National Aeronautics and
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White Sands Test Facility
P.O. Box 20
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July 26, 2022

Reply to Attn of: RE-22-098

Mr. Rick Shean, Bureau Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Subject: NASA WSTF Periodic Monitoring Report – Second Quarter 2022

Enclosed is the NASA WSTF Periodic Monitoring Report (PMR) for the second quarter of 2022. This report provides detailed information about routine groundwater, Plume Front Treatment System (PFTS), and Mid-plume Interception and Treatment System (MPITS) monitoring performed between February 1, 2022 and April 30, 2022. Analytical data processed through the WSTF data management system, operational and performance data for both treatment systems, and site-wide potentiometric surface data are also provided for the same reporting period. Activity updates not associated with or reliant upon analytical data are reported for the previous calendar quarter.

This submittal includes an Executive Summary of the PMR that provides important events and observations as Enclosure 1, suggestions for installing and using WSTF PMR Databases as Enclosure 2, a bound paper copy of the main body of the report (pages i-79) as Enclosure 3, a DVD-ROM containing the entire report, the accompanying historical analytical databases, an Excel spreadsheet comprising groundwater data for the last four calendar quarters (May 2021 to April 2022) as Enclosure 4, and a CD-ROM containing analytical lab reports for the reporting period as Enclosure 5.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments concerning this submittal, please contact Antonette Doherty of my staff at 575-202-5406.

AMANDA
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Date: 2022.07.26
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For: Timothy J. Davis
Chief, Environmental Office

5 Enclosures

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Executive Summary

Groundwater monitoring is performed at the National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) to meet regulatory requirements, monitor the effectiveness of corrective actions, develop additional corrective actions, and provide environmental data for a variety of investigations. This Periodic Monitoring Report (PMR) includes the following:

- Purpose, scope, and discussion of the groundwater monitoring data contained in this report.
- Discussion of applicable cleanup levels and comparisons of those cleanup levels to current groundwater contaminant concentrations.
- Detailed information related to the operation, maintenance, and status of the Plume Front Treatment System (PFTS) and the Mid-plume Interception and Treatment System (MPITS), NASA's presumptive remedy interim measures corrective actions for groundwater.
- Information related to the development and implementation of source area investigations and, where applicable, related corrective actions.
- Evaluations of groundwater and treatment system monitoring results and chemical analytical data as it relates to the effectiveness of groundwater remediation.
- Conclusions and recommendations based upon groundwater and remediation system monitoring analytical data and the subsequent evaluations and interpretations of those data presented in this report.

Analytical data included in this report correspond to groundwater monitoring wells, PFTS, and MPITS samples collected between February 1, 2022 and April 30, 2022. The data were processed through the WSTF data management system during the second calendar quarter of 2022.

A variety of data elements including PFTS and MPITS operational and performance data, potentiometric surface maps, and plume isoconcentration maps are used to evaluate the effects of the PFTS and MPITS on the WSTF groundwater contaminant plume. An evaluation of the PFTS data elements indicates that the PFTS is currently achieving plume capture and contaminant extraction in the Plume Front area. Data elements related to MPITS operation are presented and contaminant mass removal for both systems is included in this report.

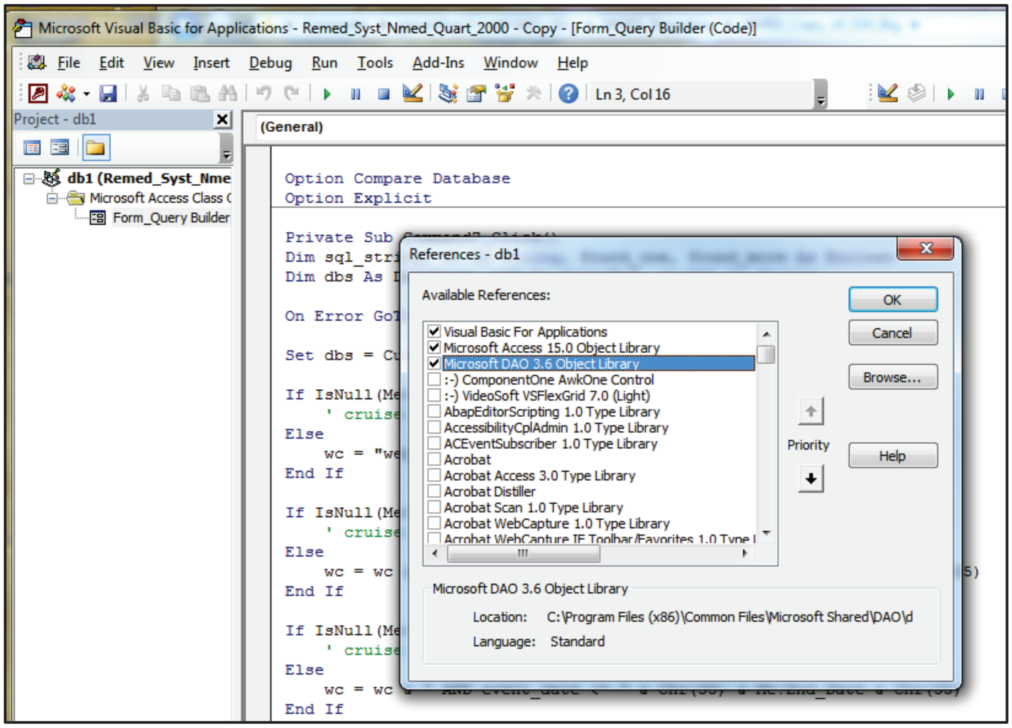
NASA's groundwater monitoring objectives are discussed in more detail in the applicable sections of this report. It is recommended that groundwater monitoring continue in accordance with the Groundwater Monitoring Plan (NASA, 2021g). NASA also recommends that groundwater corrective action operations at the PFTS and MPITS continue as scheduled. Further, NASA recommends that source area investigations continue in accordance with NMED-approved schedules.

Suggestions for Installing and Using WSTF PMR Databases

1. Ensure Microsoft Access 2013 is installed.
2. Ensure the following Microsoft libraries are installed:

   - Visual Basic for Applications
   - Microsoft Access 15.0 Object Library
   - Microsoft DAO 3.6 Object Library

   To verify the presence of these libraries, choose any table, click “Database Tools” on the menu bar, then click the “Visual Basic” button. A new window will open (see example below). Click “Tools” on the menu bar, then click “References”. Another window will open (see example below), showing the libraries available. Ensure the boxes are checked for the three required libraries.



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Option Compare Database
Option Explicit

Private Sub
Dim sql_stri
Dim dbs As I

On Error GoT

Set dbs = Cu

If IsNull(Me
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Else
    wc = "we
End If

If IsNull(Me
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Else
    wc = wc
End If

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Else
    wc = wc
End If
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Available References:

☑ Visual Basic For Applications
☑ Microsoft Access 15.0 Object Library
☑ Microsoft DAO 3.6 Object Library
☐ :-) ComponentOne AwkOne Control
☐ :-) VideoSoft VSFlexGrid 7.0 (Light)
☐ AbapEditorScripting 1.0 Type Library
☐ AccessibilityCplAdmin 1.0 Type Library
☐ ACEventSubscriber 1.0 Type Library
☐ Acrobat
☐ Acrobat Access 3.0 Type Library
☐ Acrobat Distiller
☐ Acrobat Scan 1.0 Type Library
☐ Acrobat WebCapture 1.0 Type Library
☐ Acrobat WebCapture IE Toolbar/Favorites 1.0 Type I

Microsoft DAO 3.6 Object Library

Location: C:\Program Files (x86)\Common Files\Microsoft Shared\DAO\d
Language: Standard

3. Copy the database files from the DVD to your hard drive. This will improve the performance of databases.
4. After running a query, you can export the data to Excel by selecting *External Data* on the menu bar, then click the *Export to Excel* button.

National Aeronautics and Space Administration

NASA WSTF Periodic Monitoring Report for Second Quarter 2022

NM8800019434

NASA WSTF Periodic Monitoring Report for Second Quarter 2022

Reporting Period: February 1, 2022 through April 30, 2022

Report Deadline: July 29, 2022

NM8800019434

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

AMANDA SKARSGARD
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Date: 2022.07.26 13:31:13 -06'00'

For: Timothy J. Davis
Chief, NASA Environmental Office

See Electronic Signature
Date

National Aeronautics and Space Administration

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White Sands Test Facility
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Las Cruces, NM 88012
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Executive Summary

Groundwater monitoring is performed at the National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) to meet regulatory requirements, monitor the effectiveness of corrective actions, develop additional corrective actions, and provide environmental data for a variety of investigations. This Periodic Monitoring Report (PMR) includes the following:

- Purpose, scope, and discussion of the groundwater monitoring data contained in this report.
- Discussion of applicable cleanup levels and comparisons of those cleanup levels to current groundwater contaminant concentrations.
- Detailed information related to the operation, maintenance, and status of the Plume Front Treatment System (PFTS) and the Mid-plume Interception and Treatment System (MPITS), NASA's presumptive remedy interim measures corrective actions for groundwater.
- Information related to the development and implementation of source area investigations and, where applicable, related corrective actions.
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- Conclusions and recommendations based upon groundwater and remediation system monitoring analytical data and the subsequent evaluations and interpretations of those data presented in this report.

Analytical data included in this report correspond to groundwater monitoring wells, PFTS, and MPITS samples collected between February 1, 2022 and April 30, 2022. The data were processed through the WSTF data management system during the second calendar quarter of 2022.

A variety of data elements including PFTS and MPITS operational and performance data, potentiometric surface maps, and plume isoconcentration maps are used to evaluate the effects of the PFTS and MPITS on the WSTF groundwater contaminant plume. An evaluation of the PFTS data elements indicates that the PFTS is currently achieving plume capture and contaminant extraction in the Plume Front area. Data elements related to MPITS operation are presented and contaminant mass removal for both systems is included in this report.

NASA's groundwater monitoring objectives are discussed in more detail in the applicable sections of this report. It is recommended that groundwater monitoring continue in accordance with the Groundwater Monitoring Plan (NASA, 2021b). NASA also recommends that groundwater corrective action operations at the PFTS and MPITS continue as scheduled. Further, NASA recommends that source area investigations continue in accordance with NMED-approved schedules.

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List of Acronyms and Abbreviations

µg/L	Micrograms per liter
AOC	Area of concern
bgs	Below ground surface
BLM	Bureau of Land Management
COC	Contaminant of concern
CoC	Chain-of-Custody
DP	Discharge Plan
EPA	Environmental Protection Agency
FLUTe	Flexible Liner Underground Technologies, LLC
Freon 11	Trichlorofluoromethane
ft	Foot/feet
g	Gram
GMP	Groundwater Monitoring Plan
gpm	Gallons per minute
gpm/ft	Gallons per minute per foot
HWTL	Hazardous Waste Transmission Lines
IDW	Investigation-Derived Waste
IWP	Investigation Work Plan
JDMB	Jornada del Muerto Basin
JER	Jornada Experimental Range
kg	Kilogram
L	Liter
MDL	Method detection limit
MPCA	Mid-plume Constriction Area
MPE	Mid-plume Extraction
MPITS	Mid-plume Interception and Treatment System
NASA	National Aeronautics and Space Administration
ND	Not detected
NDMA	N-nitrosodimethylamine
ng/L	Nanograms per liter
NMED	New Mexico Environment Department
NMED HWB	New Mexico Environment Department Hazardous Waste Bureau
PCE	Tetrachloroethene
PFE	Plume Front Extraction
PFI	Plume Front Injection
PFTS	Plume Front Treatment System
PMR	Periodic Monitoring Report
QA	Quality Assurance
RSMP	Remediation System Monitoring Plan
scfm	Standard cubic feet per minute
STGT	Second TDRS Ground Terminal
SWMU	Solid Waste Management Unit
T-C	Time-concentration
TCE	Trichloroethene
TDRS	Tracking and Data Relay Satellite
TDRSS	Tracking and Data Relay Satellite System
UV	Ultraviolet

VOC	Volatile Organic Compound
WBFZ	Western Boundary Fault Zone
WSTF	White Sands Test Facility

1.0 Introduction

National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) is located at 12600 NASA Road near Las Cruces, New Mexico. WSTF (U.S. Environmental Protection Agency [EPA] and New Mexico Environment Department [NMED] Facility Identification Number NM8800019434) currently operates as a field test facility under the NASA Lyndon B. Johnson Space Center in Houston, Texas. Figure 1.1 is a map showing the location of WSTF in southern Doña Ana County.

The facility provides testing services to NASA for United States space programs and support for the Department of Defense, Department of Energy, private industry, and foreign government agencies. The primary WSTF mission is to develop, qualify, and test the limits of spacecraft propulsion systems and subsystems. The installation also operates several laboratory facilities that conduct simulated use tests for space station materials, as well as compatibility testing.

WSTF historical operations resulted in a groundwater contaminant plume that requires extensive investigation activities and associated corrective actions. NASA developed and implemented a strategy for remediating contaminated WSTF groundwater in 1996, based on an analysis of potential risk to human health and the environmental and hydrogeological characteristics of the site. This strategy involves a sequential three-phase approach: 1) to stabilize the leading edge of the plume in the alluvial aquifer at the Plume Front area through operation of the Plume Front Treatment System (PFTS); 2) to intercept a high-concentration portion of the plume within fractured bedrock in the Mid-plume area through operation of the Mid-plume Interception and Treatment System (MPITS); and 3) to investigate contaminant source areas and remediate, as appropriate, any remaining sources of contamination identified during ongoing investigations.

There are currently 215 active groundwater monitoring locations (treatment system sample ports, extraction wells, conventional wells, and multiport well zones) in use at WSTF. Figure 1.2 provides a map of the facility and shows the locations of groundwater monitoring wells and components of the PFTS and the MPITS. Routine groundwater monitoring is performed in accordance with the NMED Hazardous Waste Permit (Permit; NMED, 2009, p68), the Groundwater Monitoring Plan (GMP; NASA, 2021a), and the Remediation System Monitoring Plan (RSMP; NASA, 2021d).

This report provides details of groundwater (routine and related to corrective actions), PFTS, and MPITS samples processed through the WSTF data management system during the second quarter of 2022. Between February 1, 2022 and April 30, 2022, groundwater samples were collected at 126 groundwater monitoring wells or zones (113 sample events), six PFTS sampling locations (10 sample events), and seven MPITS sampling locations (11 sample events). Specific monitoring activities for routine groundwater sampling are discussed in Section 4.0. The individual sampling activity at each monitoring well, well zone, or other sampling point is identified as a discrete, sampling event (by location and sampling date). This report includes and discusses these sampling events.

The PFTS was operational on 76 of 89 days during the reporting period at an average flow rate of 505 gallons per minute (gpm) while running. Approximately 170 acre-feet (ft) of groundwater were treated at the PFTS during this timeframe. Specific information related to operation, maintenance, and monitoring of the PFTS is included in Section 5.1 of this report. The MPITS was operational on 89 of 89 days during the reporting period, treating approximately 3.4 acre-ft of groundwater including investigation-derived waste (IDW). Specific information on MPITS operation, maintenance, monitoring, and related activities is provided in Section 5.2.

2.0 Scope of Activities

Groundwater and remediation systems sampling event analytical results and remediation systems operational data are provided for the reporting period. Updates for activities that are not associated with or reliant upon groundwater analytical data are also provided for the calendar quarter.

NASA routinely collects groundwater and treatment system samples for the analysis of volatile organic compounds (VOC), N-nitrosodimethylamine (NDMA), and several inorganic compounds. The GMP (NASA, 2021a) identifies the specific samples that are to be collected at each groundwater monitoring well. The RSMP (NASA, 2021d) provides sampling requirements for the PFTS and the MPITS.

Groundwater quality data, collectively referred to as indicator parameters, are collected during each sampling event. Indicator parameters may include temperature, pH, conductivity, turbidity, and (at wells sampled using low-flow procedures) oxidation-reduction potential and dissolved oxygen. Depth to groundwater (DTW) is also measured at each conventional monitoring well during the sampling event. Indicator parameters associated with sampling events during the reporting period are included in Appendix A as follows: groundwater monitoring wells (Section 4.2.2) – Appendix A.1; PFTS (Section 5.1.4.2) – Appendix A.3; and MPITS (Section 5.2.1.2) – Appendix A.5.

Chemical analytical data (detections only) for sampling events during the reporting period are discussed in the following sections: groundwater monitoring wells (Section 4.3) – Appendix A.2; PFTS (Section 5.1.5) – Appendix A.4; and MPITS (Section 5.2.5) – Appendix A.6.

Field data and the recording of other specific sampling-related details for each sampling event are discussed in Sections 4.0, 5.1, and 5.2 of this report. Logbook entries and internal chain-of-custody (CoC) forms from sampling events included in the report are provided in Appendix B. The external CoC forms associated with the sampling events can be found in the Lab Reports included on the enclosed DVD. Appendix C provides internal monthly WSTF Quality Assurance (QA) Reports for the reporting period. Appendix D includes the comparison of analytical results from groundwater monitoring wells (Appendix D.1), the PFTS (Appendix D.2), and the MPITS (Appendix D.3) with cleanup levels. Only results that exceed cleanup levels are included in these appendices.

During the course of groundwater, PFTS, MPITS, and other related sampling, IDW such as decontamination water and purged groundwater is produced. This IDW is treated by the MPITS as specified in the GMP (NASA, 2021a).

3.0 Cleanup Levels

Cleanup levels for all hazardous constituents detected in WSTF groundwater are summarized in the GMP update (NASA, 2021a) for 2021, submitted to NMED on April 19, 2021. That document outlines the process for developing cleanup levels as specified in Attachment 15 of the Permit (NMED, 2009, p24).

3.1 Discharge Standards for PFTS and MPITS Effluent

The Ground Water Discharge Permit Renewal and Modification, DP-1255 (NMED, 2017a) specifies that "Remediated groundwater discharged from the two remediation systems shall not exceed the concentrations in the most recent version of NMED's *Risk Assessment Guidance for Investigation and Remediation Table A-1 Soil Screening Levels for Tap Water…*" for NDMA, trichloroethene (TCE), tetrachloroethene (PCE), and chloroform (NMED, 2022j). Table 3.1 includes the updated DP-1255 discharge standards for the four constituents.

3.2 New Detections

The GMP requires that NASA report new detections of hazardous constituents in groundwater (NASA, 2021a). Each quarter, NASA adds several new constituents to the list of analytes detected at certain WSTF groundwater wells. As a result, a number of new detections have been reported in sampling results at those wells. Most of the new detections are consistent with regional groundwater chemistry and require no action beyond continued monitoring and reporting. New detections, including non-hazardous constituents, reported in sampling events during the reporting period are provided in Table 3.2.

The GMP also requires detection monitoring at specific compliance points downgradient of the closures and operational areas of the facility. The wells specified are BLM-3-182 (for the 100 and 600 Areas), 200-B-240 and 200-SG-1 (for the 200 Area), 300-A-120 (for the 300 Area), and 400-C-118 (for the 400 Area). Detection monitoring was performed at well BLM-3-182 during the reporting period.

In addition to the inorganic constituents that are characteristic of regional groundwater, NASA observed several new detections that require further evaluation. The hazardous constituents in Table 3.3 have not been previously detected at the wells listed in the table. As specified in Section 3.3 of the GMP, NASA has scheduled resampling of these wells to confirm these detections (NASA, 2021a). Table 3.4 lists the resampling date and the resolution of some of the unconfirmed detections reported in previous PMRs. The wells were resampled as required and the new detections were resolved as indicated in the table.

4.0 Routine Groundwater Monitoring

A variety of groundwater monitoring data are collected from monitoring wells and the groundwater treatment systems during routine WSTF operations. These data consist of measured groundwater elevations, calculated groundwater piezometric elevations, the graphical representations of groundwater elevation generated from these data, and groundwater indicator parameters (field water quality measurements).

Data presented in this section, including groundwater elevations and indicator parameters, were collected from various groundwater monitoring locations during the reporting period. Groundwater chemical analytical data also from this timeframe, while not considered monitoring data in some contexts, are also presented in this section.

4.1 Current Status and Monitoring Performed

NASA continues to monitor groundwater to maintain a complete understanding of plume characteristics, contaminant migration, and the overall impact of ongoing corrective action efforts. This section discusses the results of routine groundwater samples collected from groundwater monitoring wells or zones during the reporting period and processed using the WSTF data management system during the second quarter of 2022. Table 4.1 provides a list of the monitoring wells, PFTS and MPITS sampling locations, and their associated sampling events for which analytical data are presented in this report.

4.2 Groundwater Monitoring Results

This section provides the results of groundwater monitoring, including groundwater elevations and groundwater quality measurements.

4.2.1 Groundwater Elevations

Groundwater elevations at WSTF's conventional monitoring wells, piezometers, and exploration wells are determined by manually measuring the water level. Piezometric elevations at Westbay®[1] multiport wells are calculated based on the groundwater formation pressures measured at target monitoring zones. Piezometric elevations for Flexible Liner Underground Technologies, LLC (FLUTe™) multiport monitoring wells are calculated from dedicated pressure transducer measurements at specified monitoring zones. DTW or formation pressures are measured quarterly and during each sampling event.

Formation pressures at multiport wells in the Plume Front and Mid-plume areas are typically measured during the same week as quarterly DTW measurements at conventional wells. Groundwater elevations from Westbay zones are calculated from pressure data typically collected at the uppermost sampling ports (proximal to the water table) using Westbay pressure measurement equipment. Potentiometric data from multiport wells in other areas of the site are also available. Groundwater elevations are subject to quality review prior to their use in data presentations. Anomalous or erroneous values are flagged as unusable and excluded from the dataset used to generate graphical presentations of groundwater elevation.

The groundwater surface depicted in Figure 4.1 was developed by hand-contouring the most recent water level dataset that corresponds to the analytical reporting period. These data were collected from April 12-15, 2022 and are provided in Table 4.2. In Figure 4.1 Groundwater elevation contours depict a general westward groundwater flow across the facility. Subtle variations in groundwater elevation may occur within discrete transmissive flow paths at varying depths below ground surface (bgs) in the fractured bedrock aquifer located east of the Western Boundary Fault Zone (WBFZ). Due to the scale, these local elevation variations may not be reflected in the figure. The prominent transition in the hydraulic gradient from the WSTF pediment area east of the WBFZ (0.05 ft/ft) to the relatively flat southern Jornada del Muerto Basin (JDMB) of the WSTF Plume Front area (0.0002 ft/ft) is also evident in the figure. No contours are depicted in the Plume Front area because the range of observed water elevations in that area is less than the contour interval (40 ft). Further discussion of Plume Front and Mid-plume groundwater elevations is provided in Section 6.3.1 of this report.

4.2.2 Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters are obtained from field quality measurements performed during each sampling event. The groundwater indicator parameters associated with the groundwater monitoring well sampling events included in this report (see Table 4.1) are provided in Appendix A.1.

Indicator parameters and other specific sampling-related details associated with each monitor well sampling event are recorded by technicians in the field sampling record. Appendix B provides the field sampling records and field/internal CoC forms for each sampling event performed during the reporting period. The WSTF external CoC forms for groundwater samples collected during these sampling events are provided in the Lab Reports on the enclosed DVD.

4.3 Groundwater Chemical Analytical Results

Table 4.1 lists groundwater monitoring wells sampled during the reporting period. Groundwater chemical analytical data from these wells were processed through the WSTF data management system during the second calendar quarter of 2022 and detections are included in Appendix A.2.

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[1] Westbay is a registered trademark of Nova Metrix Ground Monitoring (Canada) Ltd.

NASA has also included a copy of the historical analytical database with this report. The database is provided to facilitate NMED's review of groundwater analytical data provided in this report and to allow for the historical comparisons required by the Permit (NMED, 2009; page 85). NASA's historical database is an operational tool developed, maintained, and used by NASA environmental staff to manage and archive environmental data. It is not intended to serve specifically as a regulatory reporting mechanism. NASA reserves the right to implement changes to the database that are deemed appropriate to meet the WSTF internal environmental data management requirements. Any changes will not affect the integrity of historical analytical data. The amount of historical data has exceeded the capacity of a Microsoft Access®[2] database, and as a result, all the historical data cannot be contained in the database included with this report for use by NMED. Historical data prior to 2000 was removed from the reporting database to facilitate database operation and ease of use by NMED. Pre-2000 historical data of significance in decision-making is appropriately reflected in the time-concentration (T-C) plots presented in Appendix E.

A summary of internal QA methods applied to groundwater chemical analytical data is provided in Appendix C. The QA reports included in Appendix C apply to analytical results from sampling events performed during the reporting period. All laboratory analytical reports corresponding to the analytical data presented in this report are also provided electronically (.pdf format) with this submittal.

The most recent chemical analytical data, which includes data processed in the second quarter of 2022, were used to develop manually contoured plume isoconcentration maps for NDMA (Figure 4.2) and TCE (Figure 4.3). The lowest iso-concentration contour on each map corresponds to the required cleanup level for that analyte.

5.0 Treatment System Monitoring

This section provides information related to NASA's environmental remediation systems at WSTF. It provides the current operational status of the treatment systems and includes a discussion of the capabilities and performance of the treatment systems, pertinent monitoring data from the systems, and applicable chemical analytical data associated with remediation system monitoring.

5.1 Plume Front Treatment System

The PFTS is a pump and treat groundwater remediation system that utilizes air stripping and ultraviolet (UV) photolysis to remove VOC and nitrosamines from contaminated groundwater. The system is an interim measures presumptive remedy located at the leading edge of the WSTF contaminant plume. It was implemented during the first phase of NASA's remediation strategy to stabilize plume migration. This section provides information related to PFTS operation, performance, and monitoring during the reporting period. Chemical analytical data from PFTS sampling events that occurred during the reporting period are also provided.

5.1.1 PFTS Operational Status

The operational status of the PFTS is summarized in Table 5.1 and Table 5.2.

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[2] Microsoft Access is a registered trademark of the Microsoft Corporation.

5.1.2 PFTS Performance

This section summarizes the performance of the air strippers and UV reactor for the reporting period. Additional operational status and other details may also be presented or discussed. A variety of parameters are monitored regularly to ensure that the PFTS is properly functioning and is adequately treating the WSTF contaminants of concern (COC).

Operational records indicate that the PFTS performed favorably during the reporting period. System availability statistics, which exclude scheduled shutdowns for planned maintenance, indicate that the system was operational for 94.52% of April, 100% of May, and 76.14% of June 2022. Notable events during the reporting period included the following:

- NASA completed a comprehensive series of site-specific groundwater flow modeling scenarios to refine optimum flow rates needed to maintain hydraulic capture of the plume front and maximize contaminant mass removal. The groundwater flow modeling results, along with the findings of recently completed pipe-flow engineering analyses, are being used to select replacement pumps and motors for PFE-1 and PFE-3 that will be sized for the refined flow rates. The existing submersible motor in extraction well PFE-1 failed on January 1, 2022, and the well remained offline throughout the reporting period. PFE-3, which experienced a motor failure in December 2021, also remained offline for the reporting period. The procurement and installation of replacement motors and pumps for PFE-1 and PFE-3 is anticipated to occur late in the third quarter of 2022.
- NASA conducted scheduled maintenance of the system from April 20, 2022 through May 5, 2022. During this time, NASA changed out the lamps in the UV reactor, replaced an isolation valve on an air stripper, conducted checks of the leak detection system, and replaced a total of 10 air pressure regulators used to control the system.
- NASA held a meeting with a contractor that specialized in the use of oilfield well intervention and repair technologies to potentially remove the sand-locked equipment in well PFI-1 and determine if other injection wells have similar casing failure.
- NASA reactivated the PFTS following power outages on April 10, April 12, and June 16, 2022.

5.1.2.1 Air Stripper Capabilities and Performance

The PFTS consists, in part, of two multi-sieve tray air strippers that operate in a parallel configuration to treat the WSTF VOC of concern. A single air stripper can be used when the system is operating at 650 gpm or less. Both air strippers are used when the system flow rate is greater than 650 gpm. The air strippers must maintain an air flow rate between 3,600 standard cubic feet per minute (scfm) and 4,680 scfm to ensure treatment of VOC. Table 5.3 provides the VOC performance data for the air strippers during the reporting period. Chemical analytical data provided in this report demonstrate that DP-1255 discharge limits and Permit-required cleanup levels were achieved throughout the reporting period.

5.1.2.2 UV Reactor Capabilities and Performance

The PFTS includes a 12-lamp Rayox®[3] UV reactor that uses UV photolysis to break down nitrosamines (specifically NDMA) in groundwater. The UV reactor is designed to operate at a minimum hydraulic flow

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[3] Rayox is a registered trademark of Calgon Carbon Corporation.

rate of 200 gpm and a maximum flow rate of 3,000 gpm. Table 5.3 provides the NDMA treatment performance data for the UV reactor during the reporting period. As indicated by these data, system design parameters and cleanup levels for NDMA were achieved during the reporting period.

5.1.3 Extraction and Injection Well Performance

Extraction and injection well performance for the reporting period, as based on volumetric flow rates, extraction well drawdown, and water levels and injection well specific capacities, is summarized below. Average Plume Front injection (PFI) well flow rates and average Plume Front extraction (PFE) well flow rates for the reporting period are provided in Table 5.4. Additional events relevant to the performance of individual extraction or injection wells during the report period are summarized below.

Well PFI-1 started producing excessive gravel during backflushing in March 2019 and was taken offline in December 2019. In April, August, and September 2021 NASA attempted to remove the downhole equipment from PFI-1 using a pump hoist truck so that the well casing and screen could be inspected with a downhole video camera and potentially repaired. All efforts to remove the equipment from PFI-1 were unsuccessful due to the presence of a large volume of gravel pack within the well screen, along with a suspected breach in the well casing and/or screen that is acting as a subsurface obstruction to prevent the removal of the equipment. Based on this finding, NASA concluded that well PFI-1 is permanently out of service and initiated a groundwater modeling study that was designed in part to determine if the redistribution of treated groundwater to the remaining injection wells would continue to create hydraulic conditions needed to prevent further downgradient migration of the plume front. Findings of the modeling study, along with water-level observations following the redistribution of treated groundwater to and from PFI-1 to the remaining injection wells has thus far indicated that a replacement for PFI-1 is not needed.

The submersible motor in PFI-4 that is used for backwashing the well failed in April 2022. PFI-4 continues to be used for the injection of treated groundwater while awaiting replacement of the pump and motor and water level data for the well are being monitored for indications of potential loss of specific capacity as a precaution. Repairs to PFI-4 are anticipated to be conducted late in the third quarter of 2022.

Wells PFE-1 and PFE-3 went out of service on January 1, 2022 and December 6, 2021, respectively, due to submersible motor failures believed to have been caused by overheating. Work to repair PFE-1 and PFE-3 is anticipated to be conducted late in the third quarter of 2022. NASA has completed groundwater flow modeling studies to evaluate various extraction well flow rate scenarios with respect to maintaining plume front capture zones, as well as to evaluate the potential use of intermittent (pulse) pumping to increase contaminant mass removal. The findings of these evaluations are being used to select smaller replacement pumps and motors, which may be less susceptible to overheating, for installation in PFE-1 and PFE-3. The results of recently completed pipe flow and pressure distribution analyses of the extraction well network are also being used to determine motor sizing requirements under dynamic head conditions.

5.1.3.1 Extraction and Injection Well Flow Rates and Specific Capacities

Flow rates for extraction and injection wells were measured and monitored throughout the reporting period. While in operation during the reporting period, flow rates for extraction wells PFE-2, PFE-4A, PFE-5 and PFE-7 were stable and approximately unchanged from the previous reporting period. As noted above, well PFE-1 was offline during the reporting period.

Injection wells PFI-2 and PFI-4 operated below their design flow rates during the reporting period. As previously discussed, well PFI-1 was shut down in December 2019 to investigate a suspected casing breach. Attempts to remove the downhole equipment from the well were unsuccessful, resulting in the determination that the well cannot be placed back into service.

Operational average flow rates for extraction wells PFE-2 and PFE-4A were slightly greater than their design flow rates during the reporting period, whereas PFE-5 operated below the design flow rates. Because wells PFE-1, PFE-3, and PFI-1 were not operational during the reporting period, the overall production of the PFTS was reduced during this period.

Specific capacities for the PFE and PFI wells are provided in Table 5.5 and are expressed in gallons per minute per foot (gpm/ft). Generally, PFE well specific capacities are higher than PFI well specific capacities. This is due to the differences between extraction and injection well hydraulics.

5.1.3.2 Injection Well Water Level Variations, Well Monitoring, and Maintenance

Water levels at the PFI wells are monitored on a continual basis using dedicated pressure transducers that record the levels at 2-second intervals. Specific well capacities are tracked daily while the system is in operation. Periodic backflushing of the injection wells is performed when the wells exhibit rising water levels associated with decreased well capacities and during start-ups and shutdowns. Operations personnel have been using static water table levels as a guide for setting the injection flow rates to each well to maintain a stable injection operation. This has lowered the initial design rates at the PFI wells. The original design flow rates in Table 5.4 were not reduced to account for the one nonoperational extraction well.

5.1.4 PFTS Monitoring Results

System monitoring involves the evaluation of a variety of data collected during routine PFTS sampling-related operations. Groundwater monitoring data consist of measured groundwater elevations, calculated groundwater piezometric elevations, graphical representations of groundwater elevation generated from the data (Section 6.3.3), and groundwater indicator parameters (water quality field measurements). The data presented in this section were collected from PFTS monitoring locations during the reporting period. Groundwater chemical analytical data from PFTS sampling events, while not considered monitoring data in some contexts, are also presented in this section.

5.1.4.1 PFTS Monitoring Events

This section and associated appendices discuss the results of routine PFTS samples processed through the WSTF data management system during the reporting period. Groundwater samples processed and included in this report were collected at six PFTS monitoring locations during the reporting period. Table 4.1 provides a list of the PFTS monitoring locations and sampling event dates for which analytical data are presented in this report.

5.1.4.2 PFTS Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters and other specific sampling-related details associated with each sampling event are recorded by field technicians in the field sampling record. The groundwater indicator parameters measured at each PFTS sampling event in Table 4.1 are provided in Appendix A.3. Appendix B provides the field sampling records and internal CoC forms and the lab reports include laboratory CoC forms for each of the PFTS sampling events discussed in this section.

5.1.5 PFTS Chemical Analytical Results

This section and associated appendices provide the groundwater chemical analytical data processed through the WSTF data management system during the second calendar quarter of 2022. Appendix A.4 provides the analytical results (detections only) from PFTS sampling events performed during the reporting period. A summary of internal QA methods applied to groundwater chemical analytical data is provided in Appendix C.

5.1.6 PFTS Mass Removal

Table 5.6 uses available analytical data to calculate the mass of the various WSTF COC removed by the PFTS between May 1, 2021 and April 31, 2022. During this 12-month period, the PFTS removed approximately 28 kilograms (kg) of TCE, 25 kg of trichlorofluoromethane (Freon®[4] 11), 924 grams (g) of PCE, and 191 g of NDMA.

The contaminant mass removal was calculated as follows:

$$\textit{Mass Removal} = \\ \textit{Total Volume Treated x (Influent Concentration – Effluent Concentration)}$$

5.2 Mid-plume Interception and Treatment System

The MPITS is the major component of the second phase of NASA's overall groundwater plume remediation strategy. This interim measure has been designed to intercept high COC concentrations within the fractured bedrock aquifer of the Mid-plume Constriction Area (MPCA).

The operational status of the MPITS is summarized below. Component/system failures, repair, and scheduled maintenance activities accounted for the majority of the short duration shutdowns during the reporting period.

5.2.1 MPITS Monitoring Results

System monitoring involves the collection and evaluation of a variety of data during routine MPITS sampling-related operations. Groundwater monitoring data consist of measured groundwater elevations, calculated groundwater piezometric elevations, graphical representations of groundwater elevation generated from these data (refer to Section 6.3.1), and groundwater indicator parameters (water quality field measurements).

The data presented in this section were collected from six MPITS monitoring locations during the reporting period. Groundwater chemical analytical data from MPITS sampling events, while not considered monitoring data in some contexts, are also presented in this section.

5.2.1.1 MPITS Monitoring Events

This section and associated appendices discuss the results of routine MPITS samples collected during the reporting period and processed by the WSTF data management system during the reporting period.

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[4] Freon is a registered trademark of The Chemours Company CF, LLC.

Table 4.1 includes the MPITS monitoring locations and sampling event dates for which analytical data are presented in this report.

5.2.1.2 MPITS Groundwater Quality Measurements (Indicator Parameters)

Groundwater indicator parameters and other specific sampling-related details associated with each sampling event are recorded by the field technicians in the field sampling record. The groundwater indicator parameters measured at each MPITS sampling event listed in Table 4.1 are provided in Appendix A.5. Appendix B provides the field sampling records and internal CoC for each of the MPITS sampling events discussed in this section. The laboratory CoC for each of the MPITS sampling events discussed in this section are provided in the Lab Reports enclosed on the DVD.

5.2.2 MPITS Operational Status

The operational status of the MPITS is included in Table 5.1 and Table 5.2.

5.2.3 MPITS Performance

This section summarizes the MPITS air stripper and UV reactor performance during the reporting period. Operational status and other details may also be presented or discussed. A variety of parameters are monitored regularly to ensure that the MPITS is functioning properly and effectively treating the WSTF groundwater for COC reduction.

Operational records indicate that the MPITS performed favorably during the reporting period. System availability statistics, which exclude scheduled shutdowns for planned maintenance, indicate that the system was operational for 100% of January, 95% of February, and 94.1% of March 2022. Notable events during the reporting period included the following:

- NASA installed a new motor in well MPE-9 to replace a motor that failed in September 2021. Well MPE-9 was reactivated on January 5, 2022.
- Disruptions in the off-site electrical power supply caused system shutdowns on February 16, March 6, and March 31, 2022.
- NASA completed a planned Local Area Network outage on February 24, 2022.
- NASA completed a planned shutdown of the system on March 22, 2022 to replace damaged electrical wiring in the UV system power distribution cabinet.

5.2.3.1 Air Stripper Capabilities and Performance

The MPITS consists of a single sieve tray air stripper designed to treat WSTF groundwater VOCs of concern at flow rates up to 125 gpm. Table 5.7 provides the VOC performance data for the air stripper based on MPITS analytical data for the reporting period. As indicated by these data, system design parameters and discharge limits for the VOCs were achieved during the reporting period. The MPITS influent is composed of groundwater from operational Mid-plume extraction (MPE) wells and IDW generated during groundwater sampling, well maintenance, well evaluation activities, and other groundwater-related operations at WSTF. Effluent sample results are closely monitored to ensure the air stripper continues to function properly.

5.2.3.2 UV Reactor Capabilities and Performance

The MPITS uses a 72-lamp UV photolysis reactor to break down nitrosamines in groundwater. The UV reactor is designed to operate at flow rates between 20 and 125 gpm. The reactor is capable of automatically adjusting power to the lamps to meet a target of 4.1 orders of magnitude reduction in contaminant concentrations. However, electrical power to the lamps is currently set manually at 100% to comply with current internal NASA operational requirements. The UV reactor achieved approximately four orders of magnitude reduction during the reporting period. Table 5.7 shows the UV reactor's performance for the reporting period. As indicated by these data, system design parameters and discharge limits for NDMA were achieved during the reporting period. Effluent sample results are closely monitored to ensure the UV Reactor continues to function properly.

5.2.4 MPITS Extraction Well and Infiltration Basin Performance

Wells MPE-1, MPE-8, MPE-9, MPE-10, and MPE-11 operated at various flow rates during the reporting period. Well MPE-9 was offline from March 26 to June 7, 2022 while a replacement Boreline®[5] hose for that well was on order. MPE-9 ran intermittently throughout the remainder of the period while NASA conducted the testing of a Flomatic®[6] drain-back valve in that well. There were no MPITS infiltration basin performance anomalies during the reporting period.

5.2.4.1 Extraction Well Flow Rates and Production Capacities

The MPE wells are completed in a fractured bedrock aquifer. Reduced well production capacity has resulted in cyclic operation of the extraction wells. Extraction well performance is characterized by evaluating well pumping rates and drawdown of water levels during pumping at each extraction well. No extraction well performance anomalies with respect to pumping rates and water-level drawdowns were observed during the reporting period.

5.2.4.2 Infiltration Basin Performance, Monitoring, and Maintenance

The MPITS infiltration basin was designed to accept up to 200 gpm. The treatment system must run at a minimum of 25 gpm to discharge to the infiltration basin. No operational or performance issues were identified during the reporting period.

5.2.5 MPITS Chemical Analytical Results

Appendix A.6 provides the MPITS chemical analytical data for the analytical reporting period (detections only). A summary of internal QA methods applied to groundwater chemical analytical data is provided in Appendix C.

5.2.6 MPITS Mass Removal

Table 5.8 summarizes the mass of the various WSTF COC removed by the MPITS between May 1, 2021 and April 31, 2022. Approximately 2.3 kg of COC mass was removed by the MPITS during this 12-month period. In addition to groundwater extracted in the MPCA, the MPITS accepts and treats IDW

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[5] Boreline is a registered trademark of Hose Solutions, Inc.

[6] Flowmatic is a registered trademark of Flomatic Corporation.

generated during other groundwater investigations. The contaminant mass removal was calculated as follows:

$$\text{Mass Removal} = \text{Volume of Water Extracted at Each Well} \times (\text{Contaminant Concentration at Each Well} - \text{MPITS Effluent Concentration})$$

5.3 Remediation Systems Operation Costs

Table 5.9 presents the costs for operating the PFTS and MPITS for the 12 months from May 1, 2021 to April 30, 2022. The table summarizes the cost of the labor and materials for operation and maintenance of both systems, and includes the electrical costs associated with system operations.

6.0 Discussion and Conclusions

This section provides discussion and conclusions based on the results of groundwater monitoring conducted at WSTF. Also included is a summary discussion of the remediation systems' performance, monitoring results, system modifications, and compliance with discharge requirements and/or applicable cleanup levels. Chemical analytical results from the PFTS, MPITS, and routine groundwater monitoring are compared to cleanup levels (refer to Appendix D). This section also provides NASA's anticipated future groundwater monitoring and related activities at WSTF.

6.1 Summary of Groundwater Monitoring Projects

Routine groundwater monitoring was performed during this quarter in accordance with currently approved permits, plans, and other regulatory requirements. In general, the WSTF contaminant plume is relatively stable in nature and extent. The potential for continued migration of the plume resulted in the development of the phased approach to groundwater remediation discussed in Section 1.0. NASA continues to collect a variety of groundwater data from the comprehensive WSTF groundwater monitoring network. Monitoring results are presented in detail in the relevant sections of this report and in later sections of this summary. Several noteworthy projects related to routine groundwater monitoring are discussed below.

6.1.1 Monitoring Well Performance or Sampling Equipment Issues

NASA was unable to sample one well during the reporting period (February 1, 2022 – April 30, 2022) because of mechanical or well performance issues only. This section does not address wells that were not sampled due to resource limitations.

- In February 2022, NASA was unable to sample well BLM-21-400 because the sampling system was not operational. NASA repaired the sampling system and completed sampling of well BLM-21-400 in March 2022.

The current new occurrences of sampling issues, backlog of prior unresolved issues, and issues resolved this quarter are shown on Table 6.1.

6.1.2 Monitoring Well Installation and Well Plugging and Abandonment

There was no physical well installation or plugging and abandonment activity this quarter. Other second quarter 2022 activity included:

- In its January 25, 2021 *Approval with Modifications of the NASA Groundwater Monitoring Plan 2020 Update*, NMED (2021a) directed NASA to submit a work plan for abandonment of monitoring wells 200-SG-2 and 200-SG-3 and installation of replacement wells by November 30, 2021. On November 30, 2021, NASA submitted a letter to NMED that attached a draft New Mexico Office of the State Engineer (NMOSE) Well Plugging Plan of Operations for Multiport Soil Vapor Groundwater Monitoring Wells 200-SG-2 and 200-SG-3 with an attachment indicating why NASA does not intend to replace the wells (NASA, 2021o). NMED approved the plan on January 10, 2022 (NMED, 2022a.)
- NMED approved the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600B-001-GW* (BLM-28 replacement), submitted to NMED on August 31, 2021 (NASA, 2021j), with modifications on April 25, 2022 (NMED, 2022g). In that approval, NMED provided one comment and directed NASA to provide a response no later than April 28, 2023.
- NMED approved the *Work Plan for Drilling and Installation of Monitoring Well 600C-001-GW at the NASA White Sands Test Facility (WSTF)* (deeper well adjacent to BLM-10-517), submitted to NMED on August 31, 2021 (NASA, 2021k), on April 25, 2022 (NMED, 2022h).

6.1.3 Westbay Well Reconfiguration

There was no physical well reconfiguration activity the second quarter of 2022. Historical information and full submittal history for well reconfiguration projects are provided in Appendix F.

- NMED is reviewing the *Westbay Well Reconfiguration Work Plan for Wells PL-7, PL-8, PL-10, ST-5, and WW-3*, submitted on April 29, 2021 (NASA, 2021b).
- NMED approved the *NASA WSTF Well Reconfiguration Work Plan for Well BW-4*, submitted on June 29, 2021 (NASA, 2021e), with modifications on January 18, 2022 (NMED, 2022b). In that approval, NMED provided two comments and directed NASA to provide a response no later than March 11, 2022. NASA prepared the response and submitted the *Response to Approval with Modifications of NASA WSTF Well Reconfiguration Work Plan for Well BW-4* on March 8, 2022 (NASA, 2022c). NMED also directed NASA to provide a well reconfiguration report for BW-4 no later than March 30, 2023.
- In the October 24, 2017 *Approval with Modifications Detections of NDMA (N-Nitrosodimethylamine) and TCE (Trichloroethylene) In WSTF Groundwater Monitoring Wells BLM-30, PL-5, PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3*, NMED directed NASA to provide a well reconfiguration work plan that included well PL-6 (NMED, 2017b). NASA determined that the well is not suitable for reconfiguration and plans to plug and abandon the well and replace it. NASA submitted the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600C-002-GW and Abandonment of PL-6* on February 1, 2022 (NASA, 2022a).

6.1.4 Groundwater Monitoring Data Representativeness

Activities in the second quarter 2022 included the following:

- NMED is reviewing the *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 2: FLUTe Well Evaluation*, submitted to NMED on November 2, 2021 (NASA, 2021n).

6.2 Comparison of Analytical Data to Cleanup Levels

This section and the associated appendix compare the chemical analytical data obtained from groundwater remediation system sampling points and groundwater monitoring wells to the approved cleanup levels provided in the GMP (NASA, 2021a). Appendix D provides a comparison of groundwater data to cleanup levels for the current analytical reporting period.

6.2.1 Groundwater Monitoring Wells

Appendix D.1 includes a comparison of groundwater monitoring well data to applicable cleanup levels for the analytical reporting period. Only analytical results that exceed cleanup levels are included in the tables.

6.2.2 Plume Front Treatment System

Groundwater samples were collected from the PFTS influent and effluent as required by the RSMP (NASA, 2021d) and DP-1255 (NMED, 2017a). Chemical analytical data from these sampling events were presented in Section 5.1.5 and Appendix A.4. Appendix D.2 includes any PFTS influent data that exceeded cleanup levels during the current analytical reporting period. The PFTS effluent met all DP-1255 discharge limits and Permit cleanup levels.

6.2.3 Mid-plume Interception and Treatment System

Groundwater samples were collected from the MPITS influent and effluent as required by the RSMP (NASA, 2021d) and DP-1255 (NMED, 2017a). Chemical analytical data from these sampling events were presented in Section 5.2.5 and Appendix A.6. Appendix D.3 includes any MPITS effluent data that exceeded cleanup levels during the current analytical reporting period. There were no DP-1255 discharge limit or cleanup level exceedances from the MPITS during the reporting period.

6.3 Contaminant Plume Evaluation

The plume evaluation for the second quarter of 2022 includes potentiometric surface maps and a variety of chemical analytical data.

6.3.1 Groundwater Elevations and Iso-concentration Maps

A manually contoured potentiometric surface map (Figure 6.1) is provided for the WSTF Plume Front area that correlates with the end of the current reporting period. Data used to generate contours for this map are identical to the data used to generate the site-wide contours (Figure 4.1). The 40-ft contour used in the site-wide piezometric map is supplemented by 2-ft contours in the Plume Front potentiometric surface map. Arrows indicate the direction of groundwater flow. The influence of PFTS operation is evident by the depression in the potentiometric surface that is caused by pumping at the PFE wells. The hydraulic mound produced by injecting treated water at the PFI wells is apparent at the southern edge of the figure.

Groundwater elevations measured in the MPCA during this analytical reporting period are presented in the manually contoured Mid-plume potentiometric surface map (Figure 6.2). The data used to generate contours for this map are the same values used to generate the site-wide potentiometric map (Figure 4.1). The general west-trending groundwater flow direction through the Mid-plume area is apparent in Figure 6.2, though local variations may exist within discrete fractures or higher conductivity flow zones within the fractured bedrock aquifer in this area. Groundwater elevation is generally depressed downgradient of well MPE-11 near well MPE-6 Plume isoconcentration maps.

Figure 6.3 and Figure 6.4 present manually contoured isoconcentration maps of the Plume Front for NDMA and TCE using data processed during this reporting period. The manual contouring method allows a geologist to evaluate plume contaminants against interpreted hydrogeological features in order to create a realistic representation of the contaminant plume. Hydrogeological conditions considered during the manual contouring of contaminant concentrations are primarily hydrostratigraphic units or significant structural features that cause the juxtaposition of variable hydraulic conductivities. The lowest value solid isoconcentration line on each map corresponds to the required cleanup level for the analyte presented. The isoconcentration maps are consistent with the maps presented in previous reports (i.e., a like-to-like comparison in the case of NDMA), the monthly evaluation of contaminant concentrations, and site-wide plume maps that have been provided to NMED over the last several years.

Three exceedances of the NDMA cleanup level were observed in the northern Plume Front Area this quarter. These included NDMA detections at wells BLM-32 (3.2 ng/L), JER-1 (1.3 ng/L), and JER-2 (2.5 ng/L). Four exceedances of NDMA cleanup levels were observed in sentinel wells this quarter. These included NDMA detections at wells PL-7 (1.9 ng/L), PL-8 (2.3 ng/L), PL-11 (2.4 ng/L), and WW-5 (5 ng/L). VOCs were not detected at or above the cleanup level at these wells. The following quality exceptions exist:

- The NDMA result at well BLM-32 was qualified with “FB” data quality exception.
- “FB” indicates NDMA was detected in the field blank.

6.3.2 Combined Plume Isoconcentration Maps and Potentiometric Surface Map

Figure 6.5 shows the interrelationship of the Plume Front potentiometric surface and manually contoured TCE plume for the current analytical reporting period. TCE was selected because it is the most widely distributed health-risk-driving contaminant in the conceptualized contaminant plume.

6.3.3 Time-concentration Plots and Groundwater Data Analytical Trends

T-C plots are used to evaluate and summarize contaminant concentration trends in WSTF wells over time on a quarterly basis as presented in this report. A detailed interpretation of the concentration trends shown in T-C plots over the year is provided in the fourth quarter annual comprehensive monitoring report submitted in January.

To facilitate the evaluation of T-C plots, WSTF monitoring wells are grouped as listed in Table 5 of the GMP (NASA, 2021a). T-C plots are generated using analytical data from each monitoring and remediation well where sufficient data are available. The concentration trends for four of the primary COC (Freon 11, TCE, PCE and NDMA) in groundwater are reviewed by technical personnel to develop the summary table presented in Appendix E. This table includes the historical maximum contaminant concentrations, the latest concentrations, and an interpretation of the current concentration trend for each well. For NDMA concentrations in groundwater, results are presented for both EPA Method 607 and low-level laboratory analysis (where performed). T-C trend evaluation places greater emphasis on the most recent analytical results recorded over the last several years. As a result, the current T-C interpretation may therefore not reflect the full historical variability in T-C behavior through the life of the well, particularly for the older wells at WSTF installed in the mid-1980 through the 1990s.

The identification of a trend for COC concentrations within a specific well is based on the evaluation of analytical data collected over at least several quarters (typically a minimum of three to four sampling events). Concentrations are evaluated in conjunction with other potentially influencing factors (including hydrogeology, aquifer recharge conditions, well development activities, and any changes in the operational status of remediation wells) before a modification to the T-C plot interpretation is performed. This approach is necessary to avoid the premature identification of a trend that represents a short-term fluctuation that subsequently reverts back to previous conditions.

A summary site-wide well map and supplemental analytical table depicting the most recent interpreted T-C trend for each individual well is included in Appendix E. The majority of wells in the WSTF monitoring network are associated with a decline in COC concentrations over time, or fluctuating levels that have remained relatively constant. Only one monitoring well within the network (BLM-5-527 of the MPCA Well Group) is characterized by increasing concentrations for this quarter. A summary evaluation of each of the GMP well groups is provided in the following paragraphs, along with a discussion of the T-C plots for specific wells identified within the group. T-C plots (for the specific wells where identified) are also provided as attachments in Appendix E.

Upgradient (Background) Well Group: Four wells designated as upgradient monitoring wells are located east of the WSTF industrialized areas. There have been no confirmed VOC or NDMA detections in groundwater for these wells, and all four wells are classified as not detected (ND).

100/600 Area Well Group: Monitoring wells in this group are located within the 100 Area and the adjacent easternmost section of the 600 Area. These wells are located in the vicinity of the southeastern boundary of the contaminant source areas and groundwater plume. Where located within the footprint of the groundwater plume, wells typically reflect a decreasing COC concentration trend for Freon 11, TCE, and PCE. This trend is applicable to both wells within the primary bedrock aquifer and for well 600-G-138 (T-C plot provided) that is screened across a localized perched groundwater horizon identified on the top of andesite bedrock at the bedrock-alluvial interface in the vicinity of the 600 Area Closure HWMU. NDMA is derived primarily from the northern source areas and is not identified within the 100 and 600 Areas.

200 Area Well Group: The 200 Area represents the primary historical source of TCE and Freon 11 groundwater contamination. Maximum concentrations for these contaminants were reported in the late 1980s through mid-1990s. Over the last 30 years, the majority of 200 Area T-C plots display a significant decreasing trend in contaminant concentrations for these COCs. As an example, TCE in well 200-D-240 (T-C plot provided) has decreased from 110 µg/L in 1990 to 15 µg/L in 2022. The declines reflect natural plume migration and degradation under the influence of a steep horizontal hydraulic gradient of 0.05 ft/ft within a relatively porous fractured limestone bedrock aquifer in conjunction with the implementation of effective waste management practices at WSTF that eliminated waste discharges. Wells that display more irregular concentrations with no distinct trend are frequently associated with screened intervals characterized by lower hydraulic conductivity and reduced groundwater flow.

300/400 Area Well Group: The T-C plots for monitoring wells show COC concentration trends that have been either fluctuating (most notably wells installed recently in January 2017 within poorly fractured andesite bedrock in the vicinity of the 400 Area Closure HWMU) or have declined since initial well installation. Declining concentrations primarily correlate to wells characterized by higher hydraulic conductivity and/or groundwater flow screened across the andesite bedrock-alluvium interface. These wells are located within or adjacent to the 300/400 Area primary arroyo that experiences greater natural recharge. Wells that do not display declines are typically located off the axis of the recharge drainages and may also be protected from infiltration by localized less permeable surfaces such as the Closure impoundment caps. Similar to the 200 Area, the predominant declines in the 300 and 400 Areas reflect the influence of migration related to the strong hydraulic gradient of 0.05 ft/ft along the WSTF pediment slope in conjunction with the implementation of effective waste management practices. Local disparities for concentrations reported within adjacent bedrock monitoring wells (particularly for NDMA) is interpreted to be a result of both the limited connectivity of andesite bedrock fractures, and the position of the screened intervals relative to the andesite bedrock-alluvial interface. Higher hydraulic conductivity, groundwater flow, and declining contaminant concentrations are usually attributed to screened intervals across the interface of alluvium on top of bedrock.

Northern Boundary Well Group: The monitoring wells in this group are most frequently characterized by low-level contaminant concentrations that do not display any sustained T-C trends or are ND. A trend classified as “fluctuating low-level NDMA” without other detections is reported this quarter from three locations: BLM-32 (3.2 ng/L); JER-1 (1.3 ng/L), and JER-2 (2.5 ng/L). All three wells are located adjacent to the boundary of the northwest-trending plume arm that coincides with northwest-trending structural controls in the bedrock (identified from seismic geophysical surveys) that extend northwest from the Mid-plume constriction area.

Southern Boundary Well Group: Monitoring wells in this group are located south of the NDMA and TCE plumes, do not exceed the low-level NDMA cleanup level of 1.1 ng/L, and are classified as ND. A single well (BLM-6-488, T-C plot provided) continues to show a low fluctuating concentration of TCE (2.20 µg/L) below the NMED cleanup level and is characterized as exhibiting “natural migration - no overall T-C trend.”

MPCA Well Group: T-C plots for monitoring wells in this group that characterize the MPCA generally show declining contaminant trends associated with either natural plume migration and degradation or the effect of system stresses imparted by MPITS pumping since startup in 2011. T-C plots for wells BLM-21-400, BLM-36-350, BLM-18-430, and BLM-5-527 are included in Appendix E.

Well BLM-21-400 is located adjacent and south of the MPITS extraction wells and immediately downgradient of the interpreted primary confluence of the TCE and NDMA groundwater plume from their respective source areas (Freon 11 and TCE originate from the 200 Area [upgradient well BLM-14-327] and NDMA originates from the 300 and 400 Areas [upgradient well BLM-15-305]). Contaminant concentrations in BLM-21-400 since installation in 1991 show a natural decreasing trend for Freon 11 (320 to 75 µg/L), TCE (220 to 52 µg/L), PCE (12 to 2.5 µg/L), and NDMA (5.6 to 0.85 µg/L). This well continues to be monitored with respect to potential pumping-related migration under the influence of nearby extraction well MPE-11.

Multiport well BLM-36 is located downgradient and to the south-southwest of the MPITS. The T-C plots for the shallow zone in well BLM-36 (BLM-36-350) identify groundwater contamination that has not been detected in deeper zones of this well, providing a significant location for vertical delineation in the Mid-plume. BLM-36-350 has shown fluctuating but relatively consistent concentrations for groundwater contaminants since activation of the MPITS and is currently classified as “pumping-related migration – no overall trend.”

Wells BLM-18-430 and BLM-5-527 are located in the northwest-trending arm of the WSTF groundwater contaminant plume that extends from the MPCA. These wells are monitored to determine the effect of operation of the MPITS on the migration of groundwater contaminants into this area. The T-C plot for well BLM-18-430 shows a decline in contaminant concentrations since startup of the MPITS, inferred to be related to the arrest of contaminant migration to the northwest arm through continued operation of the MPE wells. Well BLM-5-527 is currently interpreted to display a “natural migration – increasing T-C” trend. Increases in this well are inferred to reflect the migration of contaminants into low conductivity rhyolite bedrock of the extreme northwest section of the northwest-trending arm not impacted since the inception of MPITS pumping. Pumping activity (13,350 gallons extracted) within well BLM-5-527 between April 6, 2020 and May 5, 2020 as part of the Targeted Mobile Remediation Process Pilot Test at

WSTF may also have impacted contaminant concentrations in the area by temporarily creating a cone of depression.

Monitoring well BLM-38 has historically been characterized as ND and is located on the north side of the Mid-plume constriction. A low-level NDMA detection is reported this quarter from the latest sample collected (2.10 ng/L). This detection will be monitored with respect to any developing T-C trend.

Main Plume Well Group: Wells in this group are located within the western section of the groundwater plume at the Plume Front and show widespread declining trends related to natural migration or pumping depending on proximity to the PFTS remediation wells. Contaminant concentrations within this well group typically decline significantly during intervals of system operation and rebound during quiescent periods.

Plume Front Well Group: Monitoring wells within this group are generally located outside the boundary of the contaminant plume and groundwater analytical results are typically ND. Well BLM-10-517 (located south of the southern plume boundary, T-C plot provided) has displayed periodic trace detections of TCE and Freon 11, particularly between early 2012 and early 2016. The latest groundwater sampling indicated that the Freon 11 (detection limit 0.24 µg/L) and TCE (detection limit 0.20 µg/L) are both ND. Low-level NDMA was also below the detection limit of 0.4 ng/L. Well ST-7 is located west of PFTS extraction well PFE-2 and south of extraction well PFE-7. Low-level TCE (1.90 µg/L) may have migrated northward to ST-7 as a result of continued pumping of well PFE-7. The fluctuating concentrations of TCE and Freon 11 in the area of ST-7 demonstrate pumping related migration of contaminants through the heterogeneity of the alluvial aquifer. For this quarter, one Plume Front well (PL-7 [1.9 ng/L]) was reported to have fluctuating low-level NDMA detections only.

Sentinel Well Group: Monitoring wells within this group form a more distal tier located outside the groundwater contaminant plume and have all historically shown analytical results that are ND. For this quarter, fluctuating low-level NDMA detections without other detectable COCs have been identified in three of the sentinel wells (PL-11 [2.4 ng/L], PL-8 [2.3 ng/L], and WW-5 [5.0 ng/L]).

Other Well Group – Mid-plume Extraction Wells: The T-C plots for the five MPITS wells are included in Appendix E. The COC concentrations for Freon 11 and TCE in wells MPE-8, MPE-9, MPE-10, and MPE-11 have displayed a generally fluctuating trend since 2013 under the influence of pumping-related plume migration. Well MPE-1 (decreasing) is also influenced by continued operation of the MPITS.

Other Well Group – Plume Front Extraction Wells: The T-C Plots for the six PFTS wells; PFE-1, PFE-2, PFE-3, PFE-4A, PFE-5, and PFE-7 are included in Appendix E. The high-volume extraction wells exhibit declining trends due to pumping-related plume dilution within the alluvial aquifer at the Plume Front. Well PFE-5 was installed further east with a screened zone primarily in fractured bedrock within the WBFZ displays significantly lower well yield, with a relatively high concentration of NDMA.

6.4 Summary of Source Area Investigations

The following subsections summarize the status of each solid waste management unit (SWMU) or hazardous waste management unit (HWMU) at WSTF and provide specific information on work performed during the second calendar quarter of 2022: April 1, 2022 – June 30, 2022. Relevant historical information including investigation status, and full submittal history for each potential source area is provided in Appendix F.

6.4.1 200 Area

NASA continues work associated with the investigation of two HWMUs and SWMUs in the 200 Area. NASA performed a wide-area soil vapor survey in the 200 and 600 Areas to assess the potential risk to workers posed by soil vapor intrusion into the buildings adjacent to areas with the greatest soil vapor concentrations. NMED disapproved NASA's report on the assessment, stating that the vapor intrusion pathway is complete from the standpoint of risk assessment. During the second quarter of 2022, activities related to this SWMU included:

- NMED is reviewing NASA's January 30, 2020 *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report* (NASA, 2020a).

6.4.2 300 Area

There were no document submittals for the 300 Area in the second quarter of 2022. See next section and Appendix F, Section 2.2.

6.4.3 400 Area

There were no document submittals for the 400 Area in the second quarter of 2022. Recent and ongoing activity includes:

- NMED is reviewing the *Response to Disapproval of 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (July 14, 2021; NASA, 2021h).

- NMED is reviewing the *NASA WSTF 400 Area Closure Investigation Report – NMED Third Disapproval Response* (July 27, 2021; NASA, 2021i).

- NMED is reviewing the *Response to Disapproval of 300 Area Supplemental Abbreviated Drilling Work Plan* (July 14, 2021; NASA, 2021g).

6.4.4 600 Area Perched Groundwater Extraction and Investigations

NASA is currently conducting a perched groundwater extraction pilot test in the 600 Area and completed an investigation into the presence of additional perched groundwater beneath and adjacent to the 600 Area Closure. During the second quarter of 2022, activities related to this SWMU included:

- In March 2022, NASA requested additional time (June 30, 2022) to complete the 600 Area Perched Groundwater Investigation Report after NMED approved the first extension due date of May 31, 2022 (NASA, 2022d; NMED, 2021b). NMED approved the second request on April 7, 2022 (NMED, 2022e). NASA submitted the *600 Area Perched Groundwater Investigation Report* to NMED on June 29, 2022.
- In April 2022, NASA completed initial development activities for the new conventional monitoring wells 600A-001-GW and 600A-002-GW. Volume and parameter stability objectives were met, and turbidities were reduced to acceptable.
- NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 9* to NMED on April 26, 2022 (NASA, 2022f).
- In May 2022, NASA performed initial groundwater sampling at the new conventional monitoring wells 600A-001-GW and 600A-002-GW in accordance with the current NMED-approved GMP.

NASA also prepared and submitted the *Request for a "Contained-in" Determination for Contaminated Media Associated with the 600 Area Perched Groundwater Abbreviated Investigation Work Plan* on March 22, 2022 (NASA, 2022e). NMED approved the request and granted a "*no longer contained in determination*" on April 18, 2022 (NMED, 2022f).

6.4.5 SWMUs 2, 8, and 34 and Area of Concern (AOC) 51 (Wastewater Lagoons)

NASA continued work required to investigate and close the WSTF Wastewater Lagoons in the 100, 200, and 600 Areas and at the Second Tracking and Data Relay Satellite (TDRS) Ground Terminal (STGT). Activities during the second quarter of 2022 included:

- NMED is reviewing the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report* (NASA, 2020b).
- NMED disapproved the *NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* (NASA, 2019c) on June 6, 2022 and directed NASA to address 14 NMED comments and submit a revised report no later than December 30, 2022 (NMED, 2022k).
- NMED disapproved the *NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* (NASA, 2019d) on June 16, 2022 and directed NASA to address 15 NMED comments and submit a revised report no later than December 30, 2022 (NMED, 2022l).
- NMED is reviewing the *NASA White Sands Test Facility WSTF STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* (NASA, 2020e).

6.4.6 SWMU 10 (200 Area Hazardous Waste Transmission Lines [HWTL])

NASA performed an investigation of the abandoned HWTL that consisted of HWTL excavation, pipeline removal, soil sampling, and the submittal of an investigation report. Minimal activities during the second quarter of 2022 consisted of the following:

- NMED is reviewing NASA's March 4, 2022 *Response to Second Disapproval of NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report and Risk Assessment Report* (NASA, 2022b).

6.4.7 Dye Tracer Test Investigation

Activities during the second quarter of 2022 included the following:

- NASA received NMED's April 5, 2022 *Approval with Modification Report on Tracer Testing in the 200/600 Areas and Mid-plume Constriction Area* (August 31, 2020).

6.4.8 SWMU 16 (600 Area Bureau of Land Management [BLM] Off-Site Soil Pile)

NASA completed a multi-part investigation of the 600 Area BLM Off-Site Soil Pile and has addressed NMED comments on multiple iterations of the investigation report. Activities in the second quarter of 2022 were:

- NMED is reviewing NASA's September 28, 2021 *Accelerated Corrective Measures Work Plan for the NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile)* on (NASA, 2021l).

6.4.9 SWMUs 21–27 (Septic Tanks)

Activities during the second quarter of 2022 included the following:

- NMED is reviewing NASA's May 18, 2021 *Response to Second Disapproval of NASA WSTF Septic Tanks (SWMUs 21−27) Investigation Report* (NASA, 2021c).

6.4.10 SWMUs 29–31 (Small Arms Firing Ranges)

During the second quarter of 2022, activities related to these SWMUs included:

- NMED is reviewing the *Response to Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report and Risk Assessment Report* (August 3, 2020; NASA, 2020c).

6.4.11 SWMU 33 (300 Area Test Stand 302 Cooling Water Pond)

During the second quarter of 2022, activities related to this SWMU included:

- NMED disapproved the *SWMU 33 Historical Investigation Summary and Investigation Work Plan* (August 17, 2020;) on May 9, 2022 and directed NASA to address 13 comments and submit a revised work plan no later than September 15, 2022.

6.4.12 SWMU 47 (500 Fuel Storage Area)

NASA plans to perform an investigation of the 500 Area Fuel Storage Area (SWMU 47). During the second quarter of 2022, activities related to this SWMU included the following:

- NMED is reviewing NASA's *Response to Second Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan* (June 29, 2021; revised IWP; NASA, 2021f).

6.4.13 SWMU 49 (700 Area Landfill)

NASA completed NMED-approved investigation work at the closed landfill as described in the *Response to NMED Approval with Modifications SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary* (NASA, 2019b). Activities during the second quarter of 2022 include the following:

- NASA prepared and submitted the *NASA White Sands Test Facility (WSTF) 700 Area Landfill Closure (SWMU 49) Phase I Investigation Report* on April 29, 2022 (NASA, 2022h).

6.4.14 SWMU 50 (First TDRS Diesel Release)

NASA performed NMED-approved investigation fieldwork at SWMU 50 and provided the results to NMED in the *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report* (NASA, 2019a). Activities during the second quarter of 2022 include the following:

- NMED is reviewing NASA's *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report* (November 9, 2020; NASA, 2020f).

6.4.15 SWMU 52 (Second TDRS UST)

On August 11, 2020, NASA discovered a diesel fuel leak in the area of the SWMU 52 Underground Storage Tank (UST), which is located north of WSTF at the White Sands Complex. SWMU 52 related activities performed during the second quarter of 2022 included the following:

- The NMED Hazardous Waste Bureau disapproved the *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* (February 18, 2021) on March 1, 2022 (NMED, 2022c). NASA addressed NMED's four comments and submitted the *Response to Disapproval of NASA WSTF Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* on April 26, 2022 (NASA, 2022g).

6.4.16 Newly Identified SWMU

While researching documentation related to the Fuel Treatment Unit, NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. In the December 20, 2021, *Approval 500 Area Newly Identified SWMU Release Assessment Report* (NMED, 2021c), NMED directed NASA to list the former oxidizer burner as a SWMU requiring corrective action in the WSTF Hazardous Waste Permit (during a Permit renewal or modification, as applicable) and to submit an investigation work plan for the unit no later than August 31, 2022. Activities during the second quarter of 2022 include the following:

- NASA continued development of the Investigation Work Plan and the accompanying Historical Information Summary.

7.0 Planned Activities

This section discusses NASA's planned activities related to groundwater monitoring at WSTF.

7.1 Groundwater Monitoring and Related Projects

7.1.1 Monitoring Well Performance or Sampling Equipment Issues

This section presents plans to address wells that could not be sampled in the data reporting period (February 1 through April 30, 2022) due to mechanical or well performance issues and were not resolved by the end of the period. The backlog of prior unresolved issues is shown on Table 6.1. The section also presents issues that have been resolved.

- In February 2022, NASA was unable to sample well BLM-21-400 because the sampling system was inoperable. No additional planning is required because NASA repaired the sampling system and completed sampling of well BLM-21-400 in March 2022.

7.1.2 Groundwater Monitoring

NASA plans to continue routine groundwater monitoring in accordance with the GMP (NASA, 2021a). Sampling for per- and polyfluoroalkyl substances will be included in 2022 per NMED's November 15, 2021 *Approval with Modifications of the 2021 GMP* (NMED, 2021c), and are reflected in the GMP update for 2022 (NASA, 2022i). NASA committed to PFAS sampling in its *Response to Approval with Modifications of NASA WSTF Groundwater Monitoring Plan Update for 2021* (NASA, 2021p). As indicated in that response, NASA replaced the dedicated sampling system and equipment with non-fluoropolymer-based materials (e.g., Teflon) in wells 100-D-176, 200-B-240, and BLM-14-327, and made arrangements for the use of PFAS-free sampling equipment in perched groundwater well 600-G-138. In the *NASA WSTF Groundwater Monitoring Plan Update for 2022* (NASA, 2022i), NASA identified several wells that were scheduled for PFAS sampling as part of an ongoing initiative related to PFAS in groundwater sponsored by the NASA Headquarters Environmental Management Division. NASA is performing a preliminary assessment of potential PFAS contamination in groundwater at numerous NASA centers, including WSTF. As a result of this self-imposed requirement, and to accommodate schedule constraints placed on WSTF by NASA Headquarters, NASA and the

Headquarters-selected contractor-collected groundwater samples from the wells identified in the 2022 GMP for the analysis of PFAS in April 2022. NASA plans to summarize the results of the assessment in a report to be published later in 2022. NASA will provide a copy of the report to NMED for reference purposes when it becomes available for use at WSTF.

7.1.3 Westbay Well Reconfiguration

NASA expects to plug and abandon well BLM-28. NASA plans to plug and abandon the borehole at former monitoring well BLM-30 in conjunction with drilling and completing replacement well BLM-43 (NASA, 2021m).

7.1.4 Monitoring Well Installation

In addition to replacement well BLM-43 mentioned in the preceding section, NASA plans to replace well BLM-28 and to install a deeper monitoring well adjacent to existing well BLM-10-517. NASA also plans to replace Westbay monitoring well PL-6.

7.2 Groundwater Remediation System Monitoring

The RSMP (NASA, 2021d) and DP-1255 (NMED, 2017a) include provisions for monitoring the effectiveness of the PFTS and MPITS. Sampling at designated locations, including extraction wells and remediation system sampling points, will continue as required during remediation system operational periods in accordance with the RSMP and/or DP-1255. Monitoring well sampling to assess remediation system effectiveness will continue in accordance with the GMP (NASA, 2021a).

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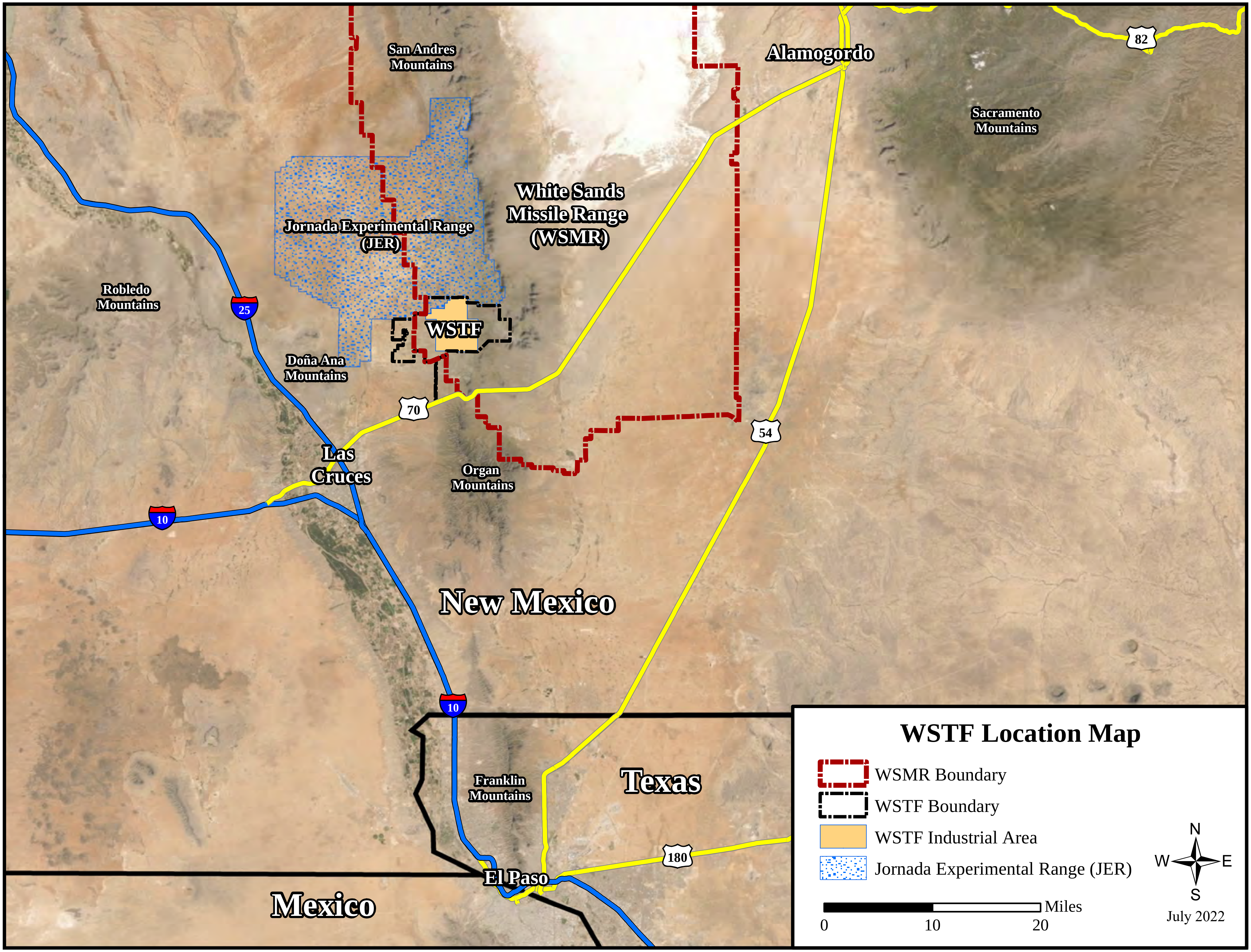
Figures

Figure 1.1 WSTF Location Map

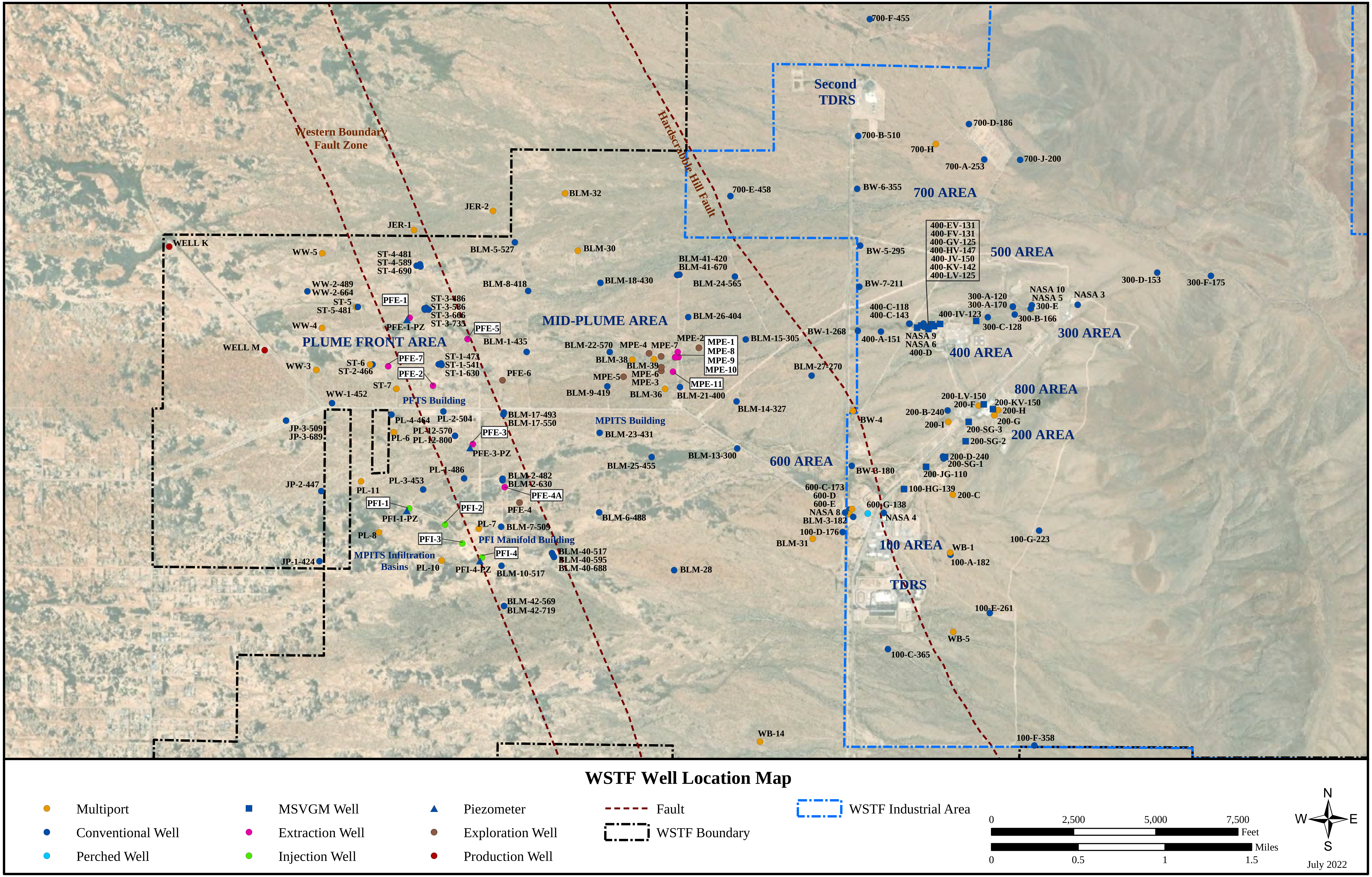
(SEE NEXT PAGE)



WSTF Location Map

Figure 1.2 **WSTF Well Location Map**

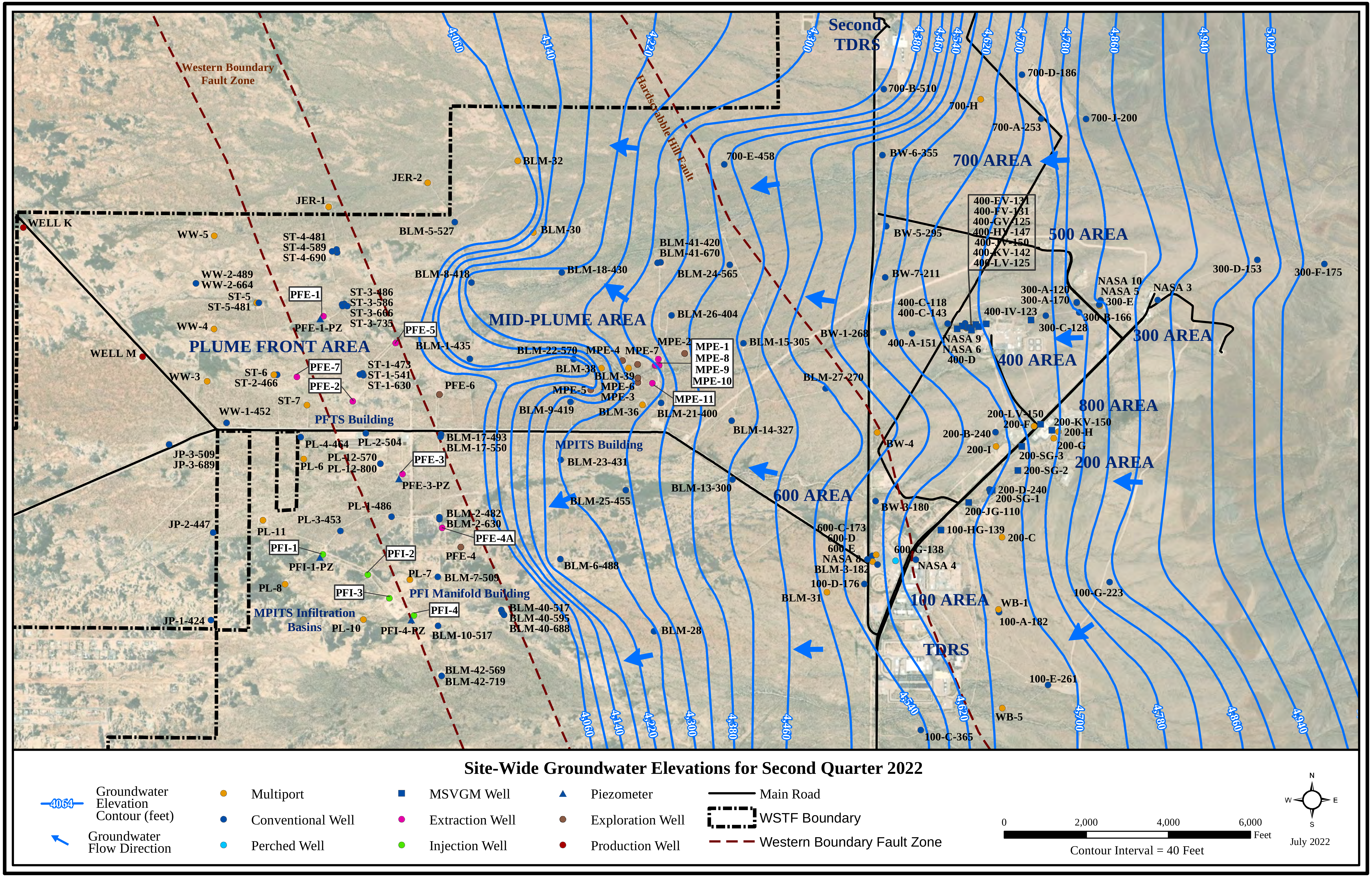
(SEE NEXT PAGE)



WSTF Well Location Map

Figure 4.1 Groundwater Elevations and Generalized Flow Directions for the Reporting Period

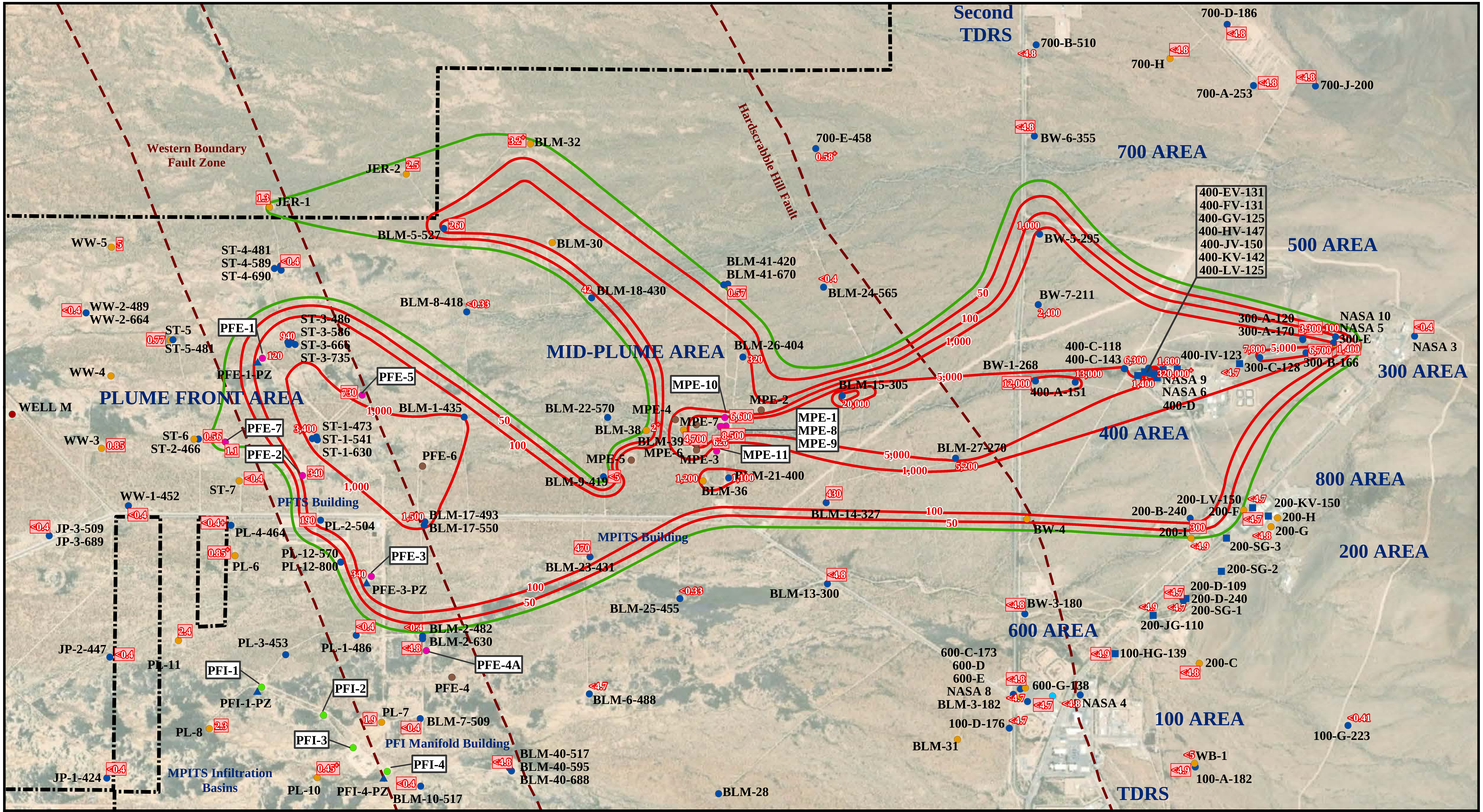
(SEE NEXT PAGE)



Site-Wide Groundwater Elevations for Second Quarter 2022

Figure 4.2 Site-Wide N-Nitrosodimethylamine (NDMA) Concentrations for the Reporting Period

(SEE NEXT PAGE)



NDMA Maximum Concentrations in Groundwater for Second Quarter 2022

50	Equiconcentration Line (ng/L)	●	Multiport	■	MSVGM Well	▲	Piezometer	Fault
	NDMA Cleanup Level (1.1 ng/L)	●	Conventional Well	●	Extraction Well	●	Exploration Well	WSTF Boundary
		●	Perched Well	●	Injection Well	●	Production Well	

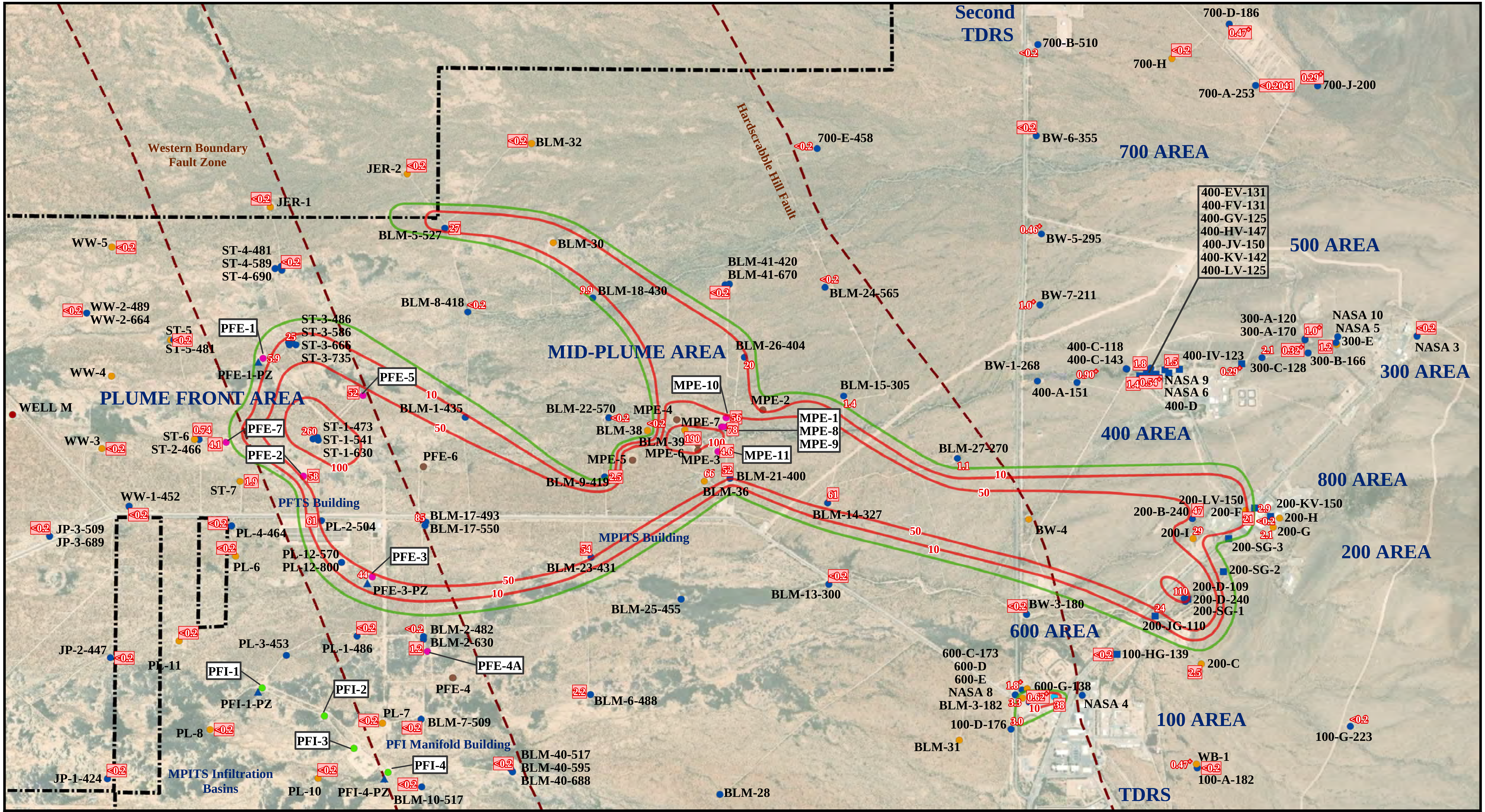
Feet
0 4,000 8,000

Note:
Method 607 NDMA results corrected for extraction efficiency.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit" in ng/L.
- No value indicates the well has not been sampled in the last year.

July 2022

Figure 4.3 Site-Wide Trichloroethene (TCE) Concentrations for the Reporting Period

(SEE NEXT PAGE)



TCE Maximum Concentrations in Groundwater for Second Quarter 2022

- 10 Equiconcentration Line (ug/L)
- TCE Cleanup Level (4.9 ug/L)
- ● Multiport
- ● Conventional Well
- ● Perched Well
- ■ MSVGM Well
- ● Extraction Well
- ● Injection Well
- ▲ Piezometer
- ● Exploration Well
- ● Production Well
- Fault
- WSTF Boundary

0 4,000 8,000 Feet

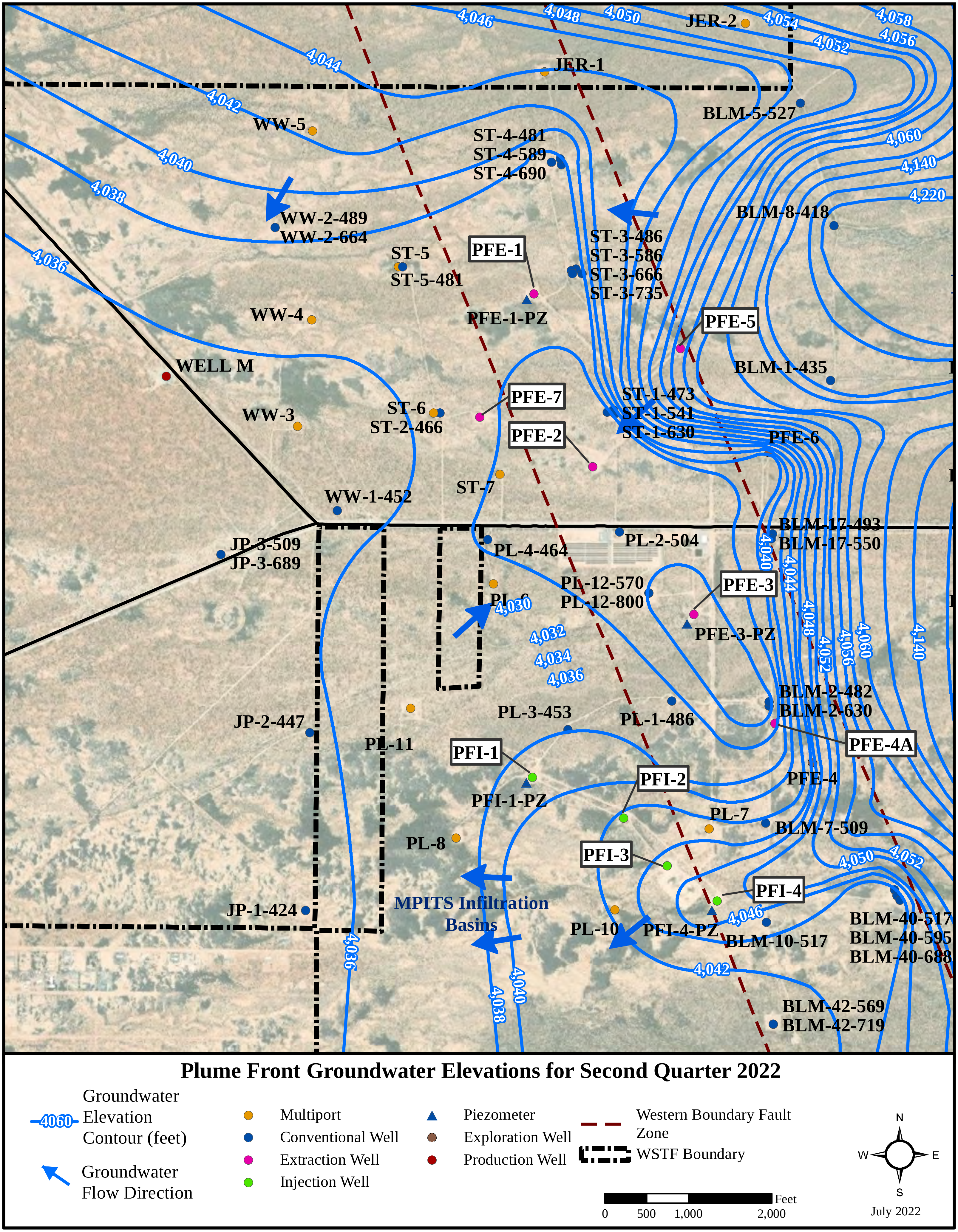
N W E S

Note:
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit" in µg/L.
- No value indicates the well has not been sampled in the last year.

July 2022

Figure 6.1 Plume Front Groundwater Elevations for the Reporting Period

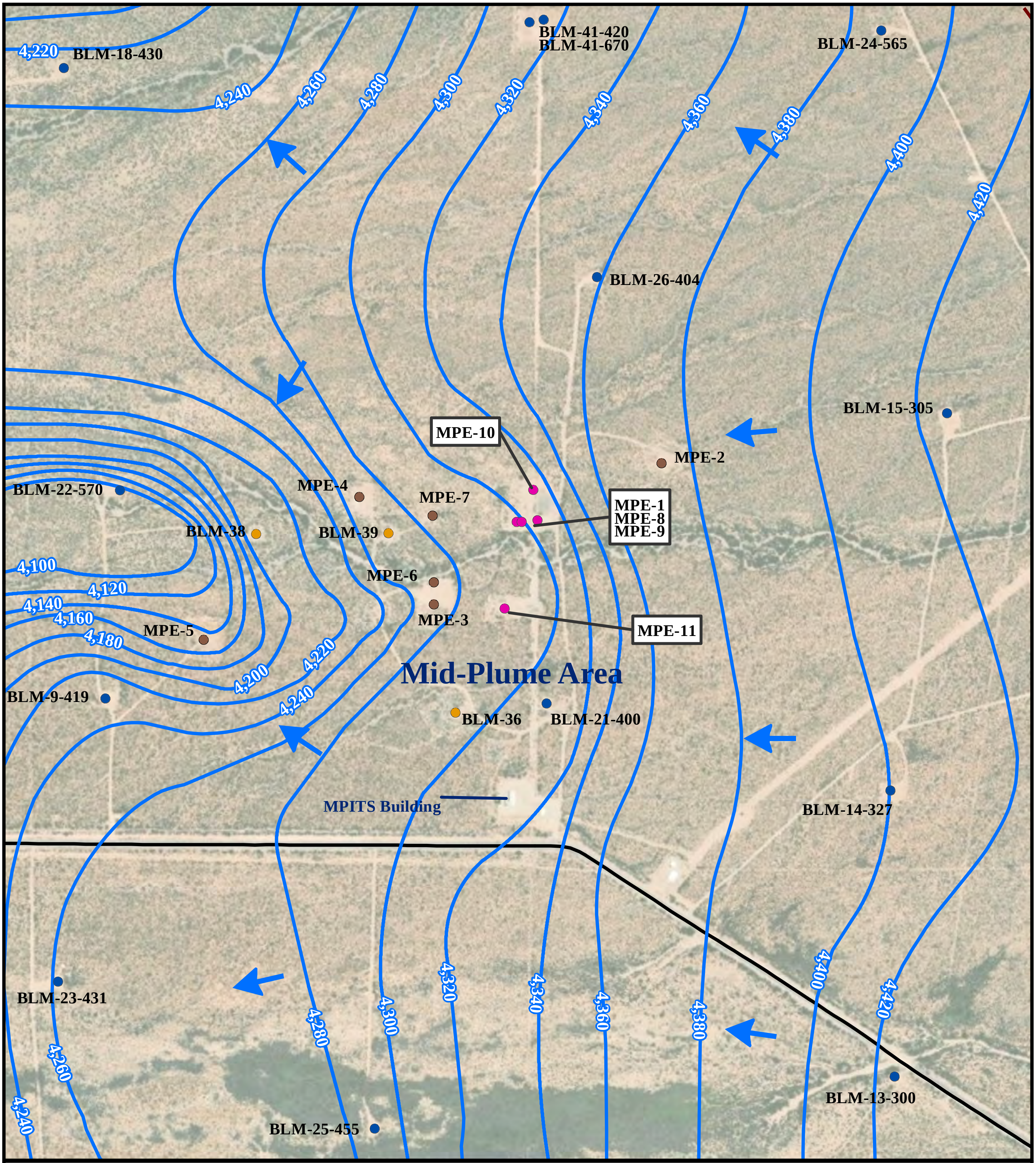
(SEE NEXT PAGE)



Plume Front Groundwater Elevations for Second Quarter 2022

Figure 6.2 Mid-plume Groundwater Elevations for the Reporting Period

(SEE NEXT PAGE)



Mid-Plume Groundwater Elevations for Second Quarter 2022

-4,300- Groundwater Elevation Contour (feet)

↖ Groundwater Flow Direction

● Conventional Well

● Multiport Well

● Extraction Well

● Exploration Well

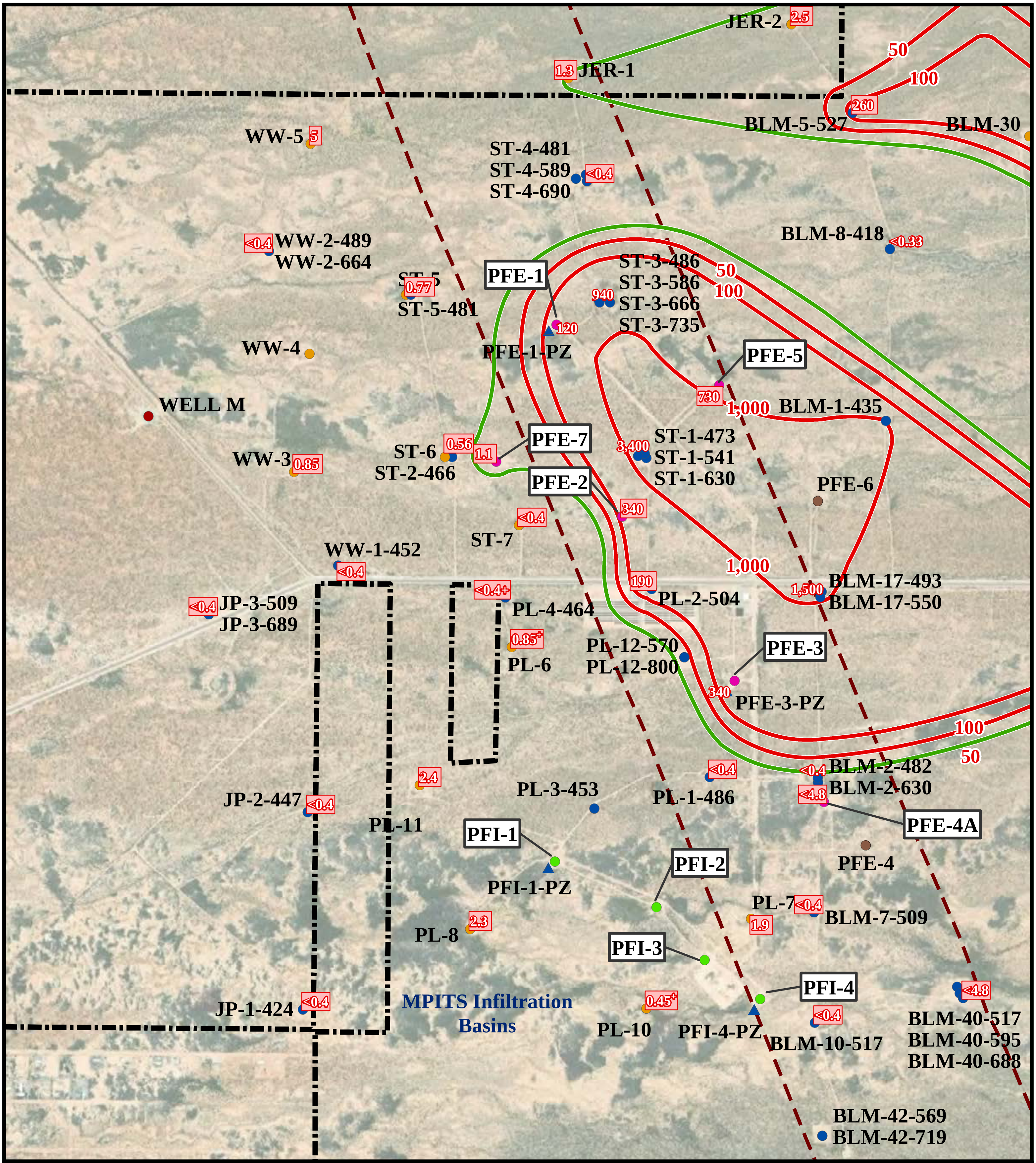
N W E S

Feet 0 625 1,250

July 2022

Figure 6.3 N-Nitrosodimethylamine Concentrations at the Plume Front for the Reporting Period

(SEE NEXT PAGE)



Plume Front NDMA Maximum Concentrations in Groundwater for Second Quarter 2022

50	Equiconcentration Line (ng/L)	●	Conventional Well	●	Exploration Well	— —	Western Boundary Fault Zone
—	NDMA Cleanup Level (1.1 ng/L)	●	Extraction Well	●	Production Well	▬ ▪ ▬	WSTF Boundary
●	Multiport Well	●	Injection Well				
		▲	Piezometer				

Feet
0 750 1,500

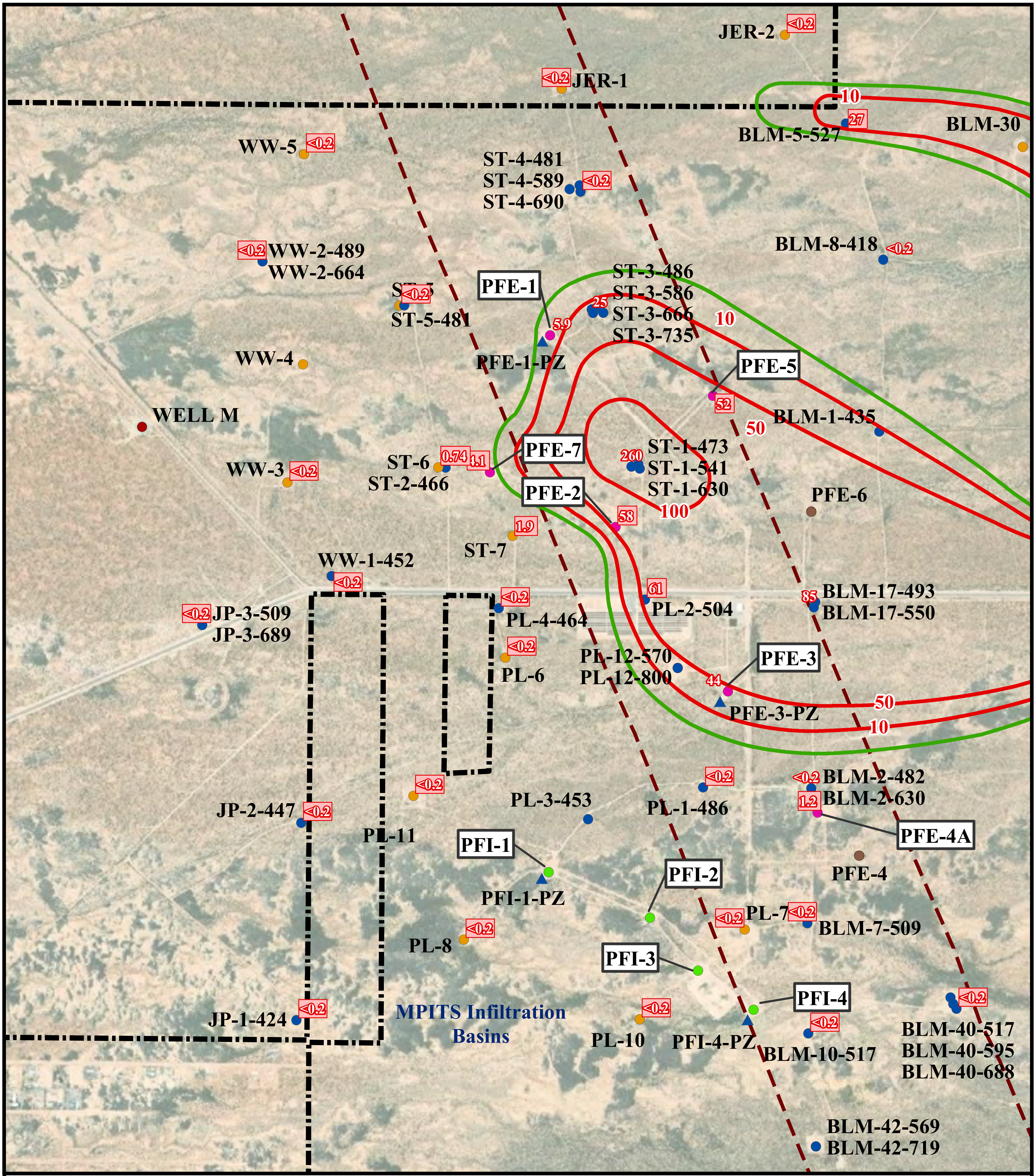
Note:
Method 607 NDMA results corrected for extraction efficiency.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit" in ng/L.
- No value indicates the well has not been sampled in the last year.

N
W E
S

July 2022

Figure 6.4 Trichloroethene Concentrations at the Plume Front for the Reporting Period

(SEE NEXT PAGE)



Plume Front TCE Maximum Concentrations in Groundwater for Second Quarter 2022

—10—	Equiconcentration Line (ug/L)	●	Conventional Well	●	Exploration Well	— —	Western Boundary Fault Zone
—	TCE Cleanup Level (4.9 ug/L)	●	Extraction Well	●	Production Well	▬ ▪ ▬	WSTF Boundary
●	Multiport Well	●	Injection Well				
		▲	Piezometer				

Feet
0 750 1,500

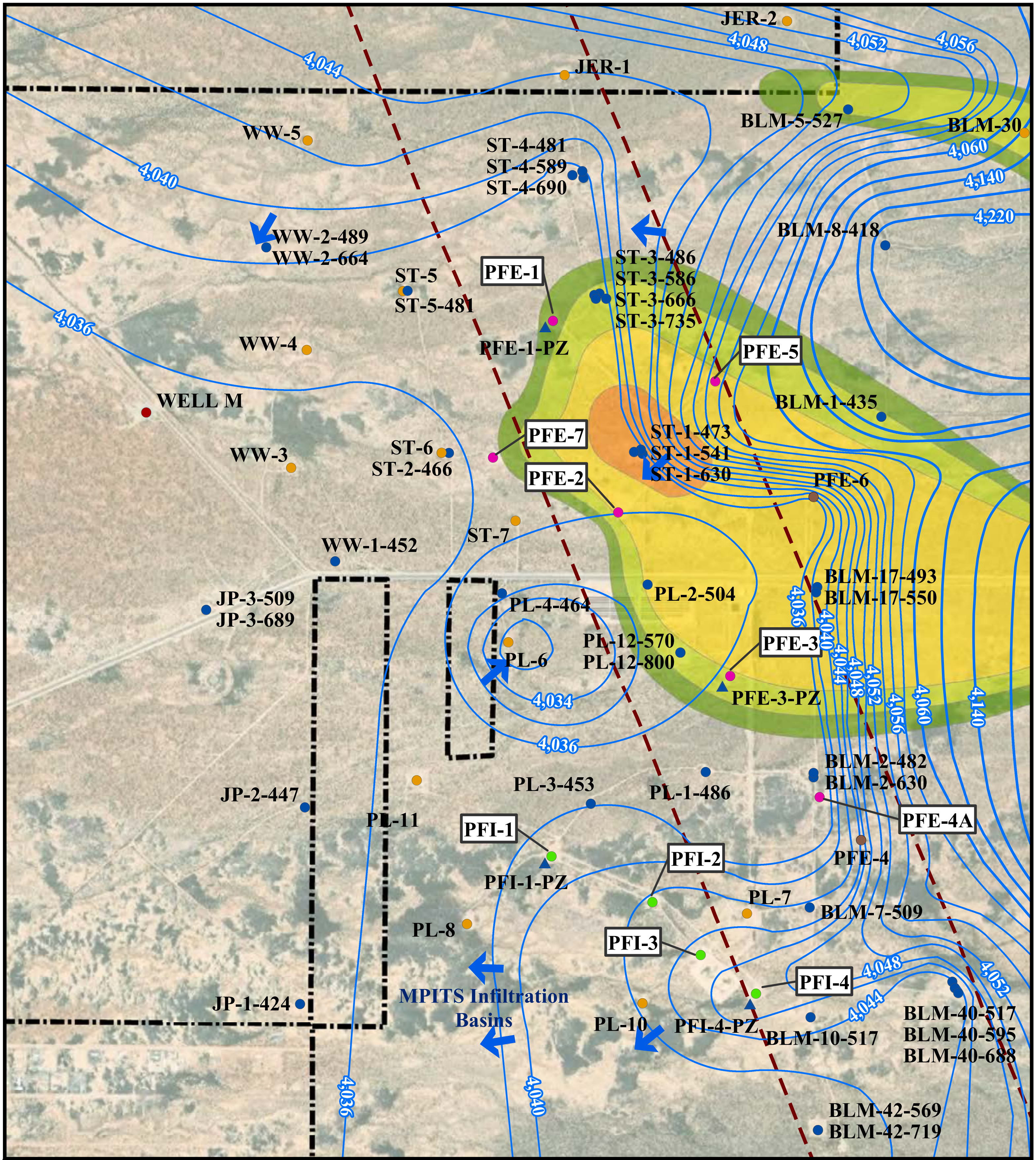
N
W E
S

Note:
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit" in µg/L.
- No value indicates the well has not been sampled in the last year.

July 2022

Figure 6.5 Plume Front Groundwater Elevations and Trichloroethene Concentrations for the Reporting Period

(SEE NEXT PAGE)



Plume Front Groundwater Elevations and TCE Concentration for Second Quarter 2022

4048 Groundwater Elevation 2 Feet Contour

4060 Groundwater Elevation 40 Feet Contour

Western Boundary Fault Zone

● Multiport Well

● Conventional Well

● Extraction Well

● Injection Well

▲ Piezometer

● Exploration Well

● Production Well

Groundwater Flow Direction

WSTF Boundary

TCE Concentration (ug/L)

4.9 10 50 100 200

Feet

0 900 1,800

N W E S

July 2022

Tables

Table 3.1 DP-1255 Discharge Standards and Groundwater Cleanup Levels for WSTF COC

Contaminant	Chemical Abstract Number	DP-1255 Standard (µg/L)	Cleanup Level (µg/L)
Carcinogens			
NDMA	62-75-9	0.0049	0.0011[1]
TCE	79-01-6	2.59	4.9[1]
PCE	127-18-4	40.3	5.0[2]
Chloroform	67-66-3	2.29	2.2[1]

Notes:

[1] Cleanup Level based on EPA RSL equivalent to the most conservative value equivalent to 1E-05 risk for carcinogens or H=1 for non-carcinogens as updated in the 2021 GMP update (NASA, 2021a).

[2] Cleanup Level based on Maximum Contaminant Levels found in 40 Code of Federal Regulations Part 141: https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=a4752225928ed82c597f05b633d21806&mc=true&n=pt40.25.141&r=PART&ty=HTML

Table 3.2 Accepted New Detections for This Reporting Period

Well ID	CAS Number	Analyte
BLM-32-543	7440-50-8	Copper, Total
PL-10-484	7439-89-6	Iron, Total
PL-10-813	7439-89-6	Iron, Total
300-A-170	7439-96-5	Manganese, Total

Table 3.3 Unconfirmed New Detections – Resolution Pending

Well ID	CAS Number	Analyte	Scheduled Resample Date
BLM-8-418	314-40-9	Bromacil	5/6/2022
BLM-38-480	314-40-9	Bromacil	5/11/2022
WB-1-200	75-15-0	Carbon Disulfide	5/18/2022
PL-8-605	123-91-1	1,4-Dioxane	6/7/2022
WW-5-579	4164-28-7	N-Nitrodimethylamine	7/13/2022
ST-6-568	117-81-7	Bis(2-ethylhexyl) Phthalate	9/15/2022
ST-6-678	314-40-9	Bromacil	9/16/2022
PL-3-453	314-40-9	Bromacil	10/4/2022
ST-7-779	7440-50-8	Copper, Total	10/6/2022
JER-2-584	7440-66-6	Zinc, Total	10/13/2022
JER-1-483	314-40-9	Bromacil	10/14/2022
BLM-41-420	314-40-9	Bromacil	10/18/2022
WW-5-459	117-81-7	Bis(2-ethylhexyl) Phthalate	10/19/2022
WW-5-809	117-81-7	Bis(2-ethylhexyl) Phthalate	10/20/2022
400-C-143	7429-90-5	Aluminum, Total	11/17/2022
700-B-510	314-40-9	Bromacil	12/9/2022
100-HG-139	67-64-1	Acetone	3/14/2023
PL-10-484	7440-02-0	Nickel, Total	4/5/2023
BLM-40-595	14797-73-0	Perchlorate	4/12/2023
200-B-240	7429-90-5	Aluminum, Total	4/19/2023
200-B-240	7439-89-6	Iron, Total	4/19/2023
PL-10-484	314-40-9	Bromacil	10/6/2023

Table 3.4 Unconfirmed Detections Resolved This Reporting Period

Well ID	CAS Number	Analyte	Scheduled Resample Date	Resolution
ST-2-466	314-40-9	Bromacil	2/2/2022	Unconfirmed
BLM-13-300	314-40-9	Bromacil	3/4/2022	Unconfirmed
BLM-42-709	117-81-7	Bis(2-ethylhexyl) Phthalate	3/13/2022	Unconfirmed
BLM-42-709	62-75-9	N-Nitrosodimethylamine	3/14/2022	Unconfirmed
WW-4-948	314-40-9	Bromacil	3/18/2022	Unconfirmed
BLM-40-517	314-40-9	Bromacil	4/1/2022	Unconfirmed
BLM-40-517	62-75-9	N-Nitrosodimethylamine	4/4/2022	Unconfirmed
PL-10-484	123-91-1	1,4-Dioxane	4/11/2022	Unconfirmed
BLM-14-327	7429-90-5	Aluminum, Total	4/15/2022	Unconfirmed

Table 4.1 Groundwater Monitoring Wells/Zones Analyzed for the Reporting Period

Well Name	Event Date	Well Group
100-A-182	02/07/22	100/600
100-C-365	02/09/22	S. Boundary
100-HG-139	03/14/22	100/600
200-B-240	04/19/22	200
200-C-170	02/14/22	200
200-C-225	02/10/22	200
200-C-270	02/10/22	200
200-D-240	03/17/22	200
200-F-225	02/15/22	200
200-F-370	02/14/22	200
200-F-420	02/15/22	200
300-A-170	02/15/22	300/400
300-B-166	02/07/22	300/400
300-E-138	02/16/22	300/400
300-E-183	02/17/22	300/400
400-EV-131	02/01/22	300/400
400-FV-131	04/18/22	300/400
400-GV-125	02/01/22	300/400
400-HV-147	04/18/22	300/400
400-JV-150	02/02/22	300/400
600-E-280	02/02/22	100/600
600-G-138	04/20/22	100/600
700-A-253	03/23/22	N. Boundary
700-D-186	03/21/22	N. Boundary
700-H-350	03/21/22	N. Boundary
700-H-535	03/23/22	N. Boundary
700-H-670	03/23/22	N. Boundary
700-J-200	03/21/22	N. Boundary
BLM-10-517	04/14/22	Plume Front
BLM-13-300	03/01/22	S. Boundary
BLM-14-327	04/18/22	Mid-plume
BLM-21-400	03/02/22	Mid-plume
BLM-23-431	02/07/22	Mid-plume
BLM-32-543	02/02/22	N. Boundary
BLM-32-571	02/01/22	N. Boundary
BLM-32-632	02/01/22	N. Boundary
BLM-39-385	04/06/22	Mid-plume
BLM-39-560	04/19/22	Mid-plume
BLM-40-517	04/04/22	S. Boundary
BLM-40-595	04/04/22	S. Boundary
BLM-40-688	04/15/22	S. Boundary
BLM-41-420	04/19/22	N. Boundary
BLM-41-670	04/19/22	N. Boundary
BLM-42-569	03/14/22	Sentinel
BLM-42-709	03/14/22	Sentinel
BLM-5-527	03/15/22	Mid-plume
BLM-6-488	04/18/22	S. Boundary
BLM-7-509	03/03/22	Plume Front
BLM-9-419	03/01/22	Mid-plume
BW-1-268	03/10/22	300/400
BW-3-180	04/20/22	100/600
BW-6-355	03/14/22	N. Boundary
JER-1-483	04/05/22	N. Boundary
JER-1-563	04/05/22	N. Boundary
JER-1-683	04/05/22	N. Boundary
JER-2-504	04/06/22	N. Boundary
JER-2-584	04/06/22	N. Boundary
JER-2-684	04/06/22	N. Boundary
JP-1-424	04/01/22	Sentinel
JP-2-447	04/01/22	Sentinel
JP-3-509	04/14/22	Sentinel
JP-3-689	04/14/22	Sentinel
NASA 3	02/10/22	Upgradient
PL-10-484	04/05/22	Sentinel
PL-10-592	04/05/22	Sentinel
PL-10-813	04/04/22	Sentinel
PL-10-962	04/04/22	Sentinel
PL-11-470	03/02/22	Sentinel
PL-11-530	03/02/22	Sentinel
PL-11-710	03/07/22	Sentinel
PL-11-820	03/07/22	Sentinel
PL-11-980	03/07/22	Sentinel
PL-12-570	02/08/22	In Plume
PL-12-800	02/14/22	In Plume
PL-1-486	04/19/22	In Plume
PL-2-504	03/15/22	In Plume
PL-4-464	03/15/22	Plume Front
PL-6-545	04/14/22	Plume Front
PL-6-725	04/13/22	Plume Front
PL-7-480	02/08/22	Plume Front
PL-7-560	02/08/22	Plume Front
PL-7-630	02/07/22	Plume Front
PL-8-455	03/10/22	Sentinel
PL-8-605	03/08/22	Sentinel

Well Name	Event Date	Well Group
PL-8-780	03/08/22	Sentinel
PL-8-965	03/09/22	Sentinel
ST-2-466	02/02/22	Plume Front
ST-4-481	03/07/22	Plume Front
ST-4-589	02/07/22	Plume Front
ST-4-690	03/07/22	Plume Front
ST-5-481	02/23/22	Plume Front
ST-5-485	02/02/22	Plume Front
ST-5-655	02/01/22	Plume Front
ST-6-528	03/08/22	Plume Front

Well Name	Event Date	Well Group
ST-6-568	03/08/22	Plume Front
ST-6-678	03/09/22	Plume Front
ST-6-824	03/09/22	Plume Front
ST-6-970	03/09/22	Plume Front
ST-7-453	04/07/22	Plume Front
ST-7-544	04/07/22	Plume Front
ST-7-779	04/11/22	Plume Front
ST-7-970	04/11/22	Plume Front
WW-1-452	03/02/22	Plume Front
WW-2-489	03/10/22	Sentinel

Well Name	Event Date	Well Group
WW-2-664	03/10/22	Sentinel
WW-3-469	03/02/22	Sentinel
WW-3-569	03/01/22	Sentinel
WW-3-710	03/02/22	Sentinel
WW-3-978	03/03/22	Sentinel
WW-5-459	04/13/22	Sentinel
WW-5-579	04/13/22	Sentinel
WW-5-809	04/13/22	Sentinel
WW-5-909	04/13/22	Sentinel

Plume Front	
Well Name	Event Date
B650-EFF-1	02/03/22
B650-EFF-1	03/18/22
B650-EFF-1	04/15/22
B650-INF-1	02/03/22
B650-INF-1	03/18/22
B650-INF-1	04/15/22

Plume Front	
Well Name	Event Date
PFE-2	04/19/22
PFE-4A	04/15/22
PFE-5	04/19/22
PFE-7	04/19/22

Mid-plume	
Well Name	Event Date
B655-EFF-2	02/04/22
B655-EFF-2	03/18/22
B655-EFF-2	04/15/22
B655-INF-2	02/04/22
B655-INF-2	03/18/22
B655-INF-2	04/15/22

Mid-plume	
Well Name	Event Date
MPE-1	02/16/22
MPE-10	02/16/22
MPE-11	02/17/22
MPE-8	02/16/22

Table 4.2 Groundwater Elevation Data

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
100-A-182	198	182	192	4,669.73	4/12/22
100-C-365	391	365	386	4,536.86	4/12/022
100-D-176	201	176	196	4,568.86	4/12/22
100-E-261	277	261	271	4,681.96	4/12/22
100-F-358	378	358	368	4,712.98	4/12/22
100-G-223	238	223	233	4,851.11	4/12/22
100-HG-139	165	139	159	4,647.25	4/12/22
200-B-240	255	240	250	4,647.16	4/12/22
200-C(170)[i]	290	N/A	N/A	4,681.652	4/15/22
200-D-240	280	240	250	4,663.15	4/12/22
200-F(370)[i]	590	N/A	N/A	4,719.68	4/15/22
200-G(220)[i]	515	N/A	N/A	4,722.555	4/15/22
200-H(331)[i]	458	N/A	N/A	4,733.055	4/15/22
200-I(300)[i]	815	N/A	N/A	4,652.826	4/15/22
200-JG-110	150	110	130	4,655.13	4/12/22
200-KV-150	175	150	170	4,726.04	4/12/22
200-LV-150	175	150	170	4,727.89	4/12/22
200-SG-1	138	123	138	4,652.08	4/12/22
300-A-120	151	120	146	4,785.47	4/12/22
300-B-166	181	165	176	4,773.04	4/12/22
300-C-128	160	128	154	4,739.72	4/12/22
300-D-153	179	153	174	4,949.27	4/12/22
300-E(138)[i]	395	N/A	N/A	4,805.817	4/15/22
300-F-175	195	175	185	5,043.55	4/12/22
400-A-151	187	151	176	4,636.39	4/12/22
400-D(275)[i]	380	N/A	N/A	4,663.827	4/15/22
600-C-173	199	173	193	4,568.57	4/12/22
600-E(280)[i]	690	N/A	N/A	4,561.055	4/15/22
700-A-253	269	253	263	4,729.13	4/12/22
700-B-510	550	510	531	4,344.86	4/12/22
700-D-186	202	186	196	4,711.41	4/12/22
700-E-458	484	458	479	4,411.31	4/12/22
700-H(350)[i]	695	N/A	N/A	4,631.352	4/15/22
700-J-200	230	200	220	4,834.95	4/12/22
BLM-10-517	532	517	527	4,045.68	4/12/22
BLM-13-300	316	300	310	4,422.46	4/12/22
BLM-1-435	451	435	446	4,145.38	4/12/22
BLM-14-327	343	327	337	4,399.87	4/12/22
BLM-15-305	321	305	315	4,423.01	4/12/22

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
BLM-17-493	519	493	513	4,041.08	4/12/22
BLM-18-430	456	430	451	4,226.12	4/12/22
BLM-21-400	413	400	410	4,312.51	4/12/22
BLM-22-570	597	570	592	4,095.12	4/12/22
BLM-23-431	447	431	441	4,260.64	4/12/22
BLM-24-565	590	565	585	4,385.13	4/12/22
BLM-25-455	470	455	465	4,283.27	4/12/22
BLM-2-630	498	482	493	4,032.36	4/12/22
BLM-26-404	420	404	414	4,358.16	4/12/22
BLM-27-270	286	270	280	4,498.56	4/12/22
BLM-28 (Borehole)[i]	555	N/A	N/A	4,257.85	4/12/22
BLM-3-182	208	182	203	4,568.68	4/12/22
BLM-36(350)[ii]	905	604	614	4,113.936	4/15/22
BLM-38(480)[ii]	641	475	485	4,203.851	4/15/22
BLM-39(385)[ii]	595	379	389	4,272.762	4/15/22
BLM-40-517	532	517	527	4,043.14	4/12/22
BLM-41-420	435	420	430	4,317.37	4/12/22
BLM-5-527	560	527	538	4,049.65	4/12/22
BLM-6-488	503	488	498	4,231.3	4/12/22
BLM-7-509	525	509	520	4,042.49	4/12/22
BLM-8-418	434	418	428	4,223.48	4/12/22
BLM-9-419	445	419	440	4,226.82	4/12/22
BW-1-268	294	268	289	4,607.12	4/12/22
BW-3-180	205	180	200	4,569.14	4/12/22
BW-5-295	311	295	305	4,582.25	4/12/22
BW-6-355	381	355	376	4,573.69	4/12/22
BW-7-211	225	211	222	4,607.13	4/12/22
JP-1-424	440	424	434	4,034.83	4/12/22
JP-2-447	462	446	457	4,035.95	4/12/22
MPE-2	600	400	580	4,372.666	4/12/22
MPE-3	639	479	619	4,271.11	4/12/22
MPE-4	639	499	619	4,275.9	4/12/22
MPE-5	590	450	570	4,144.33	4/12/22
MPE-6	603	383	602	4,276.22	4/12/22
MPE-7	600	401	600	4,235.61	4/12/22
NASA 10	135	110	130	4,823.1	4/12/22
NASA 3	144	119	139	4,889.31	4/12/22
NASA 4	171	146	166	4,638.18	4/12/22
NASA 5	135	110	130	4,792.73	4/12/22

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
NASA 6	153	128	148	4,690.28	4/12/22
NASA 8	197	172	192	4,571.48	4/12/22
PFE-1-PZ	609	588	598	4,036.99	4/12/22
PFE-3-PZ	620	590	600	4,036.74	4/12/22
PFE-4	877	397	876	4,042.886	4/12/22
PFE-6	539	434	534	4,038.464	4/12/22
PFI-1-PZ	619	589	599	4,039.02	4/12/22
PFI-4-PZ	600	398	600	4,046.96	4/12/22
PL-10(484)[ii]	1,000	479	489	4,042.024	4/18/22
PL-1-486	502	486	496	4,036.47	4/12/22
PL-2-504	520	504	514	4,034.65	4/12/22
PL-3-453	469	453	464	4,037.56	4/12/22
PL-4-464	480	464	474	4,035.77	4/12/22
PL-6(545)[ii]	1,860	540	550	4,029.245	4/15/22
PL-7(480)[ii]	655	475	485	4,042.31	4/15/22
PL-8(455)[ii]	1,000	448	458	4,033.284	4/15/22
ST-1-473	488	473	483	4,034.33	4/12/22
ST-2-466	481	466	476	4,035.09	4/12/22
ST-3-486	502	486	496	4,036.94	4/12/22
ST-4-481	497	481	491	4,037.93	4/12/22
ST-5-481	497	481	491	4,037.45	4/12/22
WB-14(520)[i]	545	N/A	N/A	4,433.836	4/15/22
WB-5(250)[i]	400	N/A	N/A	4,667.706	4/15/22
WW-1-452	468	452	462	4,035.95	4/12/22
WW-3(469)[ii]	1,014	464	474	4,032.815	4/15/22

Notes:

[i] Depth to top and bottom of screen are indicated as not applicable (N/A) for multiport Westbay wells that are completed in an open borehole. The depth of the Westbay monitoring port used to calculate the piezometric surface is provided in parenthesis with the well name. Depth to water and groundwater elevation were calculated from the formation pressure at the indicated port depth.

[ii] The screen depths listed for retrofit multiport wells indicate the top and bottom of the screen in the outer casing of the well that corresponds to the measurement port used at that location. The depth of the monitoring port used to calculate the piezometric surface is provided in parenthesis with the well name. Depth to water and groundwater elevation for Westbay multiport monitoring wells were calculated from the formation pressure at the indicated port depth. Depth to water and groundwater elevation for FLUTe multiport monitoring wells were calculated from pressure transducer readings collected on the measurement date.

Table 5.1 PFTS and MPITS Operational Status for the Reporting Period

Month	Plume Front Treatment System			Mid-plume Treatment System		
	Days Operated	Average Flow Rate (gpm)	Groundwater Treated (acre-ft)	Days Operated	Average Flow Rate (gpm)	Groundwater Treated (acre-ft)
Feb-22	26 of 28	556	53.6	28 of 28	9.7	1.14
Mar-22	31 of 31	565	75.2	31 of 31	9.5	1.27
Apr-22	19 of 30	394	40.9	30 of 30	8.1	0.98

Table 5.2 PFTS and MPITS System Shutdowns for the Reporting Period

Shutdown Date	Restart Date	Type of Shutdown	Description
Plume Front Treatment System Shutdowns			
2/4/22	2/7/22	Unplanned	The system shut down automatically because of a leak detection alarm believed to have been caused by condensation in a portion of the extraction well piping.
2/16/22	2/17/22	Unplanned	The system shut down automatically because of a disruption in the off-site electrical power supply.
3/1/22	3/1/22	Planned	NASA shut the system down to work on flow meters.
3/6/22	3/7/22	Unplanned	The system shut down automatically because of a disruption in the off-site electrical power supply.
3/8/22	3/8/22	Unplanned	The system shut down automatically due to a high-pressure alarm caused while tuning the control system for the air strippers.
3/29/22	3/29/22	Unplanned	The system shut down automatically due to a leak detection alarm caused by condensate in a section of the dual-walled extraction well piping.
4/1/22	4/1/22	Planned	NASA shut the system down to repair a valve on the spent solution tank.
4/1/22	4/4/22	Planned	NASA shut the system down to evaluate and repair a faulty isolation valve on an air stripper.
4/5/22	4/5/22	Unplanned	The system shut down automatically due to a low air flow alarm at one of the air strippers.
4/10/22	4/11/22	Unplanned	The system shut down automatically because of a disruption in the electrical power supply.
Mid-plume Interception and Treatment System Shutdowns			
2/10/22	2/10/22	Planned	NASA shut the system down to inspect and verify instrument and controls wiring for drawing updates.
2/14/22	2/14/22	Planned	NASA shut the system down to inspect and verify instrument and controls wiring for drawing updates.
2/15/22	2/15/22	Planned	NASA shut the system down to inspect and verify instrument and controls wiring for drawing updates.
2/16/22	2/16/22	Unplanned	The system shut down automatically because of a disruption in the off-site electrical power supply.
2/24/22	2/25/22	Planned	NASA shut the system down to accommodate a scheduled outage of the local area network.
2/25/22	2/26/22	Unplanned	The system shut down automatically because of a low transmissivity/UV Log Reduction alarm.

Shutdown Date	Restart Date	Type of Shutdown	Description
3/3/22	3/3/22	Unplanned	The system shut down automatically due to a low UV transmissivity alarm.
3/6/22	3/7/22	Unplanned	The system shut down automatically because of a disruption in the electrical power supply.
3/22/22	3/23/22	Planned	NASA shut down the system to replace damaged wiring in the UV system power distribution cabinet.
3/31/22	4/1/22	Unplanned	The system shut down automatically because of a disruption in the electrical power supply.
3/31/22	4/1/22	Unplanned	The system shut down automatically because of a disruption in the electrical power supply.
4/4/22	4/4/22	Planned	NASA shut down the system to update processor firmware/software.
4/5/22	4/5/22	Planned	NASA shut down the system to update processor firmware/software.
4/25/22	4/26/22	Planned	NASA shut down the system to accommodate a planned electrical power outage.

Table 5.3 PFTS Air Stripper and UV Reactor Performance for the Reporting Period

	Analyte	Unit	Design	Feb-22	Mar-22	Apr-22
Air Stripper Influent Concentrations	TCE	µg/L	130	28	24	23
	PCE	µg/L	0.66	1.1	0.89 J	0.87 J
	Freon 11	µg/L	860	21	16	23
	Chloroform	µg/L	NA[1]	< 0.24[2]	< 0.24[2]	< 0.24[2]
Air Stripper Effluent Concentrations	TCE	µg/L	5.0	<0.20[2]	< 0.20[2]	< 0.20[2]
	PCE	µg/L	5.0	< 0.21[2]	< 0.21[2]	< 0.21[2]
	Freon 11	µg/L	100	< 0.24[2]	< 0.24[2]	< 0.24[2]
	Chloroform	µg/L	NA[1]	< 0.24[2]	< 0.24[2]	< 0.24[2]
UV Reactor Influent Concentrations	NDMA[3]	ng/L	2,000	149[a]	152[b]	155[c]
UV Reactor Effluent Concentrations	NDMA[4]	ng/L	< 2.0	<0.4[2]	<0.41[2]	<0.4[2]

FB - The analyte was detected in the field blank.
J - The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NS – Not sampled during the reporting period.
RB - The analyte was detected in the method blank.
TB - The analyte was detected in the trip blank.

[1] Chloroform was not included as an analyte in the system design criteria; not applicable (NA).

[2] Analytical result for the constituent was below the method detection limit (MDL; provided).

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 49%[a], 46%[b], 44%[c]

[4] Analytical results from the low-level NDMA analytical method. NDMA was not detected by modified Method 607.

Table 5.4 PFTS Extraction and Injection Well Flow Rates for the Reporting Period

	Well Name	Design Flow Rate (gpm)	Operational Average Flow Rate[1] (gpm)	Overall Average Flow Rate[2] (gpm)	Operational Percent of Well Design	Overall Percent of Well Design
Extraction Wells (gpm)	**PFE-1**	288	N/O	N/O	N/O	N/O
	PFE-2	224	240	173	107%	77%
	PFE-3	213	N/O	N/O	N/O	N/O
	PFE-4A	200	170	123	85%	61%
	PFE-5	5.5	3.8	2.8	70%	50%
	PFE-7	125	147	106	118%	85%
Injection Wells (gpm)	**PFI-1**	269	N/O	N/O	N/O	N/O
	PFI-2	269	203	146	75%	54%
	PFI-3	344	226	163	66%	47%
	PFI-4	194	126	90	65%	47%

[1] Operational averages are averages based on when a well was in operating status. Backwashing and downtime events are not included.

[2] Overall averages are averages based on the overall status of the well and include backwashing and downtime events.

N/O - Not operating during reporting period.

Table 5.5 Comparison of Specific Capacities for the Plume Front Wells

Well Name	Specific Capacity at Installation	Specific Capacity Jul-21	Specific Capacity Oct-21	Specific Capacity Jan-22[2]	Specific Capacity Apr-22
PFE-1	8.3	NA[1]	6.6	6.9	NA[1]
PFE-2	5.7	6.5	6.6	6.4	6.0
PFE-3	19.4	10.0	10.5	NA[1]	NA[1]
PFE-4A	3.1	2.7	2.4	2.8	3.9
PFE-5	0.14	NA[1]	0.1	0.1	<0.1
PFE-7	6	6.0	5.8	5.9	5.9
Well Name	**Specific Capacity at Installation (Ideal Range)**	**Specific Capacity Jul-21**	**Specific Capacity Oct-21**	**Specific Capacity Jan-22[2]**	**Specific Capacity Apr-22**
PFI-1	2.8–5	NA[1]	NA[1]	NA[1]	NA[1]
PFI-2	2.8–7	2.2	1.6	1.7	2.1
PFI-3	2–4	1.9	2.0	1.9	2.2
PFI-4	2.3–3.5	1.6	1.5	1.4	1.7

Notes: Specific capacities are used to measure well performances and have units of gallons per minute per foot of drawdown.

NA[1] – Not Applicable due to well being inoperative during reporting period.

[2] – Measurements are from December 2021 were used because not all wells experienced a drawdown and recovery cycle in January 2022.

Table 5.6 Plume Front Mass Removal[1]

Date	TCE (kg)	Freon 11 (kg)	Chloroform(g)	PCE (g)	NDMA (g)
May-21	3.7	3.9	ND	115	27
June-21	3.3	3.4	ND	99	24
Jul-21	4.4	3.7	ND	172	28
Aug-21	4.0	4.1	ND	159	23
Sep-21	0.45	0.28	ND	13	3.9
Oct-21	0.26	0.15	ND	ND	5.9
Nov-21	2.8	2.1	ND	85	16
Dec-21	1.5	1.3	ND	52	14
Jan-22	2.4	2.3	ND	74	17
Feb-22	1.8	1.4	ND	59	10
Mar-22	2.3	1.5	ND	63	14
Apr-22	1.2	1.2	ND	33	8
Total[2]	**28**	**25**	**ND**	**924**	**191**

Notes:

1) Mass removed calculated as:
*(Influent concentration - Effluent concentration) * volume of water extracted*

2) Total mass removed during the period covered by this table.

Table 5.7 MPITS Air Stripper and UV Reactor Performance for the Reporting Period

	Analyte	Unit	Design Parameter	Feb-22	Mar-22	Apr-22
Air Stripper Influent Concentrations (MPE Wells)	TCE	µg/L	140	47	51	46
	PCE	µg/L	6.4	2.5	2.5	2.6
	Freon 11	µg/L	240	82	98	120
	Chloroform	µg/L	NA[1]	<0.24[2]	<0.24[2]	<0.24[2]
Air Stripper Influent Concentrations (Well 600-G-138)	TCE	µg/L	140	NS	NS	38
	PCE	µg/L	6.4	NS	NS	<0.21[2]
	Freon 11	µg/L	240	NS	NS	0.6 J
	Chloroform	µg/L	NA[1]	NS	NS	<0.24[2]
Air Stripper Effluent Concentrations	TCE	µg/L	1.0	<0.20[2]	<0.20[2]	<0.20[2]
	PCE	µg/L	1.0	<0.21[2]	<0.21[2]	<0.21[2]
	Freon 11	µg/L	50	<0.24[2]	<0.24[2]	0.39 J
	Chloroform	µg/L	NA[1]	<0.24[2]	<0.24[2]	<0.24[2]
UV Reactor Influent Concentrations (MPE Wells)	NDMA[3]	ng/L	25,500	3,300[a]	3,200[b]	3,600[c]
UV Reactor Influent Concentrations (Well 600-G-138)	NDMA	ng/L	25,500	NS	NS	<4.7[2]
UV Reactor Effluent Concentrations[4]	NDMA[4]	ng/L	< 2.0	<0.4[1]	<0.4[1]	<0.4[1]

Notes:

* = For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (179%) in the laboratory fortified blank (LFB21A28CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.

FB = The analyte was detected in the field blank.J = The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.

NS = Not sampled during the reporting period. Well 600-G-138 is sampled annually for NDMA in accordance with the GMP (NASA, 2021a). Analytical data are provided in this table when available.

RB = The analyte was detected in the method blank.

[1] Chloroform was not included in the design analyte list; not applicable (NA).

[2] Analytical result for the constituent was below the MDL (provided).

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 49%[a], 46%[b], 44%[c].

[4] Analytical results from low-level analytical method and was below the MDL (provided). Results for Method 607 were ND.

Table 5.8 Mid-plume Mass Removal[1]

Date	TCE (g)	F11 (g)	Chloroform (g)	PCE (g)	NDMA (g)
May-21	69	150	ND	3.1	6.2
Jun-21	83	179	ND	3.6	7.3
Jul-21	70	151	ND	3.1	6.2
Aug-21	65	113	ND	2.8	6.0
Sep-21	62	121	ND	2.5	5.3
Oct-21	35	70	ND	1.4	3.0
Nov-21	65	123	ND	3.1	4.1
Dec-21	63	120	ND	3.0	4.4
Jan-22	72	138	ND	3.4	5.0
Feb-22	54	114	ND	2.4	4.5
Mar-22	69	137	ND	3.0	5.9
Apr-22	52	112	ND	2.3	4.3
Total[2]	759	1528	ND	33.7	62.2

Notes: .

1) Mass calculation: volume of water extracted at each well * (*contaminant concentration at each well – MPITS effluent concentration*)

2) Total mass removed during the period covered by this table.

Table 5.9 Groundwater Treatment System Operation Costs ($ / 1,000 gals)

Date	Gallons[1] Treated	ECO Labor + Materials	TEST Labor + Materials	L+M cost per 1,000 gal	Energy Cost	Energy Cost per 1,000 gal	Total Cost	Total Cost per 1,000 gal treated
May-21	22,918,654	$60,571	$62,487	$5.37	$23,938	$1.04	$146,996	$6.41
Jun-21	24,723,395	$60,571	$89,304	$6.06	$21,923	$0.89	$171,798	$6.95
Jul-21	26,173,206	$48,457	$56,956	$4.03	$24,106	$0.92	$129,519	$4.95
Aug-21	28,802,957	$60,547	$53,940	$3.97	$23,373	$0.81	$137,860	$4.79
Sep-21	26,672,390	$118,079	$66,298	$6.91	$29,110[2]	$1.09	$213,487	$8.00
Oct-21	28,005,674	$65,147	$49,923	$4.11	$38,421[2]	$1.37	$153,491	$5.48
Nov-21	33,533,267	$101,792	$49,614	$4.52	$40,390[2]	$1.20	$191,796	$5.72
Dec-21	9,661,806	$122,151	$55,846	$18.42	$20,021[2]	$2.07	$198,017	$20.49
Jan-22	24,289,224	$81,434	$45,431	$5.22	$26,150[2]	$1.08	$153,015	$6.30
Feb-22	29,904,475	$101,792	$50,793	$5.10	$19,193	$0.64	$171,779	$5.74
Mar-22	23,578,185	$81,434	$49,834	$5.57	$18,756	$0.80	$150,024	$6.36
Apr-22	27,294,811	$61,075	$35,658	$3.54	$22,271	$0.82	$119,004	$4.36
12-Month Total	**305,558,044**	**$963,050**	**$666,084**	**$5.33**	**$307,652**	**$1.01**	**$1,936,786**	**$6.34**

Notes:

1) Gallons treated reflects amount of water extracted during power reporting period.

2) Includes peak demand rates.

Table 6.1 Status of Wells with Sampling Issues

Well	Date of Discovery	Description	Scheduled for Sampling this Qtr? / Next Sampling Date per GMP	Description of Future Plan or Resolution
New Occurrences this Quarter				
BLM-21-400	Feb-22	The sampling system failed during the scheduled attempt to sample this well.	No / NA	NASA repaired the sampling system and completed sampling in March 2022.
Unresolved Issues				
BLM-1-435	Apr-20	Sampling failed, as there was not enough water in the screen to fill the sample bottles. Failed again, in April 2021 and October 2021.	Yes / Apr-22	The well does not provide sufficient water for representative sampling. NASA recommends plugging and abandoning this well as described in the 2022 GMP update (NASA, 2022i).
400-C-118	Nov-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	NA	The well does not provide sufficient water for representative sampling. NASA plans to plug and abandon this well in the fall of 2022.
400-C-143	Apr-21	Unable to collect groundwater sample because the water level in the well was insufficient for sampling.	No / Nov-22	Previously reported as having insufficient water level. A review of sampling records indicates that the water level was adequate for sampling in November 2021 and the required groundwater samples were collected. The well is scheduled for the next routine sampling event in November 2022.
PL-3-453	Dec-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	NA	The well does not provide sufficient water for representative sampling. NASA recommends plugging and abandoning this well as described in the 2022 GMP update (NASA, 2022i).

Well	Date of Discovery	Description	Scheduled for Sampling this Qtr? / Next Sampling Date per GMP	Description of Future Plan or Resolution
WW-4	Jul-19 (FLUTe removal)	Water FLUTe sampling system removed Data Representativeness Phase 1: Water FLUTe Well Evaluation.	Yes / May-22	NASA installed a new Water FLUTe system in the well in February 2022 and resumed routine groundwater sampling in accordance with the GMP in May 2022.
NASA 9	Oct-20	Could not be sampled - intrusion of roots into the well casing and screen.	NA	NASA prepared and submitted a work plan for abandonment and replacement of the monitoring well to NMED on April 29, 2022.
Issues Resolved this Quarter (will not appear in future Periodic Monitoring Reports)				
BLM-21-400	Feb-22	The sampling system failed during the scheduled attempt to sample this well.	NA	NASA repaired the sampling system and completed sampling in March 2022.

Appendix A
Indicator Parameters and Analytical Data

Appendix A.1
Monitor Well Indicator Parameters

Summary of Water Quality Parameters
for the Sampling Events in this Reporting Period

Well ID **100-A-182** **Event Date** **2/7/2022**

Sample	Parameter	Result	Units
2202071422C	Conductivity	1145	µS/cm
2202071422C	DO	3.18	mg/L
2202071422C	ORP	119	mV
2202071422C	pH	7.22	NA
2202071422C	Temperature	20.73	ºC
2202071422C	Turbidity	0.63	NTU
2202071424C	Conductivity	1148	µS/cm
2202071424C	DO	3.15	mg/L
2202071424C	ORP	118	mV
2202071424C	pH	7.20	NA
2202071424C	Temperature	20.74	ºC
2202071424C	Turbidity	0.59	NTU
2202071426C	Conductivity	1148	µS/cm
2202071426C	DO	3.16	mg/L
2202071426C	ORP	119	mV
2202071426C	pH	7.17	NA
2202071426C	Temperature	20.72	ºC
2202071426C	Turbidity	0.62	NTU

Well ID **100-C-365** **Event Date** **2/9/2022**

Sample	Parameter	Result	Units
2202091430C	Conductivity	775	µS/cm
2202091430C	DO	5.15	mg/L
2202091430C	ORP	76	mV
2202091430C	pH	7.81	NA
2202091430C	Temperature	21.69	ºC
2202091430C	Turbidity	0.41	NTU
2202091431C	Conductivity	772	µS/cm
2202091431C	DO	5.25	mg/L
2202091431C	ORP	76	mV
2202091431C	pH	7.85	NA
2202091431C	Temperature	21.70	ºC
2202091431C	Turbidity	0.38	NTU
2202091432C	Conductivity	775	µS/cm
2202091432C	DO	5.20	mg/L
2202091432C	ORP	76	mV
2202091432C	pH	7.89	NA
2202091432C	Temperature	21.63	ºC
2202091432C	Turbidity	0.43	NTU

Well ID 100-HG-139 Event Date 3/14/2022

Sample	Parameter	Result	Units
2203140943A	Conductivity	1273.563	µS/cm
2203140943A	DO	4.14	mg/L
2203140943A	DTW	127.75	ft
2203140943A	ORP	239	mV
2203140943A	pH	7.40	NA
2203140943A	Temperature	19.24	ºC
2203140943A	Turbidity	12.54	NTU
2203140945A	Conductivity	1281.255	µS/cm
2203140945A	DO	4.17	mg/L
2203140945A	DTW	128.20	ft
2203140945A	ORP	240	mV
2203140945A	pH	7.40	NA
2203140945A	Temperature	19.56	ºC
2203140945A	Turbidity	1.91	NTU
2203140947A	Conductivity	1276.473	µS/cm
2203140947A	DO	4.14	mg/L
2203140947A	DTW	128.20	ft
2203140947A	ORP	241	mV
2203140947A	pH	7.40	NA
2203140947A	Temperature	19.20	ºC
2203140947A	Turbidity	2.22	NTU

Well ID 200-B-240 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190950A	Conductivity	1095	µS/cm
2204190950A	DO	10.30	mg/L
2204190950A	DTW	194.50	ft
2204190950A	ORP	134	mV
2204190950A	pH	6.68	NA
2204190950A	Temperature	21.86	ºC
2204190950A	Turbidity	1.07	NTU
2204190955A	Conductivity	1097	µS/cm
2204190955A	DO	7.01	mg/L
2204190955A	ORP	120	mV
2204190955A	pH	6.97	NA
2204190955A	Temperature	21.73	ºC
2204190955A	Turbidity	1.09	NTU
2204191000A	Conductivity	1092	µS/cm
2204191000A	DO	6.38	mg/L
2204191000A	ORP	112	mV
2204191000A	pH	7.13	NA
2204191000A	Temperature	21.73	ºC
2204191000A	Turbidity	0.93	NTU

Well ID 200-C-170 Event Date 2/14/2022

Sample	Parameter	Result	Units
2202140957Y	Atmospheric Pressure	12.53	psia
2202140957Y	Conductivity	996	µS/cm
2202140957Y	DTW	147.85	ft
2202140957Y	Formation Pressure	29.95	psia
2202140957Y	pH	8.05	NA
2202140957Y	Temperature	18.6	ºC
2202140957Y	Turbidity	0.63	NTU
2202141041Y	Atmospheric Pressure	12.50	psia
2202141041Y	Conductivity	1007	µS/cm
2202141041Y	DTW	147.96	ft
2202141041Y	pH	8.09	NA
2202141041Y	Temperature	18.5	ºC
2202141041Y	Turbidity	0.59	NTU

Well ID 200-C-225 Event Date 2/10/2022

Sample	Parameter	Result	Units
2202101418Y	Atmospheric Pressure	12.48	psia
2202101418Y	Conductivity	1179	µS/cm
2202101418Y	DTW	147.71	ft
2202101418Y	Formation Pressure	53.68	psia
2202101418Y	pH	7.95	NA
2202101418Y	Temperature	20.4	ºC
2202101418Y	Turbidity	0.68	NTU
2202101501Y	Atmospheric Pressure	12.48	psia
2202101501Y	Conductivity	1189	µS/cm
2202101501Y	DTW	147.85	ft
2202101501Y	pH	7.91	NA
2202101501Y	Temperature	20.6	ºC
2202101501Y	Turbidity	0.62	NTU

Well ID 200-C-270 Event Date 2/10/2022

Sample	Parameter	Result	Units
2202101010Y	Atmospheric Pressure	12.51	psia
2202101010Y	Conductivity	1194	µS/cm
2202101010Y	DTW	147.58	ft
2202101010Y	Formation Pressure	73.22	psia
2202101010Y	pH	7.92	NA
2202101010Y	Temperature	18.5	ºC
2202101010Y	Turbidity	1.24	NTU
2202101105Y	Atmospheric Pressure	12.49	psia
2202101105Y	Conductivity	1190	µS/cm
2202101105Y	DTW	147.71	ft
2202101105Y	pH	7.84	NA
2202101105Y	Temperature	18.8	ºC
2202101105Y	Turbidity	1.13	NTU

Well ID 200-D-240 Event Date 3/17/2022

Sample	Parameter	Result	Units
2203170955A	Conductivity	1510	µS/cm
2203170955A	DO	4.52	mg/L
2203170955A	DTW	127.10	ft
2203170955A	ORP	215	mV
2203170955A	pH	8.05	NA
2203170955A	Temperature	19.71	ºC
2203170955A	Turbidity	0.93	NTU
2203170957A	Conductivity	1536	µS/cm
2203170957A	DO	4.06	mg/L
2203170957A	DTW	127.65	ft
2203170957A	ORP	218	mV
2203170957A	pH	8.06	NA
2203170957A	Temperature	19.79	ºC
2203170957A	Turbidity	0.41	NTU
2203170959A	Conductivity	1534	µS/cm
2203170959A	DO	3.95	mg/L
2203170959A	DTW	127.65	ft
2203170959A	ORP	219	mV
2203170959A	pH	8.05	NA
2203170959A	Temperature	19.68	ºC
2203170959A	Turbidity	0.55	NTU

Well ID 200-F-225 Event Date 2/15/2022

Sample	Parameter	Result	Units
2202151433Y	Atmospheric Pressure	12.29	psia
2202151433Y	Conductivity	1064	µS/cm
2202151433Y	DTW	177.04	ft
2202151433Y	Formation Pressure	43.27	psia
2202151433Y	pH	7.88	NA
2202151433Y	Temperature	21.0	ºC
2202151433Y	Turbidity	1.14	NTU
2202160945Y	Atmospheric Pressure	12.34	psia
2202160945Y	Conductivity	1047	µS/cm
2202160945Y	DTW	177.17	ft
2202160945Y	pH	7.81	NA
2202160945Y	Temperature	20.8	ºC
2202160945Y	Turbidity	0.97	NTU

Well ID 200-F-370 Event Date 2/14/2022

Sample	Parameter	Result	Units
2202141510Y	Atmospheric Pressure	12.38	psia
2202141510Y	Conductivity	1200	µS/cm
2202141510Y	DTW	176.76	ft
2202141510Y	Formation Pressure	105.67	psia
2202141510Y	pH	7.83	NA
2202141510Y	Temperature	21.6	ºC
2202141510Y	Turbidity	0.71	NTU
2202150921Y	Atmospheric Pressure	12.35	psia
2202150921Y	Conductivity	1212	µS/cm
2202150921Y	DTW	176.87	ft
2202150921Y	pH	7.89	NA
2202150921Y	Temperature	20.9	ºC
2202150921Y	Turbidity	0.63	NTU

Well ID **200-F-420** **Event Date** **2/15/2022**

Sample	Parameter	Result	Units
2202151042Y	Atmospheric Pressure	12.37	psia
2202151042Y	Conductivity	1339	µS/cm
2202151042Y	DTW	176.87	ft
2202151042Y	Formation Pressure	127.86	psia
2202151042Y	pH	7.76	NA
2202151042Y	Temperature	21.4	ºC
2202151042Y	Turbidity	1.61	NTU
2202151301Y	Atmospheric Pressure	12.39	psia
2202151301Y	Conductivity	1351	µS/cm
2202151301Y	DTW	177.04	ft
2202151301Y	pH	7.61	NA
2202151301Y	Temperature	21.1	ºC
2202151301Y	Turbidity	1.33	NTU

Well ID **300-A-170** **Event Date** **2/15/2022**

Sample	Parameter	Result	Units
2202151420C	Conductivity	911	µS/cm
2202151420C	DO	6.24	mg/L
2202151420C	ORP	96	mV
2202151420C	pH	7.03	NA
2202151420C	Temperature	21.18	ºC
2202151420C	Turbidity	5.93	NTU
2202151422C	Conductivity	913	µS/cm
2202151422C	DO	6.27	mg/L
2202151422C	ORP	95	mV
2202151422C	pH	7.01	NA
2202151422C	Temperature	21.20	ºC
2202151422C	Turbidity	5.90	NTU
2202151424C	Conductivity	910	µS/cm
2202151424C	DO	6.25	mg/L
2202151424C	ORP	95	mV
2202151424C	pH	7.03	NA
2202151424C	Temperature	21.21	ºC
2202151424C	Turbidity	5.93	NTU

Well ID 300-B-166 Event Date 2/7/2022

Sample	Parameter	Result	Units
2202070950A	Conductivity	948	µS/cm
2202070950A	DTW	159.60	ft
2202070950A	pH	7.78	NA
2202070950A	Temperature	18.9	ºC
2202070950A	Turbidity	4.60	NTU
2202070952A	Conductivity	956	µS/cm
2202070952A	DTW	160.85	ft
2202070952A	pH	7.63	NA
2202070952A	Temperature	18.2	ºC
2202070952A	Turbidity	4.17	NTU
2202070954A	Conductivity	955	µS/cm
2202070954A	DTW	160.85	ft
2202070954A	pH	7.61	NA
2202070954A	Temperature	18.4	ºC
2202070954A	Turbidity	3.43	NTU

Well ID 300-E-138 Event Date 2/16/2022

Sample	Parameter	Result	Units
2202161340Y	Atmospheric Pressure	12.22	psia
2202161340Y	Conductivity	1201	µS/cm
2202161340Y	DTW	138.75	ft
2202161340Y	Formation Pressure	22.57	psia
2202161340Y	pH	7.23	NA
2202161340Y	Temperature	19.4	ºC
2202161340Y	Turbidity	3.52	NTU
2202161440Y	Atmospheric Pressure	12.17	psia
2202161440Y	Conductivity	1428	µS/cm
2202161440Y	DTW	138.95	ft
2202161440Y	pH	7.06	NA
2202161440Y	Temperature	19.0	ºC
2202161440Y	Turbidity	0.93	NTU

Well ID 300-E-183 Event Date 2/17/2022

Sample	Parameter	Result	Units
2202170930Y	Atmospheric Pressure	12.37	psia
2202170930Y	Conductivity	984	µS/cm
2202170930Y	DTW	138.95	ft
2202170930Y	Formation Pressure	42.03	psia
2202170930Y	pH	7.98	NA
2202170930Y	Temperature	19.4	ºC
2202170930Y	Turbidity	1.42	NTU
2202171045Y	Atmospheric Pressure	12.35	psia
2202171045Y	Conductivity	995	µS/cm
2202171045Y	DTW	139.12	ft
2202171045Y	pH	8.02	NA
2202171045Y	Temperature	19.2	ºC
2202171045Y	Turbidity	1.13	NTU

Well ID 400-EV-131 Event Date 2/1/2022

Sample	Parameter	Result	Units
2202011350C	Conductivity	1389	µS/cm
2202011350C	DO	2.79	mg/L
2202011350C	DTW	142.45	ft
2202011350C	ORP	162	mV
2202011350C	pH	6.78	NA
2202011350C	Temperature	18.03	ºC
2202011350C	Turbidity	5.44	NTU
2202011352C	Conductivity	1380	µS/cm
2202011352C	DO	2.74	mg/L
2202011352C	DTW	142.65	ft
2202011352C	ORP	163	mV
2202011352C	pH	6.82	NA
2202011352C	Temperature	18.04	ºC
2202011352C	Turbidity	4.91	NTU
2202011354C	Conductivity	1392	µS/cm
2202011354C	DO	2.71	mg/L
2202011354C	DTW	142.65	ft
2202011354C	ORP	164	mV
2202011354C	pH	6.80	NA
2202011354C	Temperature	17.98	ºC
2202011354C	Turbidity	4.73	NTU

Well ID **400-FV-131** **Event Date** **4/18/2022**

Sample	Parameter	Result	Units
2204180943C	Conductivity	1327	µS/cm
2204180943C	DO	2.47	mg/L
2204180943C	DTW	130.30	ft
2204180943C	ORP	305	mV
2204180943C	pH	7.29	NA
2204180943C	Temperature	20.74	ºC
2204180943C	Turbidity	0.11	NTU
2204180945C	Conductivity	1323	µS/cm
2204180945C	DO	2.45	mg/L
2204180945C	DTW	130.86	ft
2204180945C	ORP	305	mV
2204180945C	pH	7.38	NA
2204180945C	Temperature	20.68	ºC
2204180945C	Turbidity	0.12	NTU
2204180947C	Conductivity	1322	µS/cm
2204180947C	DO	2.43	mg/L
2204180947C	DTW	130.86	ft
2204180947C	ORP	305	mV
2204180947C	pH	7.29	NA
2204180947C	Temperature	20.61	ºC
2204180947C	Turbidity	0.14	NTU

Well ID 400-GV-125 Event Date 2/1/2022

Sample	Parameter	Result	Units
2202011000C	Conductivity	1382	µS/cm
2202011000C	DO	6.95	mg/L
2202011000C	DTW	131.08	ft
2202011000C	ORP	192	mV
2202011000C	pH	6.82	NA
2202011000C	Temperature	19.32	ºC
2202011000C	Turbidity	2.56	NTU
2202011002C	Conductivity	1385	µS/cm
2202011002C	DO	6.88	mg/L
2202011002C	DTW	131.15	ft
2202011002C	ORP	191	mV
2202011002C	pH	6.85	NA
2202011002C	Temperature	19.35	ºC
2202011002C	Turbidity	2.34	NTU
2202011004C	Conductivity	1383	µS/cm
2202011004C	DO	7.07	mg/L
2202011004C	DTW	131.15	ft
2202011004C	ORP	190	mV
2202011004C	pH	6.87	NA
2202011004C	Temperature	19.38	ºC
2202011004C	Turbidity	2.12	NTU

Well ID 400-HV-147 Event Date 4/18/2022

Sample	Parameter	Result	Units
2204181405C	Conductivity	2069	µS/cm
2204181405C	DO	2.78	mg/L
2204181405C	DTW	140.35	ft
2204181405C	ORP	267	mV
2204181405C	pH	7.36	NA
2204181405C	Temperature	24.51	ºC
2204181405C	Turbidity	71.0	NTU
2204181407C	Conductivity	2065	µS/cm
2204181407C	DO	2.61	mg/L
2204181407C	DTW	140.76	ft
2204181407C	ORP	267	mV
2204181407C	pH	7.35	NA
2204181407C	Temperature	24.49	ºC
2204181407C	Turbidity	69.9	NTU
2204181408C	Conductivity	2048	µS/cm
2204181408C	DO	2.47	mg/L
2204181408C	DTW	140.76	ft
2204181408C	ORP	267	mV
2204181408C	pH	7.35	NA
2204181408C	Temperature	24.56	ºC
2204181408C	Turbidity	69.8	NTU

Well ID 400-JV-150 Event Date 2/2/2022

Sample	Parameter	Result	Units
2202020940C	Conductivity	2050	µS/cm
2202020940C	DO	4.06	mg/L
2202020940C	DTW	146.65	ft
2202020940C	ORP	186	mV
2202020940C	pH	6.96	NA
2202020940C	Temperature	17.47	ºC
2202020940C	Turbidity	3.16	NTU
2202020942C	Conductivity	2050	µS/cm
2202020942C	DO	4.09	mg/L
2202020942C	DTW	147.90	ft
2202020942C	ORP	185	mV
2202020942C	pH	6.97	NA
2202020942C	Temperature	17.46	ºC
2202020942C	Turbidity	1.45	NTU
2202020944C	Conductivity	2050	µS/cm
2202020944C	DO	3.98	mg/L
2202020944C	DTW	147.90	ft
2202020944C	ORP	185	mV
2202020944C	pH	6.98	NA
2202020944C	Temperature	17.50	ºC
2202020944C	Turbidity	1.14	NTU

Well ID 600-E-280 Event Date 2/2/2022

Sample	Parameter	Result	Units
2202021400Y	Atmospheric Pressure	12.33	psia
2202021400Y	Conductivity	1143	µS/cm
2202021400Y	DTW	256.82	ft
2202021400Y	Formation Pressure	52.90	psia
2202021400Y	pH	8.61	NA
2202021400Y	Temperature	19.5	ºC
2202021400Y	Turbidity	4.06	NTU
2202021448Y	Atmospheric Pressure	12.31	psia
2202021448Y	Conductivity	1138	µS/cm
2202021448Y	DTW	256.96	ft
2202021448Y	pH	8.70	NA
2202021448Y	Temperature	19.7	ºC
2202021448Y	Turbidity	2.72	NTU

Well ID 600-G-138 Event Date 4/20/2022

Sample	Parameter	Result	Units
2204201025A	Conductivity	2260	µS/cm
2204201025A	DTW	145.0	ft
2204201025A	pH	7.73	NA
2204201025A	Temperature	18.2	ºC
2204201025A	Turbidity	0.59	NTU
2204201050A	Conductivity	2260	µS/cm
2204201050A	DTW	146.20	ft
2204201050A	pH	7.58	NA
2204201050A	Temperature	18.8	ºC
2204201050A	Turbidity	1.49	NTU

Well ID 700-A-253 Event Date 3/23/2022

Sample	Parameter	Result	Units
2203230909A	Conductivity	0.055	µS/cm
2203230909A	DO	33.911	mg/L
2203230909A	DTW	186.54	ft
2203230909A	ORP	257.267	mV
2203230909A	pH	7.47	NA
2203230909A	Temperature	20.797	ºC
2203230909A	Turbidity	1.58	NTU
2203230910A	Conductivity	0.055	µS/cm
2203230910A	DO	34.48	mg/L
2203230910A	DTW	186.85	ft
2203230910A	ORP	258.259	mV
2203230910A	pH	7.48	NA
2203230910A	Temperature	21.434	ºC
2203230910A	Turbidity	0.41	NTU
2203230911A	Conductivity	0.055	µS/cm
2203230911A	DO	33.85	mg/L
2203230911A	DTW	186.85	ft
2203230911A	ORP	261.451	mV
2203230911A	pH	7.43	NA
2203230911A	Temperature	21.967	ºC
2203230911A	Turbidity	0.39	NTU

Well ID 700-D-186 Event Date 3/21/2022

Sample	Parameter	Result	Units
2203211321A	Conductivity	1358	µS/cm
2203211321A	pH	6.76	NA
2203211321A	Temperature	19.3	ºC
2203211321A	Turbidity	0.23	NTU
2203211324A	Conductivity	1357	µS/cm
2203211324A	pH	6.85	NA
2203211324A	Temperature	19.8	ºC
2203211324A	Turbidity	0.20	NTU
2203211326A	Conductivity	1338	µS/cm
2203211326A	pH	6.80	NA
2203211326A	Temperature	20.8	ºC
2203211326A	Turbidity	013	NTU
2203230817A	Conductivity	0.050	µS/cm
2203230817A	DO	3.76	mg/L
2203230817A	ORP	252.367	mV
2203230817A	pH	-10.055	NA
2203230817A	Temperature	20.0	ºC
2203230817A	Turbidity	0.40	NTU
2203230819A	Conductivity	0.050	µS/cm
2203230819A	DO	3.82	mg/L
2203230819A	ORP	258.867	mV
2203230819A	pH	7.14	NA
2203230819A	Temperature	20.3	ºC
2203230819A	Turbidity	0.27	NTU
2203230820A	Conductivity	0.050	µS/cm
2203230820A	DO	3.96	mg/L
2203230820A	ORP	259.377	mV
2203230820A	pH	7.12	NA
2203230820A	Temperature	18.94	ºC
2203230820A	Turbidity	0.08	NTU

Well ID 700-H-350 Event Date 3/21/2022

Sample	Parameter	Result	Units
2203211510Y	Conductivity	902	µS/cm
2203211510Y	DTW	261.95	ft
2203211510Y	Formation Pressure	64.59	psia
2203211510Y	pH	7.46	NA
2203211510Y	Temperature	18.2	ºC
2203211510Y	Turbidity	1.58	NTU
2203221518Y	Conductivity	915	µS/cm
2203221518Y	pH	7.53	NA
2203221518Y	Temperature	17.8	ºC
2203221518Y	Turbidity	1.25	NTU

Well ID 700-H-535 Event Date 3/23/2022

Sample	Parameter	Result	Units
2203230915Y	Conductivity	1239	µS/cm
2203230915Y	Formation Pressure	144.56	psia
2203230915Y	pH	7.50	NA
2203230915Y	Temperature	19.0	ºC
2203230915Y	Turbidity	1.15	NTU
2203231325Y	Conductivity	1222	µS/cm
2203231325Y	pH	7.65	NA
2203231325Y	Temperature	19.8	ºC
2203231325Y	Turbidity	1.06	NTU

Well ID 700-H-670 Event Date 3/23/2022

Sample	Parameter	Result	Units
2203231450Y	Atmospheric Pressure	12.47	psia
2203231450Y	Conductivity	1078	µS/cm
2203231450Y	DTW	262.22	ft
2203231450Y	Formation Pressure	202.76	psia
2203231450Y	pH	7.74	NA
2203231450Y	Temperature	21.9	ºC
2203231450Y	Turbidity	0.66	NTU
2203241000Y	Atmospheric Pressure	12.44	psia
2203241000Y	Conductivity	1070	µS/cm
2203241000Y	DTW	262.47	ft
2203241000Y	pH	7.63	NA
2203241000Y	Temperature	21.1	ºC
2203241000Y	Turbidity	0.74	NTU

Well ID 700-J-200 Event Date 3/21/2022

Sample	Parameter	Result	Units
2203211300C	Conductivity	1140	µS/cm
2203211300C	DO	2.60	mg/L
2203211300C	DTW	116.36	ft
2203211300C	ORP	126	mV
2203211300C	pH	6.75	NA
2203211300C	Temperature	21.41	ºC
2203211300C	Turbidity	5.40	NTU
2203211303C	Conductivity	1133	µS/cm
2203211303C	DO	2.37	mg/L
2203211303C	DTW	116.55	ft
2203211303C	ORP	127	mV
2203211303C	pH	6.79	NA
2203211303C	Temperature	21.49	ºC
2203211303C	Turbidity	5.11	NTU
2203211306C	Conductivity	1130	µS/cm
2203211306C	DO	2.22	mg/L
2203211306C	DTW	116.55	ft
2203211306C	ORP	129	mV
2203211306C	pH	6.84	NA
2203211306C	Temperature	21.53	ºC
2203211306C	Turbidity	4.76	NTU
2203230810C	Conductivity	1152	µS/cm
2203230810C	DO	3.01	mg/L
2203230810C	DTW	116.39	ft
2203230810C	ORP	119	mV
2203230810C	pH	6.95	NA
2203230810C	Temperature	20.35	ºC
2203230810C	Turbidity	4.44	NTU
2203230813C	Conductivity	1147	µS/cm
2203230813C	DO	2.87	mg/L
2203230813C	DTW	116.46	ft
2203230813C	ORP	119	mV
2203230813C	pH	6.99	NA
2203230813C	Temperature	20.42	ºC
2203230813C	Turbidity	4.13	NTU
2203230816C	Conductivity	1150	µS/cm
2203230816C	DO	2.61	mg/L
2203230816C	DTW	116.46	ft
2203230816C	ORP	121	mV
2203230816C	pH	7.03	NA
2203230816C	Temperature	20.44	ºC
2203230816C	Turbidity	4.09	NTU

Well ID **BLM-10-517** **Event Date** **4/14/2022**

Sample	Parameter	Result	Units
2204141350C	Conductivity	990	µS/cm
2204141350C	DO	4.96	mg/L
2204141350C	DTW	490.95	ft
2204141350C	ORP	297	mV
2204141350C	pH	7.34	NA
2204141350C	Temperature	20.65	ºC
2204141350C	Turbidity	0.53	NTU
2204141352C	Conductivity	992	µS/cm
2204141352C	DO	4.99	mg/L
2204141352C	DTW	490.98	ft
2204141352C	ORP	300	mV
2204141352C	pH	7.34	NA
2204141352C	Temperature	20.72	ºC
2204141352C	Turbidity	0.58	NTU
2204141354C	Conductivity	989	µS/cm
2204141354C	DO	5.02	mg/L
2204141354C	DTW	490.98	ft
2204141354C	ORP	302	mV
2204141354C	pH	7.35	NA
2204141354C	Temperature	20.55	ºC
2204141354C	Turbidity	0.67	NTU

Well ID BLM-13-300 Event Date 3/1/2022

Sample	Parameter	Result	Units
2203011350A	Conductivity	1185	µS/cm
2203011350A	DO	7.70	mg/L
2203011350A	DTW	147.80	ft
2203011350A	ORP	171	mV
2203011350A	pH	7.65	NA
2203011350A	Temperature	20.90	ºC
2203011350A	Turbidity	1.56	NTU
2203011352A	Conductivity	1182	µS/cm
2203011352A	DO	7.72	mg/L
2203011352A	DTW	148.90	ft
2203011352A	ORP	171	mV
2203011352A	pH	7.63	NA
2203011352A	Temperature	20.94	ºC
2203011352A	Turbidity	1.42	NTU
2203011354A	Conductivity	1175	µS/cm
2203011354A	DO	7.16	mg/L
2203011354A	DTW	148.90	ft
2203011354A	ORP	170	mV
2203011354A	pH	7.66	NA
2203011354A	Temperature	20.87	ºC
2203011354A	Turbidity	1.51	NTU

Well ID BLM-14-327 Event Date 4/18/2022

Sample	Parameter	Result	Units
2204181335A	Conductivity	1194	µS/cm
2204181335A	DO	5.72	mg/L
2204181335A	ORP	97	mV
2204181335A	pH	6.68	NA
2204181335A	Temperature	21.84	ºC
2204181335A	Turbidity	1.02	NTU
2204181340A	Conductivity	1185	µS/cm
2204181340A	DO	6.05	mg/L
2204181340A	ORP	95	mV
2204181340A	pH	6.34	NA
2204181340A	Temperature	22.67	ºC
2204181340A	Turbidity	1.19	NTU
2204181345A	Conductivity	282	µS/cm
2204181345A	DO	6.08	mg/L
2204181345A	ORP	85	mV
2204181345A	pH	7.12	NA
2204181345A	Temperature	26.39	ºC
2204181345A	Turbidity	0.89	NTU

Well ID BLM-21-400 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203021435A	Conductivity	1110	µS/cm
2203021435A	DO	6.06	mg/L
2203021435A	DTW	338.80	ft
2203021435A	ORP	181	mV
2203021435A	pH	7.42	NA
2203021435A	Temperature	20.97	ºC
2203021435A	Turbidity	1.10	NTU
2203021437A	Conductivity	1114	µS/cm
2203021437A	DO	6.11	mg/L
2203021437A	DTW	340.40	ft
2203021437A	ORP	187	mV
2203021437A	pH	7.40	NA
2203021437A	Temperature	20.95	ºC
2203021437A	Turbidity	0.98	NTU
2203021439A	Conductivity	1117	µS/cm
2203021439A	DO	6.34	mg/L
2203021439A	DTW	340.40	ft
2203021439A	ORP	185	mV
2203021439A	pH	7.43	NA
2203021439A	Temperature	20.99	ºC
2203021439A	Turbidity	0.59	NTU

Well ID BLM-23-431 Event Date 2/7/2022

Sample	Parameter	Result	Units
2202071400A	Conductivity	1383	µS/cm
2202071400A	DTW	329.70	ft
2202071400A	pH	7.16	NA
2202071400A	Temperature	18.2	ºC
2202071400A	Turbidity	1.64	NTU
2202071402A	Conductivity	1360	µS/cm
2202071402A	DTW	330.10	ft
2202071402A	pH	7.10	NA
2202071402A	Temperature	18.1	ºC
2202071402A	Turbidity	1.15	NTU
2202071404A	Conductivity	1306	µS/cm
2202071404A	DTW	330.10	ft
2202071404A	pH	7.15	NA
2202071404A	Temperature	17.9	ºC
2202071404A	Turbidity	1.43	NTU

Well ID BLM-32-543 Event Date 2/2/2022

Sample	Parameter	Result	Units
2202021320B	Conductivity	971	µS/cm
2202021320B	pH	7.58	NA
2202021320B	Temperature	16.0	ºC
2202021320B	Turbidity	1.09	NTU
2202021430B	Conductivity	968	µS/cm
2202021430B	pH	7.63	NA
2202021430B	Temperature	16.1	ºC
2202021430B	Turbidity	0.90	NTU

Well ID BLM-32-571 Event Date 2/1/2022

Sample	Parameter	Result	Units
2202011515B	Conductivity	993	µS/cm
2202011515B	pH	8.46	NA
2202011515B	Temperature	17.9	ºC
2202011515B	Turbidity	0.86	NTU
2202011521B	Conductivity	995	µS/cm
2202011521B	pH	8.46	NA
2202011521B	Temperature	17.4	ºC
2202011521B	Turbidity	0.91	NTU

Well ID BLM-32-632 Event Date 2/1/2022

Sample	Parameter	Result	Units
2202011525B	Conductivity	969	µS/cm
2202011525B	pH	8.29	NA
2202011525B	Temperature	17.7	ºC
2202011525B	Turbidity	1.54	NTU
2202011535B	Conductivity	973	µS/cm
2202011535B	pH	8.30	NA
2202011535B	Temperature	17.9	ºC
2202011535B	Turbidity	1.25	NTU

Well ID BLM-39-385 Event Date 4/6/2022

Sample	Parameter	Result	Units
2204061500Y	Atmospheric Pressure	12.59	psia
2204061500Y	Conductivity	985	µS/cm
2204061500Y	DTW	369.23	ft
2204061500Y	Formation Pressure	25.50	psia
2204061500Y	pH	8.16	NA
2204061500Y	Temperature	24.0	ºC
2204061500Y	Turbidity	1.75	NTU
2204070918Y	Atmospheric Pressure	12.61	psia
2204070918Y	Conductivity	971	µS/cm
2204070918Y	DTW	369.32	ft
2204070918Y	pH	7.96	NA
2204070918Y	Temperature	22.9	ºC
2204070918Y	Turbidity	1.35	NTU

Well ID BLM-39-560 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190905Y	Atmospheric Pressure	12.51	psia
2204190905Y	Conductivity	681	µS/cm
2204190905Y	DTW	369.26	ft
2204190905Y	Formation Pressure	100.44	psia
2204190905Y	pH	8.23	NA
2204190905Y	Temperature	22.1	ºC
2204190905Y	Turbidity	1.09	NTU
2204191026Y	Atmospheric Pressure	12.48	psia
2204191026Y	Conductivity	672	µS/cm
2204191026Y	DTW	639.43	ft
2204191026Y	pH	8.21	NA
2204191026Y	Temperature	22.0	ºC
2204191026Y	Turbidity	0.85	NTU

Well ID BLM-40-517 Event Date 4/4/2022

Sample	Parameter	Result	Units
2204041000C	Conductivity	809	µS/cm
2204041000C	DO	4.08	mg/L
2204041000C	ORP	285	mV
2204041000C	pH	7.65	NA
2204041000C	Temperature	19.93	ºC
2204041000C	Turbidity	0.81	NTU
2204041002C	Conductivity	808	µS/cm
2204041002C	DO	4.04	mg/L
2204041002C	ORP	286	mV
2204041002C	pH	7.65	NA
2204041002C	Temperature	20.10	ºC
2204041002C	Turbidity	0.93	NTU
2204041004C	Conductivity	809	µS/cm
2204041004C	DO	4.01	mg/L
2204041004C	ORP	287	mV
2204041004C	pH	7.64	NA
2204041004C	Temperature	20.01	ºC
2204041004C	Turbidity	0.72	NTU

Well ID BLM-40-595 Event Date 4/4/2022

Sample	Parameter	Result	Units
2204041420C	Conductivity	549	µS/cm
2204041420C	DO	4.99	mg/L
2204041420C	ORP	292	mV
2204041420C	pH	7.31	NA
2204041420C	Temperature	21.64	ºC
2204041420C	Turbidity	0.77	NTU
2204041422C	Conductivity	551	µS/cm
2204041422C	DO	4.93	mg/L
2204041422C	ORP	292	mV
2204041422C	pH	7.32	NA
2204041422C	Temperature	21.33	ºC
2204041422C	Turbidity	0.69	NTU
2204041424C	Conductivity	556	µS/cm
2204041424C	DO	4.90	mg/L
2204041424C	ORP	292	mV
2204041424C	pH	7.33	NA
2204041424C	Temperature	21.15	ºC
2204041424C	Turbidity	0.83	NTU

Well ID BLM-40-688 Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150900C	Conductivity	737	µS/cm
2204150900C	DO	1.63	mg/L
2204150900C	ORP	250	mV
2204150900C	pH	7.44	NA
2204150900C	Temperature	20.55	ºC
2204150900C	Turbidity	0.21	NTU
2204150902C	Conductivity	736	µS/cm
2204150902C	DO	1.71	mg/L
2204150902C	ORP	253	mV
2204150902C	pH	7.43	NA
2204150902C	Temperature	20.43	ºC
2204150902C	Turbidity	0.19	NTU
2204150904C	Conductivity	737	µS/cm
2204150904C	DO	1.53	mg/L
2204150904C	ORP	253	mV
2204150904C	pH	7.46	NA
2204150904C	Temperature	20.49	ºC
2204150904C	Turbidity	0.23	NTU

Well ID BLM-41-420 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204191410C	Conductivity	1024	µS/cm
2204191410C	DO	2.76	mg/L
2204191410C	DTW	535.79	ft
2204191410C	ORP	266.45	mV
2204191410C	pH	7.17	NA
2204191410C	Temperature	33.36	ºC
2204191410C	Turbidity	1.26	NTU
2204191415C	Conductivity	1025	µS/cm
2204191415C	DO	2.75	mg/L
2204191415C	DTW	353.60	ft
2204191415C	ORP	268.44	mV
2204191415C	pH	7.17	NA
2204191415C	Temperature	33.38	ºC
2204191415C	Turbidity	1.27	NTU
2204191420C	Conductivity	1030	µS/cm
2204191420C	DO	2.74	mg/L
2204191420C	DTW	353.60	ft
2204191420C	ORP	267.39	mV
2204191420C	pH	7.17	NA
2204191420C	Temperature	33.40	ºC
2204191420C	Turbidity	1.33	NTU

Well ID BLM-41-670 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190940C	Conductivity	1705	µS/cm
2204190940C	DO	2.55	mg/L
2204190940C	DTW	393.89	ft
2204190940C	ORP	218.5	mV
2204190940C	pH	7.55	NA
2204190940C	Temperature	24.6	ºC
2204190940C	Turbidity	32.36	NTU
2204190945C	Conductivity	1735	µS/cm
2204190945C	DO	2.40	mg/L
2204190945C	DTW	394.00	ft
2204190945C	ORP	218.5	mV
2204190945C	pH	8.01	NA
2204190945C	Temperature	24.7	ºC
2204190945C	Turbidity	32.41	NTU
2204190950C	Conductivity	1785	µS/cm
2204190950C	DO	2.39	mg/L
2204190950C	DTW	394.00	ft
2204190950C	ORP	218.5	mV
2204190950C	pH	7.69	NA
2204190950C	Temperature	24.7	ºC
2204190950C	Turbidity	32.42	NTU

Well ID BLM-42-569 Event Date 3/14/2022

Sample	Parameter	Result	Units
2203140935C	Conductivity	571	µS/cm
2203140935C	DO	2.28	mg/L
2203140935C	ORP	125	mV
2203140935C	pH	7.19	NA
2203140935C	Temperature	20.41	ºC
2203140935C	Transducer	49.15	
2203140935C	Turbidity	1.98	NTU
2203140938C	Conductivity	565	µS/cm
2203140938C	DO	2.22	mg/L
2203140938C	ORP	126	mV
2203140938C	pH	7.21	NA
2203140938C	Temperature	20.48	ºC
2203140938C	Turbidity	1.86	NTU
2203140941C	Conductivity	567	µS/cm
2203140941C	DO	2.18	mg/L
2203140941C	ORP	128	mV
2203140941C	pH	7.22	NA
2203140941C	Temperature	20.43	ºC
2203140941C	Turbidity	1.57	NTU

Well ID BLM-42-709 Event Date 3/14/2022

Sample	Parameter	Result	Units
2203141400C	Conductivity	598	µS/cm
2203141400C	DO	3.09	mg/L
2203141400C	ORP	117	mV
2203141400C	pH	7.54	NA
2203141400C	Temperature	20.70	ºC
2203141400C	Transducer	49.18	ft
2203141400C	Turbidity	2.27	NTU
2203141403C	Conductivity	613	µS/cm
2203141403C	DO	2.91	mg/L
2203141403C	ORP	116	mV
2203141403C	pH	7.56	NA
2203141403C	Temperature	20.82	ºC
2203141403C	Turbidity	2.10	NTU
2203141406C	Conductivity	619	µS/cm
2203141406C	DO	2.72	mg/L
2203141406C	ORP	115	mV
2203141406C	pH	7.56	NA
2203141406C	Temperature	20.95	ºC
2203141406C	Turbidity	1.94	NTU

Well ID BLM-5-527 Event Date 3/15/2022

Sample	Parameter	Result	Units
2203151345C	Conductivity	967	µS/cm
2203151345C	DO	6.30	mg/L
2203151345C	DTW	510.13	ft
2203151345C	ORP	120	mV
2203151345C	pH	7.59	NA
2203151345C	Temperature	21.40	ºC
2203151345C	Turbidity	0.36	NTU
2203151348C	Conductivity	971	µS/cm
2203151348C	DO	6.12	mg/L
2203151348C	DTW	510.21	ft
2203151348C	ORP	121	mV
2203151348C	pH	7.62	NA
2203151348C	Temperature	21.52	ºC
2203151348C	Turbidity	0.30	NTU
2203151351C	Conductivity	966	µS/cm
2203151351C	DO	5.88	mg/L
2203151351C	DTW	510.21	ft
2203151351C	ORP	123	mV
2203151351C	pH	7.63	NA
2203151351C	Temperature	21.58	ºC
2203151351C	Turbidity	0.22	NTU

Well ID BLM-6-488 Event Date 4/18/2022

Sample	Parameter	Result	Units
2204180945A	Conductivity	1404	µS/cm
2204180945A	DO	4.22	mg/L
2204180945A	ORP	94	mV
2204180945A	pH	6.83	NA
2204180945A	Temperature	20.45	ºC
2204180945A	Turbidity	3.14	NTU
2204180950A	Conductivity	1400	µS/cm
2204180950A	DO	6.88	mg/L
2204180950A	ORP	82	mV
2204180950A	pH	7.00	NA
2204180950A	Temperature	20.67	ºC
2204180950A	Turbidity	2.97	NTU
2204180955A	Conductivity	1418	µS/cm
2204180955A	DO	1.75	mg/L
2204180955A	ORP	75	mV
2204180955A	pH	7.13	NA
2204180955A	Temperature	20.85	ºC
2204180955A	Turbidity	2.73	NTU

Well ID BLM-7-509 Event Date 3/3/2022

Sample	Parameter	Result	Units
2203030920A	Conductivity	989	µS/cm
2203030920A	DO	4.31	mg/L
2203030920A	ORP	152	mV
2203030920A	pH	7.56	NA
2203030920A	Temperature	19.26	ºC
2203030920A	Turbidity	0.61	NTU
2203030922A	Conductivity	994	µS/cm
2203030922A	DO	4.27	mg/L
2203030922A	ORP	151	mV
2203030922A	pH	7.55	NA
2203030922A	Temperature	19.21	ºC
2203030922A	Turbidity	0.49	NTU
2203030924A	Conductivity	983	µS/cm
2203030924A	DO	4.24	mg/L
2203030924A	ORP	150	mV
2203030924A	pH	7.53	NA
2203030924A	Temperature	19.27	ºC
2203030924A	Turbidity	0.55	NTU

Well ID **BLM-9-419** **Event Date** **3/1/2022**

Sample	Parameter	Result	Units
2203010940A	Conductivity	922	µS/cm
2203010940A	DO	7.56	mg/L
2203010940A	DTW	378.50	ft
2203010940A	ORP	211	mV
2203010940A	pH	7.38	NA
2203010940A	Temperature	20.47	ºC
2203010940A	Turbidity	2.56	NTU
2203010942A	Conductivity	923	µS/cm
2203010942A	DO	7.61	mg/L
2203010942A	DTW	378.90	ft
2203010942A	ORP	210	mV
2203010942A	pH	7.30	NA
2203010942A	Temperature	20.48	ºC
2203010942A	Turbidity	3.19	NTU
2203010944A	Conductivity	926	µS/cm
2203010944A	DO	7.49	mg/L
2203010944A	DTW	378.90	ft
2203010944A	ORP	210	mV
2203010944A	pH	7.31	NA
2203010944A	Temperature	20.50	ºC
2203010944A	Turbidity	2.63	NTU

Well ID **BW-1-268** **Event Date** **3/10/2022**

Sample	Parameter	Result	Units
2203100930C	Conductivity	1328	µS/cm
2203100930C	pH	7.28	NA
2203100930C	Temperature	18.3	ºC
2203100930C	Turbidity	0.65	NTU
2203100940C	Conductivity	1324	µS/cm
2203100940C	pH	7.22	NA
2203100940C	Temperature	18.7	ºC
2203100940C	Turbidity	0.58	NTU

Well ID **BW-3-180** **Event Date** **4/20/2022**

Sample	Parameter	Result	Units
2204200935C	Conductivity	2208	µS/cm
2204200935C	DO	NA	mg/L
2204200935C	DTW	170.05	ft
2204200935C	ORP	121.7	mV
2204200935C	pH	7.75	NA
2204200935C	Temperature	21.45	ºC
2204200935C	Turbidity	13.70	NTU
2204200940C	Conductivity	2212	µS/cm
2204200940C	DO	NA	mg/L
2204200940C	DTW	170.90	ft
2204200940C	ORP	121.7	mV
2204200940C	pH	7.75	NA
2204200940C	Temperature	21.50	ºC
2204200940C	Turbidity	12.98	NTU
2204200945C	Conductivity	2270	µS/cm
2204200945C	DO	NA	mg/L
2204200945C	DTW	170.90	ft
2204200945C	ORP	121.9	mV
2204200945C	pH	7.75	NA
2204200945C	Temperature	21.62	ºC
2204200945C	Turbidity	12.80	NTU

Well ID BW-6-355 Event Date 3/14/2022

Sample	Parameter	Result	Units
2203141417A	Conductivity	1220.857	µS/cm
2203141417A	DO	1.56	mg/L
2203141417A	DTW	245.10	ft
2203141417A	ORP	225	mV
2203141417A	pH	7.87	NA
2203141417A	Temperature	21.48	ºC
2203141417A	Turbidity	0.65	NTU
2203141420A	Conductivity	1216.068	µS/cm
2203141420A	DO	1.51	mg/L
2203141420A	DTW	247.00	ft
2203141420A	ORP	224	mV
2203141420A	pH	7.87	NA
2203141420A	Temperature	21.56	ºC
2203141420A	Turbidity	0.75	NTU
2203141423A	Conductivity	1212.862	µS/cm
2203141423A	DO	1.46	mg/L
2203141423A	DTW	247.00	ft
2203141423A	ORP	223	mV
2203141423A	pH	7.87	NA
2203141423A	Temperature	21.51	ºC
2203141423A	Turbidity	0.64	NTU

Well ID JER-1-483 Event Date 4/5/2022

Sample	Parameter	Result	Units
2204051430B	Conductivity	1063	µS/cm
2204051430B	pH	7.05	NA
2204051430B	Temperature	19.8	ºC
2204051430B	Turbidity	0.69	NTU
2204051450B	Conductivity	1034	µS/cm
2204051450B	pH	7.23	NA
2204051450B	Temperature	20.1	ºC
2204051450B	Turbidity	0.55	NTU

Well ID JER-1-563 Event Date 4/5/2022

Sample	Parameter	Result	Units
2204051455B	Conductivity	1080	µS/cm
2204051455B	pH	2.74	NA
2204051455B	Temperature	18.9	ºC
2204051455B	Turbidity	0.50	NTU
2204051508B	Conductivity	1075	µS/cm
2204051508B	pH	7.85	NA
2204051508B	Temperature	19.4	ºC
2204051508B	Turbidity	0.64	NTU

Well ID JER-1-683 Event Date 4/5/2022

Sample	Parameter	Result	Units
2204051513B	Conductivity	1055	µS/cm
2204051513B	pH	7.89	NA
2204051513B	Temperature	19.2	ºC
2204051513B	Turbidity	0.55	NTU
2204051528B	Conductivity	1063	µS/cm
2204051528B	pH	7.74	NA
2204051528B	Temperature	19.1	ºC
2204051528B	Turbidity	0.54	NTU

Well ID JER-2-504 Event Date 4/6/2022

Sample	Parameter	Result	Units
2204061410B	Conductivity	948	µS/cm
2204061410B	pH	8.12	NA
2204061410B	Temperature	20.1	ºC
2204061410B	Turbidity	0.61	NTU
2204061417B	Conductivity	951	µS/cm
2204061417B	pH	8.15	NA
2204061417B	Temperature	20.2	ºC
2204061417B	Turbidity	0.64	NTU

Well ID JER-2-584 Event Date 4/6/2022

Sample	Parameter	Result	Units
2204061430B	Conductivity	990	µS/cm
2204061430B	pH	7.88	NA
2204061430B	Temperature	19.4	ºC
2204061430B	Turbidity	0.55	NTU
2204061436BB	Conductivity	993	µS/cm
2204061436BB	pH	7.94	NA
2204061436BB	Temperature	19.5	ºC
2204061436BB	Turbidity	0.50	NTU

Well ID JER-2-684 Event Date 4/6/2022

Sample	Parameter	Result	Units
2204061450B	Conductivity	1010	µS/cm
2204061450B	pH	7.94	NA
2204061450B	Temperature	18.3	ºC
2204061450B	Turbidity	0.49	NTU
2204061456B	Conductivity	1008	µS/cm
2204061456B	pH	7.99	NA
2204061456B	Temperature	18.5	ºC
2204061456B	Turbidity	0.58	NTU

Well ID **JP-1-424** **Event Date** **4/1/2022**

Sample	Parameter	Result	Units
2204010915A	Conductivity	975.43	µS/cm
2204010915A	DO	4.19	mg/L
2204010915A	DTW	413.34	ft
2204010915A	ORP	283	mV
2204010915A	pH	7.44	NA
2204010915A	Temperature	20.20	ºC
2204010915A	Turbidity	1.25	NTU
2204010918A	Conductivity	971.10	µS/cm
2204010918A	DO	4.10	mg/L
2204010918A	DTW	413.60	ft
2204010918A	ORP	282	mV
2204010918A	pH	7.42	NA
2204010918A	Temperature	20.43	ºC
2204010918A	Turbidity	0.75	NTU
2204010921A	Conductivity	978.54	µS/cm
2204010921A	DO	4.01	mg/L
2204010921A	DTW	413.60	ft
2204010921A	ORP	280	mV
2204010921A	pH	7.42	NA
2204010921A	Temperature	20.58	ºC
2204010921A	Turbidity	0.64	NTU

Well ID JP-2-447 Event Date 4/1/2022

Sample	Parameter	Result	Units
2204011045A	Conductivity	1009.95	µS/cm
2204011045A	DO	4.82	mg/L
2204011045A	DTW	414.29	ft
2204011045A	ORP	254	mV
2204011045A	pH	7.25	NA
2204011045A	Temperature	21.31	ºC
2204011045A	Turbidity	1.78	NTU
2204011048A	Conductivity	1005.81	µS/cm
2204011048A	DO	4.67	mg/L
2204011048A	DTW	414.52	ft
2204011048A	ORP	255	mV
2204011048A	pH	7.28	NA
2204011048A	Temperature	21.27	ºC
2204011048A	Turbidity	2.04	NTU
2204011051A	Conductivity	1012.76	µS/cm
2204011051A	DO	4.62	mg/L
2204011051A	DTW	414.52	ft
2204011051A	ORP	255	mV
2204011051A	pH	7.29	NA
2204011051A	Temperature	21.34	ºC
2204011051A	Turbidity	1.69	NTU

Well ID JP-3-509 Event Date 4/14/2022

Sample	Parameter	Result	Units
2204140940A	Conductivity	0.055	µS/cm
2204140940A	DO	7.05	mg/L
2204140940A	ORP	204	mV
2204140940A	pH	7.41	NA
2204140940A	Temperature	20.70	ºC
2204140940A	Turbidity	0.59	NTU
2204140942A	Conductivity	0.054	µS/cm
2204140942A	DO	6.99	mg/L
2204140942A	ORP	201	mV
2204140942A	pH	7.31	NA
2204140942A	Temperature	20.68	ºC
2204140942A	Turbidity	0.54	NTU
2204140944A	Conductivity	0.055	µS/cm
2204140944A	DO	6.88	mg/L
2204140944A	ORP	2.04	mV
2204140944A	pH	NA	NA
2204140944A	Temperature	20.69	ºC
2204140944A	Turbidity	0.59	NTU

Well ID JP-3-689 Event Date 4/14/2022

Sample	Parameter	Result	Units
2204141340A	Conductivity	1019	µS/cm
2204141340A	DO	6.57	mg/L
2204141340A	ORP	232	mV
2204141340A	pH	8.96	NA
2204141340A	Temperature	23.87	ºC
2204141340A	Turbidity	1.41	NTU
2204141342A	Conductivity	1017	µS/cm
2204141342A	DO	6.52	mg/L
2204141342A	ORP	229	mV
2204141342A	pH	8.91	NA
2204141342A	Temperature	23.82	ºC
2204141342A	Turbidity	1.40	NTU
2204141344A	Conductivity	1009	µS/cm
2204141344A	DO	6.53	mg/L
2204141344A	ORP	231	mV
2204141344A	pH	8.94	NA
2204141344A	Temperature	23.84	ºC
2204141344A	Turbidity	1.43	NTU

Well ID NASA 3 Event Date 2/10/2022

Sample	Parameter	Result	Units
2202101420C	Conductivity	902	µS/cm
2202101420C	DO	5.89	mg/L
2202101420C	ORP	99	mV
2202101420C	pH	7.15	NA
2202101420C	Temperature	20.38	ºC
2202101420C	Turbidity	1.24	NTU
2202101422C	Conductivity	905	µS/cm
2202101422C	DO	5.86	mg/L
2202101422C	ORP	99	mV
2202101422C	pH	7.12	NA
2202101422C	Temperature	20.41	ºC
2202101422C	Turbidity	1.21	NTU
2202101424C	Conductivity	901	µS/cm
2202101424C	DO	5.90	mg/L
2202101424C	ORP	98	mV
2202101424C	pH	7.16	NA
2202101424C	Temperature	20.38	ºC
2202101424C	Turbidity	1.25	NTU

Well ID PL-10-484 Event Date 4/5/2022

Sample	Parameter	Result	Units
2204051335Y	Atmospheric Pressure	12.27	psia
2204051335Y	Conductivity	1069	µS/cm
2204051335Y	DTW	464.95	ft
2204051335Y	Formation Pressure	21.51	psia
2204051335Y	pH	8.24	NA
2204051335Y	Temperature	24.4	ºC
2204051335Y	Turbidity	1.26	NTU
2204051446Y	Atmospheric Pressure	12.30	psia
2204051446Y	Conductivity	1073	µS/cm
2204051446Y	DTW	465.04	ft
2204051446Y	pH	8.34	NA
2204051446Y	Temperature	24.8	ºC
2204051446Y	Turbidity	1.13	NTU

Well ID PL-10-592 Event Date 4/5/2022

Sample	Parameter	Result	Units
2204050945Y	Atmospheric Pressure	12.26	psia
2204050945Y	Conductivity	1084	µS/cm
2204050945Y	DTW	464.81	ft
2204050945Y	Formation Pressure	68.36	psia
2204050945Y	pH	8.42	NA
2204050945Y	Temperature	22.9	ºC
2204050945Y	Turbidity	1.24	NTU
2204051024Y	Atmospheric Pressure	12.24	psia
2204051024Y	Conductivity	1071	µS/cm
2204051024Y	DTW	464.95	ft
2204051024Y	pH	8.36	NA
2204051024Y	Temperature	23.1	ºC
2204051024Y	Turbidity	1.15	NTU

Well ID PL-10-813 Event Date 4/4/2022

Sample	Parameter	Result	Units
2204041045Y	Atmospheric Pressure	12.22	psia
2204041045Y	Conductivity	1007	µS/cm
2204041045Y	DTW	464.47	ft
2204041045Y	Formation Pressure	163.16	psia
2204041045Y	pH	8.81	NA
2204041045Y	Temperature	22.9	ºC
2204041045Y	Turbidity	0.53	NTU
2204041303Y	Atmospheric Pressure	12.26	psia
2204041303Y	Conductivity	1019	µS/cm
2204041303Y	DTW	464.64	ft
2204041303Y	pH	8.73	NA
2204041303Y	Temperature	23.1	ºC
2204041303Y	Turbidity	0.45	NTU

Well ID PL-10-962 Event Date 4/4/2022

Sample	Parameter	Result	Units
2204041430Y	Atmospheric Pressure	12.22	psia
2204041430Y	Conductivity	1010	µS/cm
2204041430Y	DTW	464.64	ft
2204041430Y	Formation Pressure	229.99	psia
2204041430Y	pH	8.57	NA
2204041430Y	Temperature	24.3	ºC
2204041430Y	Turbidity	0.63	NTU
2204041508Y	Atmospheric Pressure	12.24	psia
2204041508Y	Conductivity	1003	µS/cm
2204041508Y	DTW	464.81	ft
2204041508Y	pH	8.67	NA
2204041508Y	Temperature	24.0	ºC
2204041508Y	Turbidity	0.60	NTU

Well ID PL-11-470 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203021335B	Conductivity	1049	µS/cm
2203021335B	pH	7.78	NA
2203021335B	Temperature	21.6	ºC
2203021335B	Turbidity	3.63	NTU
2203021412B	Conductivity	1119	µS/cm
2203021412B	pH	7.57	NA
2203021412B	Temperature	20.7	ºC
2203021412B	Turbidity	0.61	NTU

Well ID PL-11-530 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203021425B	Conductivity	1101	µS/cm
2203021425B	pH	8.62	NA
2203021425B	Temperature	21.6	ºC
2203021425B	Turbidity	1.42	NTU
2203021432B	Conductivity	1119	µS/cm
2203021432B	pH	8.00	NA
2203021432B	Temperature	22.5	ºC
2203021432B	Turbidity	1.44	NTU

Well ID PL-11-710 Event Date 3/7/2022

Sample	Parameter	Result	Units
2203071405B	Conductivity	1135	µS/cm
2203071405B	pH	7.55	NA
2203071405B	Temperature	20.9	ºC
2203071405B	Turbidity	0.34	NTU
2203071411B	Conductivity	1139	µS/cm
2203071411B	pH	7.51	NA
2203071411B	Temperature	20.8	ºC
2203071411B	Turbidity	0.36	NTU

Well ID PL-11-820 Event Date 3/7/2022

Sample	Parameter	Result	Units
2203071420B	Conductivity	1006	µS/cm
2203071420B	pH	7.63	NA
2203071420B	Temperature	20.8	ºC
2203071420B	Turbidity	0.51	NTU
2203071425B	Conductivity	1006	µS/cm
2203071425B	pH	7.59	NA
2203071425B	Temperature	20.8	ºC
2203071425B	Turbidity	0.53	NTU

Well ID PL-11-980 Event Date 3/7/2022

Sample	Parameter	Result	Units
2203071430B	Conductivity	980	µS/cm
2203071430B	pH	7.83	NA
2203071430B	Temperature	19.0	ºC
2203071430B	Turbidity	0.56	NTU
2203071435B	Conductivity	983	µS/cm
2203071435B	pH	7.85	NA
2203071435B	Temperature	20.9	ºC
2203071435B	Turbidity	0.51	NTU

Well ID PL-12-570 Event Date 2/8/2022

Sample	Parameter	Result	Units
2202081430C	Conductivity	1004	µS/cm
2202081430C	DO	6.27	mg/L
2202081430C	ORP	111	mV
2202081430C	pH	7.29	NA
2202081430C	Temperature	19.71	ºC
2202081430C	Turbidity	0.66	NTU
2202081432C	Conductivity	1007	µS/cm
2202081432C	DO	6.24	mg/L
2202081432C	ORP	110	mV
2202081432C	pH	7.31	NA
2202081432C	Temperature	19.74	ºC
2202081432C	Turbidity	0.69	NTU
2202081434C	Conductivity	1003	µS/cm
2202081434C	DO	6.27	mg/L
2202081434C	ORP	110	mV
2202081434C	pH	7.27	NA
2202081434C	Temperature	19.73	ºC
2202081434C	Turbidity	0.65	NTU

Well ID PL-12-800 Event Date 2/14/2022

Sample	Parameter	Result	Units
2202140955A	Conductivity	1023	µS/cm
2202140955A	DO	1.20	mg/L
2202140955A	ORP	137	mV
2202140955A	pH	7.11	NA
2202140955A	Temperature	19.53	ºC
2202140955A	Turbidity	1.43	NTU
2202140957A	Conductivity	1031	µS/cm
2202140957A	DO	1.23	mg/L
2202140957A	ORP	136	mV
2202140957A	pH	7.12	NA
2202140957A	Temperature	19.58	ºC
2202140957A	Turbidity	1.54	NTU
2202140959A	Conductivity	1029	µS/cm
2202140959A	DO	1.27	mg/L
2202140959A	ORP	136	mV
2202140959A	pH	7.10	NA
2202140959A	Temperature	19.60	ºC
2202140959A	Turbidity	1.37	NTU

Well ID PL-1-486 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204191435A	Conductivity	981	µS/cm
2204191435A	DO	6.65	mg/L
2204191435A	DTW	485.90	ft
2204191435A	ORP	84	mV
2204191435A	pH	7.75	NA
2204191435A	Temperature	22.57	ºC
2204191435A	Turbidity	0.81	NTU
2204191440A	Conductivity	1010	µS/cm
2204191440A	DO	6.78	mg/L
2204191440A	ORP	83	mV
2204191440A	pH	7.72	NA
2204191440A	Temperature	22.86	ºC
2204191440A	Turbidity	1.02	NTU
2204191445A	Conductivity	1028	µS/cm
2204191445A	DO	7.24	mg/L
2204191445A	DTW	485.90	ft
2204191445A	ORP	83	mV
2204191445A	pH	7.69	NA
2204191445A	Temperature	22.94	ºC
2204191445A	Turbidity	1.06	NTU

Well ID PL-2-504 Event Date 3/15/2022

Sample	Parameter	Result	Units
2203150920C	Conductivity	970	µS/cm
2203150920C	DO	5.98	mg/L
2203150920C	DTW	477.87	ft
2203150920C	ORP	118	mV
2203150920C	pH	7.77	NA
2203150920C	Temperature	19.38	ºC
2203150920C	Turbidity	0.50	NTU
2203150923C	Conductivity	971	µS/cm
2203150923C	DO	5.74	mg/L
2203150923C	DTW	477.98	ft
2203150923C	ORP	119	mV
2203150923C	pH	7.77	NA
2203150923C	Temperature	19.46	ºC
2203150923C	Turbidity	0.39	NTU
2203150926C	Conductivity	978	µS/cm
2203150926C	DO	5.57	mg/L
2203150926C	DTW	477.98	ft
2203150926C	ORP	119	mV
2203150926C	pH	7.75	NA
2203150926C	Temperature	19.53	ºC
2203150926C	Turbidity	0.35	NTU

Well ID PL-4-464 Event Date 3/15/2022

Sample	Parameter	Result	Units
2203150940A	Conductivity	1257	µS/cm
2203150940A	DO	4.78	mg/L
2203150940A	DTW	450.20	ft
2203150940A	ORP	277	mV
2203150940A	pH	7.25	NA
2203150940A	Temperature	19.07	ºC
2203150940A	Turbidity	1.10	NTU
2203150943A	Conductivity	1256	µS/cm
2203150943A	DO	4.76	mg/L
2203150943A	DTW	450.30	ft
2203150943A	ORP	275	mV
2203150943A	pH	7.26	NA
2203150943A	Temperature	19.09	ºC
2203150943A	Turbidity	0.51	NTU
2203150946A	Conductivity	1258	µS/cm
2203150946A	DO	4.75	mg/L
2203150946A	DTW	450.30	ft
2203150946A	ORP	272	mV
2203150946A	pH	7.27	NA
2203150946A	Temperature	19.17	ºC
2203150946A	Turbidity	0.85	NTU

Well ID PL-6-545 Event Date 4/14/2022

Sample	Parameter	Result	Units
2204141025Y	Atmospheric Pressure	12.57	psia
2204141025Y	Conductivity	1015	µS/cm
2204141025Y	DTW	475.16	ft
2204141025Y	Formation Pressure	55.93	psia
2204141025Y	pH	8.37	NA
2204141025Y	Temperature	22.3	ºC
2204141025Y	Turbidity	0.80	NTU
2204141440Y	Atmospheric Pressure	12.51	psia
2204141440Y	Conductivity	1027	µS/cm
2204141440Y	DTW	475.28	ft
2204141440Y	pH	8.30	NA
2204141440Y	Temperature	22.8	ºC
2204141440Y	Turbidity	0.64	NTU

Well ID PL-6-725 Event Date 4/13/2022

Sample	Parameter	Result	Units
2204130955Y	Atmospheric Pressure	12.56	psia
2204130955Y	Conductivity	1191	µS/cm
2204130955Y	DTW	475.00	ft
2204130955Y	Formation Pressure	134.46	psia
2204130955Y	pH	8.53	NA
2204130955Y	Temperature	19.7	ºC
2204130955Y	Turbidity	1.41	NTU
2204131414Y	Atmospheric Pressure	12.53	psia
2204131414Y	Conductivity	1204	µS/cm
2204131414Y	DTW	475.16	ft
2204131414Y	pH	8.60	NA
2204131414Y	Temperature	20.3	ºC
2204131414Y	Turbidity	1.24	NTU

Well ID PL-7-480 Event Date 2/8/2022

Sample	Parameter	Result	Units
2202081435Y	Atmospheric Pressure	12.58	psia
2202081435Y	Conductivity	888	µS/cm
2202081435Y	DTW	481.76	ft
2202081435Y	Formation Pressure	13.71	psia
2202081435Y	pH	8.18	NA
2202081435Y	Temperature	20.8	ºC
2202081435Y	Turbidity	0.87	NTU
2202091435Y	Atmospheric Pressure	12.57	psia
2202091435Y	Conductivity	865	µS/cm
2202091435Y	DTW	481.81	ft
2202091435Y	pH	8.24	NA
2202091435Y	Temperature	20.1	ºC
2202091435Y	Turbidity	0.77	NTU

Well ID PL-7-560 Event Date 2/8/2022

Sample	Parameter	Result	Units
2202081037Y	Atmospheric Pressure	12.67	psia
2202081037Y	Conductivity	967	µS/cm
2202081037Y	DTW	481.62	ft
2202081037Y	Formation Pressure	48.03	psia
2202081037Y	pH	8.22	NA
2202081037Y	Temperature	20.7	ºC
2202081037Y	Turbidity	2.33	NTU
2202081305Y	Atmospheric Pressure	12.67	psia
2202081305Y	Conductivity	981	µS/cm
2202081305Y	DTW	481.76	ft
2202081305Y	pH	8.25	NA
2202081305Y	Temperature	21.2	ºC
2202081305Y	Turbidity	2.02	NTU

Well ID PL-7-630 Event Date 2/7/2022

Sample	Parameter	Result	Units
2202071305Y	Atmospheric Pressure	12.72	psia
2202071305Y	Conductivity	904	µS/cm
2202071305Y	DTW	481.48	ft
2202071305Y	Formation Pressure	78.35	psia
2202071305Y	pH	8.17	NA
2202071305Y	Temperature	21.7	ºC
2202071305Y	Turbidity	3.19	NTU
2202071429Y	Atmospheric Pressure	12.68	psia
2202071429Y	Conductivity	921	µS/cm
2202071429Y	DTW	481.62	ft
2202071429Y	pH	8.06	NA
2202071429Y	Temperature	21.4	ºC
2202071429Y	Turbidity	2.22	NTU

Well ID PL-8-455 Event Date 3/10/2022

Sample	Parameter	Result	Units
2203100950Y	Atmospheric Pressure	12.51	psia
2203100950Y	Conductivity	1033	µS/cm
2203100950Y	DTW	439.53	ft
2203100950Y	Formation Pressure	22.89	psia
2203100950Y	pH	7.93	NA
2203100950Y	Temperature	20.1	ºC
2203100950Y	Turbidity	1.27	NTU
2203101439Y	Atmospheric Pressure	12.53	psia
2203101439Y	Conductivity	1016	µS/cm
2203101439Y	DTW	439.60	ft
2203101439Y	pH	7.80	NA
2203101439Y	Temperature	20.8	ºC
2203101439Y	Turbidity	1.36	NTU

Well ID PL-8-605 Event Date 3/8/2022

Sample	Parameter	Result	Units
2203081020Y	Atmospheric Pressure	12.53	psia
2203081020Y	Conductivity	978	µS/cm
2203081020Y	DTW	439.02	ft
2203081020Y	Formation Pressure	87.84	psia
2203081020Y	pH	7.92	NA
2203081020Y	Temperature	21.0	ºC
2203081020Y	Turbidity	4.43	NTU
2203081300Y	Atmospheric Pressure	12.51	psia
2203081300Y	Conductivity	989	µS/cm
2203081300Y	DTW	439.14	ft
2203081300Y	pH	7.98	NA
2203081300Y	Temperature	21.3	ºC
2203081300Y	Turbidity	2.73	NTU

Well ID PL-8-780 Event Date 3/8/2022

Sample	Parameter	Result	Units
2203081450Y	Atmospheric Pressure	12.54	psia
2203081450Y	Conductivity	953	µS/cm
2203081450Y	DTW	439.14	ft
2203081450Y	Formation Pressure	163.70	psia
2203081450Y	pH	7.82	NA
2203081450Y	Temperature	22.4	ºC
2203081450Y	Turbidity	1.39	NTU
2203091000Y	Atmospheric Pressure	12.50	psia
2203091000Y	Conductivity	946	µS/cm
2203091000Y	DTW	439.38	ft
2203091000Y	pH	7.90	NA
2203091000Y	Temperature	21.4	ºC
2203091000Y	Turbidity	1.46	NTU

Well ID PL-8-965 Event Date 3/9/2022

Sample	Parameter	Result	Units
2203091400Y	Atmospheric Pressure	12.46	psia
2203091400Y	Conductivity	830	µS/cm
2203091400Y	DTW	439.38	ft
2203091400Y	Formation Pressure	244.18	psia
2203091400Y	pH	8.01	NA
2203091400Y	Temperature	23.0	ºC
2203091400Y	Turbidity	2.71	NTU
2203091504Y	Atmospheric Pressure	12.48	psia
2203091504Y	Conductivity	836	µS/cm
2203091504Y	DTW	439.53	ft
2203091504Y	pH	7.93	NA
2203091504Y	Temperature	22.8	ºC
2203091504Y	Turbidity	2.01	NTU

Well ID ST-2-466 Event Date 2/2/2022

Sample	Parameter	Result	Units
2202021430C	Conductivity	1023	µS/cm
2202021430C	DO	6.70	mg/L
2202021430C	DTW	436.80	ft
2202021430C	ORP	171	mV
2202021430C	pH	7.22	NA
2202021430C	Temperature	19.91	ºC
2202021430C	Turbidity	0.87	NTU
2202021432C	Conductivity	1029	µS/cm
2202021432C	DO	7.10	mg/L
2202021432C	DTW	436.85	ft
2202021432C	ORP	171	mV
2202021432C	pH	7.23	NA
2202021432C	Temperature	19.97	ºC
2202021432C	Turbidity	0.97	NTU
2202021434C	Conductivity	1017	µS/cm
2202021434C	DO	7.41	mg/L
2202021434C	DTW	436.85	ft
2202021434C	ORP	171	mV
2202021434C	pH	7.25	NA
2202021434C	Temperature	20.05	ºC
2202021434C	Turbidity	0.82	NTU

Well ID **ST-4-481** **Event Date** **3/7/2022**

Sample	Parameter	Result	Units
2203070940A	Conductivity	977	µS/cm
2203070940A	DO	5.51	mg/L
2203070940A	DTW	458.85	ft
2203070940A	ORP	148	mV
2203070940A	pH	7.15	NA
2203070940A	Temperature	19.72	ºC
2203070940A	Turbidity	0.52	NTU
2203070942A	Conductivity	981	µS/cm
2203070942A	DO	5.70	mg/L
2203070942A	DTW	459.35	ft
2203070942A	ORP	148	mV
2203070942A	pH	7.11	NA
2203070942A	Temperature	19.75	ºC
2203070942A	Turbidity	0.48	NTU
2203070944A	Conductivity	984	µS/cm
2203070944A	DO	5.50	mg/L
2203070944A	DTW	459.35	ft
2203070944A	ORP	147	mV
2203070944A	pH	7.20	NA
2203070944A	Temperature	19.80	ºC
2203070944A	Turbidity	0.59	NTU

Well ID **ST-4-589** **Event Date** **2/7/2022**

Sample	Parameter	Result	Units
2202071000C	Conductivity	737	µS/cm
2202071000C	DO	1.89	mg/L
2202071000C	ORP	132	mV
2202071000C	pH	7.43	NA
2202071000C	Temperature	20.99	ºC
2202071000C	Turbidity	0.49	NTU
2202071002C	Conductivity	734	µS/cm
2202071002C	DO	1.91	mg/L
2202071002C	ORP	131	mV
2202071002C	pH	7.40	NA
2202071002C	Temperature	20.98	ºC
2202071002C	Turbidity	0.52	NTU
2202071004C	Conductivity	738	µS/cm
2202071004C	DO	1.88	mg/L
2202071004C	ORP	131	mV
2202071004C	pH	7.44	NA
2202071004C	Temperature	20.96	ºC
2202071004C	Turbidity	0.47	NTU

Well ID ST-4-690 **Event Date 3/7/2022**

Sample	Parameter	Result	Units
2203071355A	Conductivity	785	µS/cm
2203071355A	DO	4.78	mg/L
2203071355A	DTW	457.75	ft
2203071355A	ORP	102	mV
2203071355A	pH	8.65	NA
2203071355A	Temperature	19.91	ºC
2203071355A	Turbidity	2.30	NTU
2203071357A	Conductivity	787	µS/cm
2203071357A	DO	4.86	mg/L
2203071357A	DTW	458.00	ft
2203071357A	ORP	101	mV
2203071357A	pH	8.64	NA
2203071357A	Temperature	19.85	ºC
2203071357A	Turbidity	2.18	NTU
2203071359A	Conductivity	789	µS/cm
2203071359A	DO	4.98	mg/L
2203071359A	DTW	458.00	ft
2203071359A	ORP	99	mV
2203071359A	pH	8.63	NA
2203071359A	Temperature	19.88	ºC
2203071359A	Turbidity	2.04	NTU

Well ID ST-5-481 Event Date 2/23/2022

Sample	Parameter	Result	Units
2202230950A	Conductivity	990	µS/cm
2202230950A	DO	5.19	mg/L
2202230950A	DTW	425.19	ft
2202230950A	ORP	161	mV
2202230950A	pH	7.48	NA
2202230950A	Temperature	19.47	ºC
2202230950A	Turbidity	2.11	NTU
2202230953A	Conductivity	1001	µS/cm
2202230953A	DO	5.08	mg/L
2202230953A	DTW	425.39	ft
2202230953A	ORP	160	mV
2202230953A	pH	7.46	NA
2202230953A	Temperature	19.53	ºC
2202230953A	Turbidity	1.70	NTU
2202230956A	Conductivity	1000	µS/cm
2202230956A	DO	4.86	mg/L
2202230956A	DTW	425.39	ft
2202230956A	ORP	156	mV
2202230956A	pH	7.43	NA
2202230956A	Temperature	19.59	ºC
2202230956A	Turbidity	1.58	NTU

Well ID ST-5-485 Event Date 2/2/2022

Sample	Parameter	Result	Units
2202020910Y	Atmospheric Pressure	12.49	psia
2202020910Y	Conductivity	892	µS/cm
2202020910Y	DTW	475.43	ft
2202020910Y	Formation Pressure	40.32	psia
2202020910Y	pH	8.54	NA
2202020910Y	Temperature	19.9	ºC
2202020910Y	Turbidity	1.10	NTU
2202021031Y	Atmospheric Pressure	12.52	psia
2202021031Y	Conductivity	881	µS/cm
2202021031Y	DTW	475.51	ft
2202021031Y	pH	8.45	NA
2202021031Y	Temperature	19.6	ºC
2202021031Y	Turbidity	0.79	NTU

Well ID ST-5-655 Event Date 2/1/2022

Sample	Parameter	Result	Units
2202011045Y	Atmospheric Pressure	12.44	psia
2202011045Y	Conductivity	815	µS/cm
2202011045Y	DTW	475.24	ft
2202011045Y	Formation Pressure	113.97	psia
2202011045Y	pH	8.69	NA
2202011045Y	Temperature	21.2	ºC
2202011045Y	Turbidity	3.71	NTU
2202011424Y	Atmospheric Pressure	12.47	psia
2202011424Y	Conductivity	829	µS/cm
2202011424Y	DTW	475.43	ft
2202011424Y	pH	8.72	NA
2202011424Y	Temperature	20.8	ºC
2202011424Y	Turbidity	2.48	NTU

Well ID ST-6-528 Event Date 3/8/2022

Sample	Parameter	Result	Units
2203081400B	Conductivity	1128	µS/cm
2203081400B	pH	7.70	NA
2203081400B	Temperature	18.0	ºC
2203081400B	Turbidity	0.98	NTU
2203081410B	Conductivity	1133	µS/cm
2203081410B	pH	7.68	NA
2203081410B	Temperature	17.9	ºC
2203081410B	Turbidity	0.87	NTU
2203151430B	Conductivity	1086	µS/cm
2203151430B	pH	7.60	NA
2203151430B	Temperature	18.7	ºC
2203151430B	Turbidity	0.75	NTU
2203151446B	Conductivity	1099	µS/cm
2203151446B	pH	7.70	NA
2203151446B	Temperature	18.9	ºC
2203151446B	Turbidity	0.95	NTU

Well ID ST-6-568 Event Date 3/8/2022

Sample	Parameter	Result	Units
2203081420B	Conductivity	1101	µS/cm
2203081420B	pH	7.42	NA
2203081420B	Temperature	17.9	ºC
2203081420B	Turbidity	0.69	NTU
2203081430B	Conductivity	1105	µS/cm
2203081430B	pH	7.45	NA
2203081430B	Temperature	18.1	ºC
2203081430B	Turbidity	0.73	NTU
2203151450B	Conductivity	1086	µS/cm
2203151450B	pH	7.78	NA
2203151450B	Temperature	18.7	ºC
2203151450B	Turbidity	0.75	NTU
2203151452B	Conductivity	1091	µS/cm
2203151452B	pH	7.85	NA
2203151452B	Temperature	19.5	ºC
2203151452B	Turbidity	0.68	NTU

Well ID ST-6-678 Event Date 3/9/2022

Sample	Parameter	Result	Units
2203091400B	Conductivity	1044	µS/cm
2203091400B	pH	7.96	NA
2203091400B	Temperature	20.8	ºC
2203091400B	Turbidity	0.42	NTU
2203091406B	Conductivity	1046	µS/cm
2203091406B	pH	7.94	NA
2203091406B	Temperature	20.4	ºC
2203091406B	Turbidity	0.38	NTU

Well ID ST-6-824 Event Date 3/9/2022

Sample	Parameter	Result	Units
2203091420B	Conductivity	937	µS/cm
2203091420B	pH	7.95	NA
2203091420B	Temperature	20.5	ºC
2203091420B	Turbidity	0.21	NTU
2203091430B	Conductivity	930	µS/cm
2203091430B	pH	7.91	NA
2203091430B	Temperature	20.8	ºC
2203091430B	Turbidity	0.25	NTU

Well ID ST-6-970 Event Date 3/9/2022

Sample	Parameter	Result	Units
2203091440B	Conductivity	1027	µS/cm
2203091440B	pH	7.99	NA
2203091440B	Temperature	20.1	ºC
2203091440B	Turbidity	0.85	NTU
2203091445B	Conductivity	1033	µS/cm
2203091445B	pH	8.05	NA
2203091445B	Temperature	19.6	ºC
2203091445B	Turbidity	0.89	NTU

Well ID ST-7-453 Event Date 4/7/2022

Sample	Parameter	Result	Units
2204071430B	Conductivity	1013	µS/cm
2204071430B	pH	7.60	NA
2204071430B	Temperature	18.5	ºC
2204071430B	Turbidity	0.92	NTU
2204071435B	Conductivity	1032	µS/cm
2204071435B	pH	7.88	NA
2204071435B	Temperature	18.9	ºC
2204071435B	Turbidity	0.67	NTU

Well ID ST-7-544 Event Date 4/7/2022

Sample	Parameter	Result	Units
2204071445B	Conductivity	1060	µS/cm
2204071445B	pH	7.70	NA
2204071445B	Temperature	20.9	ºC
2204071445B	Turbidity	1.26	NTU
2204071450B	Conductivity	1063	µS/cm
2204071450B	pH	7.68	NA
2204071450B	Temperature	21.4	ºC
2204071450B	Turbidity	1.48	NTU

Well ID ST-7-779 Event Date 4/11/2022

Sample	Parameter	Result	Units
2204111430B	Conductivity	905	µS/cm
2204111430B	pH	7.61	NA
2204111430B	Temperature	18.7	ºC
2204111430B	Turbidity	0.48	NTU
2204111446B	Conductivity	907	µS/cm
2204111446B	pH	7.63	NA
2204111446B	Temperature	18.8	ºC
2204111446B	Turbidity	0.44	NTU

Well ID ST-7-970 Event Date 4/11/2022

Sample	Parameter	Result	Units
2204111450B	Conductivity	828	µS/cm
2204111450B	pH	7.67	NA
2204111450B	Temperature	18.4	ºC
2204111450B	Turbidity	0.43	NTU
2204111510B	Conductivity	831	µS/cm
2204111510B	pH	7.68	NA
2204111510B	Temperature	18.5	ºC
2204111510B	Turbidity	0.41	NTU

Well ID WW-1-452 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203020945A	Conductivity	1011	µS/cm
2203020945A	DO	7.46	mg/L
2203020945A	DTW	422.80	ft
2203020945A	ORP	170	mV
2203020945A	pH	7.26	NA
2203020945A	Temperature	20.04	ºC
2203020945A	Turbidity	0.47	NTU
2203020947A	Conductivity	1003	µS/cm
2203020947A	DO	7.55	mg/L
2203020947A	DTW	422.80	ft
2203020947A	ORP	170	mV
2203020947A	pH	7.20	NA
2203020947A	Temperature	20.06	ºC
2203020947A	Turbidity	0.72	NTU
2203020949A	Conductivity	1007	µS/cm
2203020949A	DO	7.21	mg/L
2203020949A	DTW	422.80	ft
2203020949A	ORP	170	mV
2203020949A	pH	7.28	NA
2203020949A	Temperature	20.02	ºC
2203020949A	Turbidity	0.54	NTU

Well ID WW-2-489 Event Date 3/10/2022

Sample	Parameter	Result	Units
2203101419A	Conductivity	852.256	µS/cm
2203101419A	DO	4.482	mg/L
2203101419A	ORP	208	mV
2203101419A	pH	8.18	NA
2203101419A	Temperature	20.47	ºC
2203101419A	Turbidity	3.02	NTU
2203101420A	Conductivity	855.164	µS/cm
2203101420A	DO	4.419	mg/L
2203101420A	ORP	207	mV
2203101420A	pH	8.18	NA
2203101420A	Temperature	20.55	ºC
2203101420A	Turbidity	3.27	NTU
2203101421A	Conductivity	849.846	µS/cm
2203101421A	DO	4.354	mg/L
2203101421A	ORP	207	mV
2203101421A	pH	8.17	NA
2203101421A	Temperature	20.39	ºC
2203101421A	Turbidity	3.75	NTU

Well ID WW-2-664 Event Date 3/10/2022

Sample	Parameter	Result	Units
2203100938A	Conductivity	836.788	µS/cm
2203100938A	DO	5.89	mg/L
2203100938A	ORP	225	mV
2203100938A	pH	7.94	NA
2203100938A	Temperature	19.49	ºC
2203100938A	Turbidity	1.46	NTU
2203100942A	Conductivity	833.890	µS/cm
2203100942A	DO	5.85	mg/L
2203100942A	ORP	224	mV
2203100942A	pH	8.03	NA
2203100942A	Temperature	19.31	ºC
2203100942A	Turbidity	1.19	NTU
2203100946A	Conductivity	834.981	µS/cm
2203100946A	DO	5.78	mg/L
2203100946A	ORP	224	mV
2203100946A	pH	8.03	NA
2203100946A	Temperature	19.15	ºC
2203100946A	Turbidity	1.31	NTU

Well ID WW-3-469 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203021325Y	Atmospheric Pressure	12.39	psia
2203021325Y	Conductivity	1144	µS/cm
2203021325Y	DTW	410.58	ft
2203021325Y	Formation Pressure	38.69	psia
2203021325Y	pH	7.68	NA
2203021325Y	Temperature	23.9	ºC
2203021325Y	Turbidity	1.30	NTU
2203021413Y	Atmospheric Pressure	12.41	psia
2203021413Y	Conductivity	1137	µS/cm
2203021413Y	DTW	410.70	ft
2203021413Y	pH	7.61	NA
2203021413Y	Temperature	24.0	ºC
2203021413Y	Turbidity	1.13	NTU

Well ID WW-3-569 Event Date 3/1/2022

Sample	Parameter	Result	Units
2203010950Y	Atmospheric Pressure	12.50	psia
2203010950Y	Conductivity	1124	µS/cm
2203010950Y	DTW	409.92	ft
2203010950Y	Formation Pressure	81.81	psia
2203010950Y	pH	8.65	NA
2203010950Y	Temperature	18.2	ºC
2203010950Y	Turbidity	1.54	NTU
2203011102Y	Atmospheric Pressure	12.49	psia
2203011102Y	Conductivity	1117	µS/cm
2203011102Y	DTW	410.34	ft
2203011102Y	pH	8.54	NA
2203011102Y	Temperature	18.6	ºC
2203011102Y	Turbidity	1.29	NTU

Well ID WW-3-710 Event Date 3/2/2022

Sample	Parameter	Result	Units
2203020915Y	Atmospheric Pressure	12.43	psia
2203020915Y	Conductivity	1016	µS/cm
2203020915Y	DTW	410.34	ft
2203020915Y	Formation Pressure	142.74	psia
2203020915Y	pH	8.31	NA
2203020915Y	Temperature	20.9	ºC
2203020915Y	Turbidity	0.62	NTU
2203021006Y	Atmospheric Pressure	12.40	psia
2203021006Y	Conductivity	1030	µS/cm
2203021006Y	DTW	410.58	ft
2203021006Y	pH	8.43	NA
2203021006Y	Temperature	21.1	ºC
2203021006Y	Turbidity	0.56	NTU

Well ID WW-3-978 Event Date 3/3/2022

Sample	Parameter	Result	Units
2203030910Y	Atmospheric Pressure	12.40	psia
2203030910Y	Conductivity	1067	µS/cm
2203030910Y	DTW	410.70	ft
2203030910Y	Formation Pressure	260.64	psia
2203030910Y	pH	8.13	NA
2203030910Y	Temperature	20.1	ºC
2203030910Y	Turbidity	0.85	NTU
2203030948Y	Atmospheric Pressure	12.44	psia
2203030948Y	Conductivity	1055	µS/cm
2203030948Y	DTW	410.93	ft
2203030948Y	pH	7.99	NA
2203030948Y	Temperature	20.4	ºC
2203030948Y	Turbidity	0.80	NTU

Well ID WW-5-459 Event Date 4/13/2022

Sample	Parameter	Result	Units
2204131300B	Conductivity	1022	µS/cm
2204131300B	pH	8.97	NA
2204131300B	Temperature	16.7	ºC
2204131300B	Turbidity	0.49	NTU
2204131315B	Conductivity	1014	µS/cm
2204131315B	pH	8.78	NA
2204131315B	Temperature	16.6	ºC
2204131315B	Turbidity	0.66	NTU

Well ID WW-5-579 Event Date 4/13/2022

Sample	Parameter	Result	Units
2204131053B	Conductivity	991	µS/cm
2204131053B	pH	8.77	NA
2204131053B	Temperature	16.2	ºC
2204131053B	Turbidity	0.80	NTU
2204131410B	Conductivity	1006	µS/cm
2204131410B	pH	8.01	NA
2204131410B	Temperature	16.4	ºC
2204131410B	Turbidity	0.48	NTU

Well ID WW-5-809 Event Date 4/13/2022

Sample	Parameter	Result	Units
2204131057B	Conductivity	929	µS/cm
2204131057B	pH	8.15	NA
2204131057B	Temperature	14.7	ºC
2204131057B	Turbidity	0.39	NTU
2204131428B	Conductivity	938	µS/cm
2204131428B	pH	8.66	NA
2204131428B	Temperature	15.1	ºC
2204131428B	Turbidity	0.50	NTU

Well ID WW-5-909 Event Date 4/13/2022

Sample	Parameter	Result	Units
2204131104B	Conductivity	1216	µS/cm
2204131104B	pH	8.29	NA
2204131104B	Temperature	16.1	ºC
2204131104B	Turbidity	0.59	NTU
2204131450B	Conductivity	1228	µS/cm
2204131450B	pH	8.33	NA
2204131450B	Temperature	16.6	ºC
2204131450B	Turbidity	0.33	NTU

Appendix A.2
Monitor Well Analytical Data

Detections for Monitoring Well Sampling Events in this Reporting Period

Analytical Results for Sampling Events at 100-A-182

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/7/2022	8260	2202071430C	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1	0.2		
2/7/2022	8260	2202071430C	Trichlorofluoromethane (CFC 11)	1.9	ug/L	1	0.24		
2/7/2022	8260	2202071431C	Trichlorofluoromethane (CFC 11)	1.9	ug/L	1	0.24		
2/7/2022	8260	2202071431C	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	1	0.2		
2/7/2022	8270	2202071435C	Unknown	660	ug/L	NA	NA		TIC RB
2/7/2022	METALS	2202071436C	Potassium, Total	2.5	mg/L	2	0.4		
2/7/2022	METALS	2202071436C	Zinc, Total	0.021	mg/L	0.02	0.003		
2/7/2022	METALS	2202071436C	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
2/7/2022	METALS	2202071436C	Sodium, Total	33.1	mg/L	1	0.2		
2/7/2022	METALS	2202071436C	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/7/2022	METALS	2202071436C	Chromium, Total	0.006	mg/L	0.01	0.002		J
2/7/2022	METALS	2202071436C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/7/2022	METALS	2202071436C	Calcium, Total	141	mg/L	1	0.3		
2/7/2022	METALS	2202071436C	Strontium, Total	3.38	mg/L	0.1	0.002		
2/7/2022	METALS	2202071436C	Boron, Total	0.07	mg/L	0.2	0.02		J
2/7/2022	METALS	2202071436C	Barium, Total	0.027	mg/L	0.02	0.003		
2/7/2022	METALS	2202071436C	Magnesium, Total	67.8	mg/L	1	0.03		

Analytical Results for Sampling Events at 100-C-365

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/9/2022	8270	2202091439C	Unknown	3.8	ug/L	NA	NA		TIC RB
2/9/2022	8270	2202091439C	Benzenamine, 2,6-bis(1-methylethyl)-	9.1	ug/L	NA	NA		TIC
2/9/2022	8270	2202091439C	Unknown	7.6	ug/L	NA	NA		TIC
2/9/2022	8015	2202091440C	Diesel Range Organics (DRO) as C10-C28 Alkanes	190	ug/L	100	75		RB
2/9/2022	METALS	2202091441C	Nickel, Total	0.004	mg/L	0.04	0.003		J
2/9/2022	METALS	2202091441C	Barium, Total	0.017	mg/L	0.02	0.003		J
2/9/2022	METALS	2202091441C	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/9/2022	METALS	2202091441C	Strontium, Total	2.39	mg/L	0.1	0.002		
2/9/2022	METALS	2202091441C	Sodium, Total	105	mg/L	1	0.2		
2/9/2022	METALS	2202091441C	Potassium, Total	1.5	mg/L	2	0.4		J
2/9/2022	METALS	2202091441C	Magnesium, Total	8.7	mg/L	1	0.03		
2/9/2022	METALS	2202091441C	Chromium, Total	0.024	mg/L	0.01	0.002		
2/9/2022	METALS	2202091441C	Boron, Total	0.18	mg/L	0.2	0.02		J
2/9/2022	METALS	2202091441C	Molybdenum, Total	0.027	mg/L	0.025	0.003		
2/9/2022	METALS	2202091441C	Calcium, Total	51.8	mg/L	1	0.3		

Analytical Results for Sampling Events at 100-HG-139

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/14/2022	8260	2203140950A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.26	ug/L	1	0.2		J
3/14/2022	8260	2203140950A	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.4	ug/L	1	0.2		
3/14/2022	8260	2203140950A	Acetone	16	ug/L	10	5		
3/14/2022	8260	2203140951A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.27	ug/L	1	0.2		J
3/14/2022	8260	2203140951A	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.1	ug/L	1	0.2		
3/14/2022	8260	2203140951A	Acetone	15	ug/L	10	5		
3/14/2022	METALS	2203140954A	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
3/14/2022	METALS	2203140954A	Zinc, Total	0.007	mg/L	0.02	0.003		J
3/14/2022	METALS	2203140954A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/14/2022	METALS	2203140954A	Strontium, Total	3.74	mg/L	0.1	0.002		
3/14/2022	METALS	2203140954A	Sodium, Total	38.9	mg/L	1	0.2		
3/14/2022	METALS	2203140954A	Potassium, Total	3	mg/L	2	0.4		
3/14/2022	METALS	2203140954A	Calcium, Total	120	mg/L	1	0.3		
3/14/2022	METALS	2203140954A	Boron, Total	0.06	mg/L	0.2	0.02		J
3/14/2022	METALS	2203140954A	Barium, Total	0.041	mg/L	0.02	0.003		
3/14/2022	METALS	2203140954A	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
3/14/2022	METALS	2203140954A	Magnesium, Total	61.9	mg/L	1	0.03		
3/14/2022	METALS	2203140954A	Aluminum, Total	0.08	mg/L	0.1	0.03		J
3/14/2022	METALS	2203140954A	Antimony, Total	0.0003	mg/L	0.001	0.0002		J

Analytical Results for Sampling Events at 200-B-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260	2204191002A	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
4/19/2022	8260	2204191002A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
4/19/2022	8260	2204191002A	trans-1,2-Dichloroethene	0.31	ug/L	1	0.2		J
4/19/2022	8260	2204191002A	cis-1,2-Dichloroethene	0.48	ug/L	1	0.23		J
4/19/2022	8260	2204191002A	Trichlorofluoromethane (CFC 11)	90	ug/L	1	0.24		
4/19/2022	8260	2204191002A	Tetrachloroethene (PCE)	1.6	ug/L	1	0.21		
4/19/2022	8260	2204191002A	Trichloroethene (TCE)	47	ug/L	1	0.2		
4/19/2022	8260	2204191004A	Tetrachloroethene (PCE)	1.9	ug/L	1	0.21		
4/19/2022	8260	2204191004A	cis-1,2-Dichloroethene	0.52	ug/L	1	0.23		J
4/19/2022	8260	2204191004A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.5	ug/L	1	0.2		
4/19/2022	8260	2204191004A	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
4/19/2022	8260	2204191004A	Trichlorofluoromethane (CFC 11)	89	ug/L	1	0.24		
4/19/2022	8260	2204191004A	Trichloroethene (TCE)	46	ug/L	1	0.2		
4/19/2022	8290	2204191006A	OCDD	1.12	pg/L	24	0.0908		J RB
4/19/2022	607	2204191010A	N-Nitrosodimethylamine	0.13	µg/L	0.0095	0.0048	44	
4/19/2022	607	2204191010A	N-Nitrodimethylamine	0.18	µg/L	0.0095	0.0048	76	
4/19/2022	607	2204191010A	Bromacil	1.25	µg/L	0.0095	0.0048	116	
4/19/2022	8270	2204191013A	Dichloromethane (Methylene Chloride)	5.6	ug/L	NA	NA		TIC RB
4/19/2022	8270	2204191013A	Unknown	4.6	ug/L	NA	NA		TIC
4/19/2022	8270	2204191013A	Unknown	7.5	ug/L	NA	NA		TIC RB
4/19/2022	METALS	2204191017A	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
4/19/2022	METALS	2204191017A	Strontium, Total	2.04	mg/L	0.1	0.002		
4/19/2022	METALS	2204191017A	Zinc, Total	0.009	mg/L	0.02	0.003		J
4/19/2022	METALS	2204191017A	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
4/19/2022	METALS	2204191017A	Sodium, Total	50.2	mg/L	1	0.2		
4/19/2022	METALS	2204191017A	Potassium, Total	4.4	mg/L	2	0.4		
4/19/2022	METALS	2204191017A	Iron, Total	0.14	mg/L	0.1	0.07		
4/19/2022	METALS	2204191017A	Calcium, Total	118	mg/L	1	0.3		
4/19/2022	METALS	2204191017A	Boron, Total	0.13	mg/L	0.2	0.02		J
4/19/2022	METALS	2204191017A	Aluminum, Total	0.22	mg/L	0.1	0.03		
4/19/2022	METALS	2204191017A	Barium, Total	0.036	mg/L	0.02	0.003		
4/19/2022	METALS	2204191017A	Vanadium, Total	0.0007	mg/L	0.05	0.0007		J
4/19/2022	METALS	2204191017A	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
4/19/2022	METALS	2204191017A	Magnesium, Total	64.3	mg/L	1	0.03		
4/19/2022	ANIONS	2204191018A	Alkalinity, Total as CaCO3	228	mg/L	2	1.8		
4/19/2022	ANIONS	2204191018A	Chloride	64.6	mg/L	2	0.5		
4/19/2022	ANIONS	2204191018A	Fluoride, undistilled	0.96	mg/L	0.1	0.01		
4/19/2022	ANIONS	2204191018A	Sulfate	293	mg/L	8	1.6		

Analytical Results for Sampling Events at 200-B-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	SM2540C	2204191019A	Total Dissolved Solids (TDS)	824	mg/L	10	9		
4/19/2022	6850	2204191020A	Perchlorate	0.418	ug/L	0.1	0.025		
4/19/2022	353.2	2204191021A	Nitrate+Nitrite as Nitrogen	2.81	mg/L	0.25	0.008		

Analytical Results for Sampling Events at 200-C-170

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/14/2022	8260	2202141020Y	Dichlorofluoromethane (CFC 21)	3.1	ug/L	1	0.2		
2/14/2022	8260	2202141020Y	Tetrahydrofuran (THF)	9.6	ug/L	5	1.7		
2/14/2022	8260	2202141020Y	Trichloroethene (TCE)	1.9	ug/L	1	0.2		
2/14/2022	8260	2202141020Y	Trichlorofluoromethane (CFC 11)	12	ug/L	1	0.24		
2/14/2022	8260	2202141020Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.4	ug/L	1	0.2		
2/14/2022	8260	2202141020Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	ug/L	1	0.2		
2/14/2022	607	2202141021Y	Bromacil	0.11	µg/L	0.0095	0.0048	119	
2/14/2022	METALS	2202141040Y	Nickel, Total	0.005	mg/L	0.04	0.003		J
2/14/2022	METALS	2202141040Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/14/2022	METALS	2202141040Y	Zinc, Total	0.014	mg/L	0.02	0.003		J
2/14/2022	METALS	2202141040Y	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
2/14/2022	METALS	2202141040Y	Strontium, Total	2.51	mg/L	0.1	0.002		
2/14/2022	METALS	2202141040Y	Sodium, Total	40.5	mg/L	1	0.2		
2/14/2022	METALS	2202141040Y	Potassium, Total	2.6	mg/L	2	0.4		
2/14/2022	METALS	2202141040Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
2/14/2022	METALS	2202141040Y	Magnesium, Total	64.8	mg/L	1	0.03		
2/14/2022	METALS	2202141040Y	Calcium, Total	128	mg/L	1	0.3		
2/14/2022	METALS	2202141040Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/14/2022	METALS	2202141040Y	Barium, Total	0.031	mg/L	0.02	0.003		
2/14/2022	METALS	2202141040Y	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
2/14/2022	METALS	2202141040Y	Molybdenum, Total	0.013	mg/L	0.025	0.003		J

Analytical Results for Sampling Events at 200-C-225

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2022	8260	2202101440Y	Chloromethane	0.42	ug/L	2	0.28		J EB
2/10/2022	8260	2202101440Y	Trichloroethene (TCE)	2.5	ug/L	1	0.2		
2/10/2022	8260	2202101440Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	14	ug/L	1	0.2		
2/10/2022	8260	2202101440Y	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
2/10/2022	607	2202101441Y	Bromacil	0.19	µg/L	0.0095	0.0048	119	
2/10/2022	METALS	2202101500Y	Potassium, Total	3.6	mg/L	2	0.4		
2/10/2022	METALS	2202101500Y	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
2/10/2022	METALS	2202101500Y	Strontium, Total	2.22	mg/L	0.1	0.002		
2/10/2022	METALS	2202101500Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/10/2022	METALS	2202101500Y	Sodium, Total	44.6	mg/L	1	0.2		
2/10/2022	METALS	2202101500Y	Zinc, Total	0.019	mg/L	0.02	0.003		J
2/10/2022	METALS	2202101500Y	Calcium, Total	134	mg/L	1	0.3		
2/10/2022	METALS	2202101500Y	Barium, Total	0.03	mg/L	0.02	0.003		
2/10/2022	METALS	2202101500Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/10/2022	METALS	2202101500Y	Magnesium, Total	66.6	mg/L	1	0.03		
2/10/2022	METALS	2202101500Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J

Analytical Results for Sampling Events at 200-C-270

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2022	8260	2202101030Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
2/10/2022	8260	2202101030Y	Trichloroethene (TCE)	2.3	ug/L	1	0.2		
2/10/2022	8260	2202101030Y	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
2/10/2022	607	2202101031Y	Bromacil	0.19	µg/L	0.0095	0.0048	119	
2/10/2022	METALS	2202101100Y	Vanadium, Total	0.001	mg/L	0.05	0.0007		J EB
2/10/2022	METALS	2202101100Y	Zinc, Total	0.028	mg/L	0.02	0.003		EB
2/10/2022	METALS	2202101100Y	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
2/10/2022	METALS	2202101100Y	Strontium, Total	2.43	mg/L	0.1	0.002		
2/10/2022	METALS	2202101100Y	Sodium, Total	48.7	mg/L	1	0.2		
2/10/2022	METALS	2202101100Y	Potassium, Total	4.2	mg/L	2	0.4		
2/10/2022	METALS	2202101100Y	Magnesium, Total	72.6	mg/L	1	0.03		
2/10/2022	METALS	2202101100Y	Calcium, Total	145	mg/L	1	0.3		
2/10/2022	METALS	2202101100Y	Boron, Total	0.1	mg/L	0.2	0.02		J
2/10/2022	METALS	2202101100Y	Barium, Total	0.03	mg/L	0.02	0.003		
2/10/2022	METALS	2202101100Y	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
2/10/2022	METALS	2202101100Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/10/2022	ANIONS	2202101101Y	Chloride	63.5	mg/L	2	0.5		
2/10/2022	ANIONS	2202101101Y	Fluoride, undistilled	0.95	mg/L	0.1	0.01		
2/10/2022	ANIONS	2202101101Y	Sulfate	386	mg/L	8	1.6		
2/10/2022	ANIONS	2202101101Y	Alkalinity, Total as CaCO3	258	mg/L	2	1.8		
2/10/2022	SM2540C	2202101102Y	Total Dissolved Solids (TDS)	888	mg/L	10	9		
2/10/2022	6850	2202101103Y	Perchlorate	0.411	ug/L	0.1	0.025		
2/10/2022	353.2	2202101104Y	Nitrate+Nitrite as Nitrogen	2.85	mg/L	0.25	0.008		

Analytical Results for Sampling Events at 200-D-240

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/17/2022	8260	2203171005A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.22	ug/L	1	0.2		J
3/17/2022	8260	2203171005A	Trichlorofluoromethane (CFC 11)	53	ug/L	1	0.24		
3/17/2022	8260	2203171005A	Trichloroethene (TCE)	15	ug/L	1	0.2		
3/17/2022	8260	2203171005A	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	2.5	0.5		
3/17/2022	8260	2203171005A	Tetrachloroethene (PCE)	0.34	ug/L	1	0.21		J
3/17/2022	607	2203171007A	Bromacil	0.51	µg/L	0.0094	0.0047	111	
3/17/2022	METALS	2203171008A	Nickel, Total	0.006	mg/L	0.04	0.003		J
3/17/2022	METALS	2203171008A	Zinc, Total	0.007	mg/L	0.02	0.003		J
3/17/2022	METALS	2203171008A	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
3/17/2022	METALS	2203171008A	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
3/17/2022	METALS	2203171008A	Strontium, Total	2.15	mg/L	0.1	0.002		
3/17/2022	METALS	2203171008A	Sodium, Total	56.3	mg/L	1	0.2		
3/17/2022	METALS	2203171008A	Potassium, Total	3.7	mg/L	2	0.4		
3/17/2022	METALS	2203171008A	Manganese, Total	0.005	mg/L	0.01	0.004		J
3/17/2022	METALS	2203171008A	Magnesium, Total	66.6	mg/L	1	0.03		
3/17/2022	METALS	2203171008A	Calcium, Total	129	mg/L	1	0.3		
3/17/2022	METALS	2203171008A	Barium, Total	0.034	mg/L	0.02	0.003		
3/17/2022	METALS	2203171008A	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/17/2022	METALS	2203171008A	Boron, Total	0.11	mg/L	0.2	0.02		J

Analytical Results for Sampling Events at 200-F-225

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/15/2022	8260	2202160840Y	Tetrahydrofuran (THF)	42	ug/L	5	1.7		
2/15/2022	8260	2202160840Y	Silane, methoxytrimethyl-	5.7	ug/L	NA	NA		TIC
2/15/2022	8260	2202160840Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.6	ug/L	1	0.2		
2/15/2022	8260	2202160840Y	Vinyl Chloride	0.41	ug/L	1	0.2		J
2/15/2022	8260	2202160840Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
2/15/2022	8260	2202160840Y	Styrene	0.27	ug/L	1	0.2		J
2/15/2022	8260	2202160840Y	Dichlorofluoromethane (CFC 21)	16	ug/L	1	0.2		
2/15/2022	8260	2202160840Y	Benzene	0.82	ug/L	1	0.2		J
2/15/2022	8260	2202160840Y	Acrylonitrile	2.4	ug/L	5	0.9		J
2/15/2022	8260	2202160840Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
2/15/2022	8260	2202160840Y	Trichlorofluoromethane (CFC 11)	4.7	ug/L	1	0.24		
2/15/2022	607	2202160841Y	Bromacil	0.38	µg/L	0.0096	0.0048	101	
2/15/2022	METALS	2202160915Y	Boron, Total	0.1	mg/L	0.2	0.02		J
2/15/2022	METALS	2202160915Y	Nickel, Total	0.004	mg/L	0.04	0.003		J
2/15/2022	METALS	2202160915Y	Zinc, Total	0.009	mg/L	0.02	0.003		J
2/15/2022	METALS	2202160915Y	Strontium, Total	2.33	mg/L	0.1	0.002		
2/15/2022	METALS	2202160915Y	Sodium, Total	29.9	mg/L	1	0.2		
2/15/2022	METALS	2202160915Y	Potassium, Total	3.4	mg/L	2	0.4		
2/15/2022	METALS	2202160915Y	Manganese, Total	0.008	mg/L	0.01	0.004		J
2/15/2022	METALS	2202160915Y	Magnesium, Total	72.7	mg/L	1	0.03		
2/15/2022	METALS	2202160915Y	Calcium, Total	134	mg/L	1	0.3		
2/15/2022	METALS	2202160915Y	Iron, Total	0.11	mg/L	0.1	0.07		
2/15/2022	METALS	2202160915Y	Barium, Total	0.04	mg/L	0.02	0.003		
2/15/2022	METALS	2202160915Y	Molybdenum, Total	0.004	mg/L	0.025	0.003		J
2/15/2022	ANIONS	2202160916Y	Chloride	58.7	mg/L	2	0.5		
2/15/2022	ANIONS	2202160916Y	Fluoride, undistilled	0.99	mg/L	0.1	0.01		
2/15/2022	ANIONS	2202160916Y	Alkalinity, Total as CaCO3	288	mg/L	2	1.8		
2/15/2022	ANIONS	2202160916Y	Sulfate	304	mg/L	8	1.6		
2/15/2022	SM2540C	2202160917Y	Total Dissolved Solids (TDS)	830	mg/L	10	9		
2/15/2022	353.2	2202160919Y	Nitrate+Nitrite as Nitrogen	0.141	mg/L	0.05	0.002		

Analytical Results for Sampling Events at 200-F-370

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/14/2022	8260	2202150855Y	Styrene	0.2	ug/L	1	0.2		J
2/14/2022	8260	2202150855Y	Dichlorofluoromethane (CFC 21)	4.5	ug/L	1	0.2		
2/14/2022	8260	2202150855Y	Chloromethane	0.39	ug/L	2	0.28		J A
2/14/2022	8260	2202150855Y	Silane, methoxytrimethyl-	8	ug/L	NA	NA		TIC
2/14/2022	8260	2202150855Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.2	ug/L	1	0.2		
2/14/2022	8260	2202150855Y	Tetrahydrofuran (THF)	33	ug/L	5	1.7		
2/14/2022	8260	2202150855Y	Trichloroethene (TCE)	0.89	ug/L	1	0.2		J
2/14/2022	8260	2202150855Y	Acrylonitrile	1.3	ug/L	5	0.9		J
2/14/2022	8260	2202150855Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	ug/L	1	0.2		
2/14/2022	8260	2202150855Y	Vinyl Chloride	0.32	ug/L	1	0.2		J
2/14/2022	METALS	2202150857Y	Magnesium, Total	80.1	mg/L	1	0.03		
2/14/2022	METALS	2202150857Y	Zinc, Total	0.024	mg/L	0.02	0.003		
2/14/2022	METALS	2202150857Y	Strontium, Total	12.4	mg/L	1	0.02		
2/14/2022	METALS	2202150857Y	Sodium, Total	20.5	mg/L	1	0.2		
2/14/2022	METALS	2202150857Y	Potassium, Total	2.7	mg/L	2	0.4		
2/14/2022	METALS	2202150857Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
2/14/2022	METALS	2202150857Y	Iron, Total	0.53	mg/L	0.1	0.07		
2/14/2022	METALS	2202150857Y	Calcium, Total	153	mg/L	1	0.3		
2/14/2022	METALS	2202150857Y	Boron, Total	0.08	mg/L	0.2	0.02		J
2/14/2022	METALS	2202150857Y	Barium, Total	0.025	mg/L	0.02	0.003		
2/14/2022	METALS	2202150857Y	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
2/14/2022	METALS	2202150857Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/14/2022	METALS	2202150920Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
2/14/2022	METALS	2202150920Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/14/2022	METALS	2202150920Y	Strontium, Total	12.3	mg/L	1	0.02		
2/14/2022	METALS	2202150920Y	Zinc, Total	0.01	mg/L	0.02	0.003		J
2/14/2022	METALS	2202150920Y	Sodium, Total	20.6	mg/L	1	0.2		
2/14/2022	METALS	2202150920Y	Potassium, Total	2.7	mg/L	2	0.4		
2/14/2022	METALS	2202150920Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
2/14/2022	METALS	2202150920Y	Magnesium, Total	80.9	mg/L	1	0.03		
2/14/2022	METALS	2202150920Y	Iron, Total	0.56	mg/L	0.1	0.07		
2/14/2022	METALS	2202150920Y	Calcium, Total	154	mg/L	1	0.3		
2/14/2022	METALS	2202150920Y	Barium, Total	0.025	mg/L	0.02	0.003		
2/14/2022	METALS	2202150920Y	Boron, Total	0.08	mg/L	0.2	0.02		J

Analytical Results for Sampling Events at 200-F-420

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/15/2022	8260	2202151110Y	Acrylonitrile	1.4	ug/L	5	0.9		J
2/15/2022	8260	2202151110Y	Tetrahydrofuran (THF)	40	ug/L	5	1.7		
2/15/2022	METALS	2202151300Y	Iron, Total	0.6	mg/L	0.1	0.07		
2/15/2022	METALS	2202151300Y	Strontium, Total	17.2	mg/L	1	0.02		
2/15/2022	METALS	2202151300Y	Sodium, Total	22.3	mg/L	1	0.2		
2/15/2022	METALS	2202151300Y	Potassium, Total	2.7	mg/L	2	0.4		
2/15/2022	METALS	2202151300Y	Zinc, Total	0.008	mg/L	0.02	0.003		J
2/15/2022	METALS	2202151300Y	Molybdenum, Total	0.004	mg/L	0.025	0.003		J
2/15/2022	METALS	2202151300Y	Calcium, Total	162	mg/L	1	0.3		
2/15/2022	METALS	2202151300Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/15/2022	METALS	2202151300Y	Barium, Total	0.028	mg/L	0.02	0.003		
2/15/2022	METALS	2202151300Y	Manganese, Total	0.01	mg/L	0.01	0.004		J
2/15/2022	METALS	2202151300Y	Magnesium, Total	78.3	mg/L	1	0.03		

Analytical Results for Sampling Events at 300-A-170

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/15/2022	8260	2202151427C	1,1,2-Trichloro-1,2,2-Trifluoroethane	17	ug/L	1	0.2		
2/15/2022	8260	2202151427C	Dichlorofluoromethane (CFC 21)	0.40	ug/L	1	0.2		J
2/15/2022	8260	2202151427C	Trichloroethene (TCE)	1.0	ug/L	1	0.2		J
2/15/2022	8260	2202151427C	Trichlorofluoromethane (CFC 11)	240	ug/L	2.5	0.6		
2/15/2022	607	2202151429C	N-Nitrosodimethylamine	1.53	µg/L	0.0095	0.0048	47	
2/15/2022	607	2202151429C	N-Nitrodimethylamine	3.65	µg/L	0.0095	0.0048	79	
2/15/2022	607	2202151429C	Bromacil	1.8	µg/L	0.0095	0.0048	119	
2/15/2022	METALS	2202151430C	Iron, Total	0.74	mg/L	0.1	0.07		
2/15/2022	METALS	2202151430C	Zinc, Total	0.006	mg/L	0.02	0.003		J
2/15/2022	METALS	2202151430C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/15/2022	METALS	2202151430C	Strontium, Total	1.95	mg/L	0.1	0.002		
2/15/2022	METALS	2202151430C	Sodium, Total	49.9	mg/L	1	0.2		
2/15/2022	METALS	2202151430C	Potassium, Total	2.4	mg/L	2	0.4		
2/15/2022	METALS	2202151430C	Nickel, Total	0.132	mg/L	0.04	0.003		
2/15/2022	METALS	2202151430C	Molybdenum, Total	0.018	mg/L	0.025	0.003		J
2/15/2022	METALS	2202151430C	Chromium, Total	0.049	mg/L	0.01	0.002		
2/15/2022	METALS	2202151430C	Calcium, Total	78.5	mg/L	1	0.3		
2/15/2022	METALS	2202151430C	Boron, Total	0.12	mg/L	0.2	0.02		J
2/15/2022	METALS	2202151430C	Barium, Total	0.038	mg/L	0.02	0.003		
2/15/2022	METALS	2202151430C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/15/2022	METALS	2202151430C	Magnesium, Total	50.6	mg/L	1	0.03		
2/15/2022	METALS	2202151430C	Manganese, Total	0.014	mg/L	0.01	0.004		
2/15/2022	353.2	2202151431C	Nitrate+Nitrite as Nitrogen	5.18	mg/L	0.25	0.008		

Analytical Results for Sampling Events at 300-B-166

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/7/2022	8260	2202071000A	Silane, methoxytrimethyl-	5.2	ug/L	NA	NA		TIC
2/7/2022	8260	2202071000A	Trichlorofluoromethane (CFC 11)	180	ug/L	2	0.48		
2/7/2022	8260	2202071000A	Trichloroethene (TCE)	0.32	ug/L	1	0.2		J
2/7/2022	8260	2202071000A	1,1,2-Trichloro-1,2,2-Trifluoroethane	14	ug/L	1	0.2		
2/7/2022	8260	2202071000A	Dichlorofluoromethane (CFC 21)	1.8	ug/L	1	0.2		
2/7/2022	607	2202071002A	N-Nitrosodimethylamine	3.3	µg/L	0.0094	0.0047	49	
2/7/2022	607	2202071002A	N-Nitrodimethylamine	2.62	µg/L	0.0094	0.0047	80	
2/7/2022	607	2202071002A	Bromacil	0.39	µg/L	0.0094	0.0047	108	
2/7/2022	607	2202071003A	N-Nitrosodimethylamine	3.07	µg/L	0.0094	0.0047	49	
2/7/2022	607	2202071003A	Bromacil	0.38	µg/L	0.0094	0.0047	108	
2/7/2022	607	2202071003A	N-Nitrodimethylamine	2.52	µg/L	0.0094	0.0047	80	
2/7/2022	METALS	2202071004A	Magnesium, Total	49.6	mg/L	1	0.03		
2/7/2022	METALS	2202071004A	Strontium, Total	1.7	mg/L	0.1	0.002		
2/7/2022	METALS	2202071004A	Sodium, Total	36.6	mg/L	1	0.2		
2/7/2022	METALS	2202071004A	Potassium, Total	2	mg/L	2	0.4		J
2/7/2022	METALS	2202071004A	Nickel, Total	0.019	mg/L	0.04	0.003		J
2/7/2022	METALS	2202071004A	Manganese, Total	0.007	mg/L	0.01	0.004		J
2/7/2022	METALS	2202071004A	Iron, Total	0.11	mg/L	0.1	0.07		
2/7/2022	METALS	2202071004A	Chromium, Total	0.023	mg/L	0.01	0.002		
2/7/2022	METALS	2202071004A	Calcium, Total	69.3	mg/L	1	0.3		
2/7/2022	METALS	2202071004A	Boron, Total	0.11	mg/L	0.2	0.02		J
2/7/2022	METALS	2202071004A	Barium, Total	0.042	mg/L	0.02	0.003		
2/7/2022	METALS	2202071004A	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/7/2022	METALS	2202071004A	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/7/2022	353.2	2202071005A	Nitrate+Nitrite as Nitrogen	3.53	mg/L	0.25	0.008		

Analytical Results for Sampling Events at 300-E-138

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/16/2022	8260	2202161400Y	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/16/2022	8260	2202161400Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	ug/L	1	0.2		
2/16/2022	607	2202161401Y	N-Nitrosodimethylamine	0.61	µg/L	0.0099	0.005	45	
2/16/2022	607	2202161401Y	Bromacil	0.26	µg/L	0.0099	0.005	101	
2/16/2022	607	2202161401Y	N-Nitrodimethylamine	1.77	µg/L	0.0099	0.005	74	
2/16/2022	METALS	2202161420Y	Nickel, Total	0.007	mg/L	0.04	0.003		J
2/16/2022	METALS	2202161420Y	Zinc, Total	0.016	mg/L	0.02	0.003		J
2/16/2022	METALS	2202161420Y	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
2/16/2022	METALS	2202161420Y	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
2/16/2022	METALS	2202161420Y	Strontium, Total	1.93	mg/L	0.1	0.002		
2/16/2022	METALS	2202161420Y	Potassium, Total	2.4	mg/L	2	0.4		
2/16/2022	METALS	2202161420Y	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/16/2022	METALS	2202161420Y	Magnesium, Total	66.2	mg/L	1	0.03		
2/16/2022	METALS	2202161420Y	Calcium, Total	108	mg/L	1	0.3		
2/16/2022	METALS	2202161420Y	Boron, Total	0.23	mg/L	0.2	0.02		
2/16/2022	METALS	2202161420Y	Barium, Total	0.022	mg/L	0.02	0.003		
2/16/2022	METALS	2202161420Y	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
2/16/2022	METALS	2202161420Y	Sodium, Total	113	mg/L	1	0.2		

Analytical Results for Sampling Events at 300-E-183

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/17/2022	8260	2202171000Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.6	ug/L	1	0.2		
2/17/2022	8260	2202171000Y	Trichloroethene (TCE)	1	ug/L	1	0.2		
2/17/2022	8260	2202171000Y	Trichlorofluoromethane (CFC 11)	7.8	ug/L	1	0.24		
2/17/2022	8260	2202171001Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1	0.2		
2/17/2022	8260	2202171001Y	Trichlorofluoromethane (CFC 11)	8.1	ug/L	1	0.24		
2/17/2022	8260	2202171001Y	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
2/17/2022	607	2202171002Y	N-Nitrosodimethylamine	0.007	µg/L	0.0095	0.0048	45	J
2/17/2022	607	2202171002Y	N-Nitrodimethylamine	0.02	µg/L	0.0095	0.0048	74	
2/17/2022	607	2202171002Y	Bromacil	0.95	µg/L	0.0095	0.0048	101	
2/17/2022	607	2202171025Y	N-Nitrosodimethylamine	0.007	µg/L	0.0095	0.0048	45	J
2/17/2022	607	2202171025Y	N-Nitrodimethylamine	0.02	µg/L	0.0095	0.0048	74	
2/17/2022	607	2202171025Y	Bromacil	0.94	µg/L	0.0095	0.0048	101	
2/17/2022	METALS	2202171026Y	Strontium, Total	1.88	mg/L	0.1	0.002		
2/17/2022	METALS	2202171026Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/17/2022	METALS	2202171026Y	Sodium, Total	44.8	mg/L	1	0.2		
2/17/2022	METALS	2202171026Y	Potassium, Total	3.3	mg/L	2	0.4		
2/17/2022	METALS	2202171026Y	Nickel, Total	0.005	mg/L	0.04	0.003		J
2/17/2022	METALS	2202171026Y	Magnesium, Total	58.6	mg/L	1	0.03		
2/17/2022	METALS	2202171026Y	Calcium, Total	117	mg/L	1	0.3		
2/17/2022	METALS	2202171026Y	Boron, Total	0.11	mg/L	0.2	0.02		J
2/17/2022	METALS	2202171026Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/17/2022	METALS	2202171026Y	Barium, Total	0.025	mg/L	0.02	0.003		
2/17/2022	METALS	2202171026Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/17/2022	METALS	2202171026Y	Zinc, Total	0.011	mg/L	0.02	0.003		J

Analytical Results for Sampling Events at 400-EV-131

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/1/2022	8260	2202011400C	Trichlorofluoromethane (CFC 11)	380	ug/L	5	1.2		
2/1/2022	8260	2202011400C	1,1,2-Trichloro-1,2,2-Trifluoroethane	89	ug/L	1	0.2		
2/1/2022	8260	2202011400C	Chloroform	0.3	ug/L	1	0.24		J
2/1/2022	8260	2202011400C	Dichlorofluoromethane (CFC 21)	0.67	ug/L	1	0.2		J
2/1/2022	8260	2202011400C	Trichloroethene (TCE)	1.5	ug/L	1	0.2		

Analytical Results for Sampling Events at 400-FV-131

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/18/2022	8260	2204180950C	Trichlorofluoromethane (CFC 11)	230	ug/L	2.5	0.6		
4/18/2022	8260	2204180950C	Trichloroethene (TCE)	1.4	ug/L	1	0.2		
4/18/2022	8260	2204180950C	Dichlorofluoromethane (CFC 21)	7	ug/L	1	0.2		
4/18/2022	8260	2204180950C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.1	ug/L	1	0.2		
4/18/2022	8260	2204180950C	1,1,2-Trichloro-1,2,2-Trifluoroethane	70	ug/L	1	0.2		

Analytical Results for Sampling Events at 400-GV-125

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/1/2022	8260	2202011010C	1,1,2-Trichloro-1,2,2-Trifluoroethane	70	ug/L	1	0.2		
2/1/2022	8260	2202011010C	Dichlorofluoromethane (CFC 21)	5.7	ug/L	1	0.2		
2/1/2022	8260	2202011010C	Trichloroethene (TCE)	1.8	ug/L	1	0.2		
2/1/2022	8260	2202011010C	Trichlorofluoromethane (CFC 11)	270	ug/L	2.5	0.6		
2/1/2022	8260	2202011010C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	5.2	ug/L	1	0.2		

Analytical Results for Sampling Events at 400-HV-147

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/18/2022	8260	2204181415C	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
4/18/2022	8260	2204181415C	Trichloroethene (TCE)	0.54	ug/L	1	0.2		J
4/18/2022	8260	2204181415C	1,1,2-Trichloro-1,2,2-Trifluoroethane	64	ug/L	1	0.2		
4/18/2022	8260	2204181415C	Chloroform	0.85	ug/L	1	0.24		J
4/18/2022	8260	2204181415C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.76	ug/L	1	0.2		J
4/18/2022	8260	2204181415C	Dichlorofluoromethane (CFC 21)	3.4	ug/L	1	0.2		

Analytical Results for Sampling Events at 400-JV-150

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2022	8260	2202020950C	Trichlorofluoromethane (CFC 11)	730	ug/L	10	2.4		
2/2/2022	8260	2202020950C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.79	ug/L	1	0.2		J
2/2/2022	8260	2202020950C	Trichloroethene (TCE)	0.95	ug/L	1	0.2		J
2/2/2022	8260	2202020950C	Dichlorofluoromethane (CFC 21)	4.2	ug/L	1	0.2		
2/2/2022	8260	2202020950C	Chloroform	0.49	ug/L	1	0.24		J
2/2/2022	8260	2202020950C	1,1-Dichloroethene	0.5	ug/L	1	0.2		J
2/2/2022	8260	2202020950C	1,1,2-Trichloro-1,2,2-Trifluoroethane	180	ug/L	1	0.2		

Analytical Results for Sampling Events at 600-E-280

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2022	8260	2202021420Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.4	ug/L	1	0.2		
2/2/2022	8260	2202021420Y	Trichloroethene (TCE)	0.62	ug/L	1	0.2		J
2/2/2022	607	2202021421Y	Bromacil	0.014	µg/L	0.0095	0.0048	111	
2/2/2022	METALS	2202021445Y	Potassium, Total	3.2	mg/L	2	0.4		
2/2/2022	METALS	2202021445Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/2/2022	METALS	2202021445Y	Aluminum, Total	0.11	mg/L	0.1	0.03		
2/2/2022	METALS	2202021445Y	Zinc, Total	0.005	mg/L	0.02	0.003		J
2/2/2022	METALS	2202021445Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/2/2022	METALS	2202021445Y	Barium, Total	0.049	mg/L	0.02	0.003		
2/2/2022	METALS	2202021445Y	Molybdenum, Total	0.011	mg/L	0.025	0.003		J RB
2/2/2022	METALS	2202021445Y	Manganese, Total	0.015	mg/L	0.01	0.004		
2/2/2022	METALS	2202021445Y	Magnesium, Total	24.6	mg/L	1	0.03		
2/2/2022	METALS	2202021445Y	Calcium, Total	99.4	mg/L	1	0.3		
2/2/2022	METALS	2202021445Y	Boron, Total	0.22	mg/L	0.2	0.02		
2/2/2022	METALS	2202021445Y	Strontium, Total	4.88	mg/L	0.1	0.002		
2/2/2022	METALS	2202021445Y	Sodium, Total	123	mg/L	1	0.2		

Analytical Results for Sampling Events at 600-G-138

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/20/2022	8260	2204201030A	Trichlorofluoromethane (CFC 11)	0.58	ug/L	1	0.24		J
4/20/2022	8260	2204201030A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.41	ug/L	1	0.2		J
4/20/2022	8260	2204201030A	Trichloroethene (TCE)	37	ug/L	1	0.2		
4/20/2022	8260	2204201030A	1,1,2-Trichloro-1,2,2-Trifluoroethane	28	ug/L	1	0.2		
4/20/2022	8260	2204201031A	Trichloroethene (TCE)	38	ug/L	1	0.2		
4/20/2022	8260	2204201031A	Trichlorofluoromethane (CFC 11)	0.6	ug/L	1	0.24		J
4/20/2022	8260	2204201031A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.61	ug/L	1	0.2		J
4/20/2022	8260	2204201031A	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	ug/L	1	0.2		
4/20/2022	607	2204201033A	Bromacil	20.7	µg/L	0.19	0.094	116	D
4/20/2022	300.0	2204201045A	Chloride	177	mg/L	8	1.7		
4/20/2022	353.2	2204201046A	Nitrate+Nitrite as Nitrogen	11.2	mg/L	0.5	0.02		

Analytical Results for Sampling Events at 700-A-253

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/23/2022	8260	2203231011A	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	ug/L	1	0.2		J
3/23/2022	6850	2203231014A	Perchlorate	0.112	ug/L	0.1	0.025		

Analytical Results for Sampling Events at 700-D-186

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/21/2022	8260	2203211327A	Trichlorofluoromethane (CFC 11)	0.5	ug/L	1	0.24		J
3/21/2022	8260	2203211327A	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1	0.2		
3/21/2022	8260	2203211327A	Trichloroethene (TCE)	0.47	ug/L	1	0.2		J
3/21/2022	8260	2203211328A	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1	0.2		
3/21/2022	8260	2203211328A	Trichloroethene (TCE)	0.4	ug/L	1	0.2		J
3/21/2022	8260	2203211328A	Trichlorofluoromethane (CFC 11)	0.5	ug/L	1	0.24		J
3/21/2022	6850	2203211332A	Perchlorate	0.254	ug/L	0.1	0.025		

Analytical Results for Sampling Events at 700-H-350

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/21/2022	6850	2203220920Y	Perchlorate	0.629	ug/L	0.1	0.025		

Analytical Results for Sampling Events at 700-H-670

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/23/2022	8260	2203240825Y	Styrene	0.67	ug/L	1	0.2		J

Analytical Results for Sampling Events at 700-J-200

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/21/2022	8260	2203211310C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.52	ug/L	1	0.2		J
3/21/2022	6850	2203211313C	Perchlorate	0.0605	ug/L	0.1	0.025		J

Analytical Results for Sampling Events at BLM-10-517

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/14/2022	8260_LL	2204141400C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.3	ug/L	0.5	0.2		J

Analytical Results for Sampling Events at BLM-13-300

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/1/2022	8260	2203011400A	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.47	ug/L	1	0.2		J
3/1/2022	METALS	2203011408A	Magnesium, Total	70.5	mg/L	1	0.03		
3/1/2022	METALS	2203011408A	Zinc, Total	0.046	mg/L	0.02	0.003		
3/1/2022	METALS	2203011408A	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/1/2022	METALS	2203011408A	Strontium, Total	3.21	mg/L	0.1	0.002		
3/1/2022	METALS	2203011408A	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/1/2022	METALS	2203011408A	Potassium, Total	9.2	mg/L	2	0.4		
3/1/2022	METALS	2203011408A	Sodium, Total	41	mg/L	1	0.2		
3/1/2022	METALS	2203011408A	Calcium, Total	127	mg/L	1	0.3		
3/1/2022	METALS	2203011408A	Boron, Total	0.05	mg/L	0.2	0.02		J
3/1/2022	METALS	2203011408A	Barium, Total	0.029	mg/L	0.02	0.003		
3/1/2022	METALS	2203011408A	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/1/2022	METALS	2203011408A	Antimony, Total	0.0008	mg/L	0.001	0.0002		J
3/1/2022	METALS	2203011408A	Chromium, Total	0.027	mg/L	0.01	0.002		

Analytical Results for Sampling Events at BLM-14-327

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/18/2022	8260	2204181346A	Trichloroethene (TCE)	61	ug/L	1	0.2		
4/18/2022	8260	2204181346A	Trichlorofluoromethane (CFC 11)	98	ug/L	1	0.24		Q
4/18/2022	8260	2204181346A	Tetrachloroethene (PCE)	2.2	ug/L	1	0.21		Q
4/18/2022	8260	2204181346A	Dichlorofluoromethane (CFC 21)	0.32	ug/L	1	0.2		J
4/18/2022	8260	2204181346A	1,1,2-Trichloro-1,2,2-Trifluoroethane	340	ug/L	2.5	0.5		Q
4/18/2022	8260	2204181346A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.1	ug/L	1	0.2		
4/18/2022	607	2204181348A	N-Nitrosodimethylamine	0.19	µg/L	0.0095	0.0048	44	
4/18/2022	607	2204181348A	N-Nitrodimethylamine	0.2	µg/L	0.0095	0.0048	76	
4/18/2022	607	2204181348A	Bromacil	0.66	µg/L	0.0095	0.0048	116	
4/18/2022	METALS	2204181349A	Calcium, Total	140	mg/L	1	0.3		
4/18/2022	METALS	2204181349A	Zinc, Total	0.006	mg/L	0.02	0.003		J
4/18/2022	METALS	2204181349A	Vanadium, Total	0.0007	mg/L	0.05	0.0007		J
4/18/2022	METALS	2204181349A	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
4/18/2022	METALS	2204181349A	Strontium, Total	3.4	mg/L	0.1	0.002		
4/18/2022	METALS	2204181349A	Sodium, Total	49.3	mg/L	1	0.2		
4/18/2022	METALS	2204181349A	Magnesium, Total	71.1	mg/L	1	0.03		
4/18/2022	METALS	2204181349A	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/18/2022	METALS	2204181349A	Boron, Total	0.11	mg/L	0.2	0.02		J
4/18/2022	METALS	2204181349A	Barium, Total	0.025	mg/L	0.02	0.003		
4/18/2022	METALS	2204181349A	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
4/18/2022	METALS	2204181349A	Potassium, Total	2.9	mg/L	2	0.4		
4/18/2022	ANIONS	2204181350A	Chloride	71.1	mg/L	2	0.5		
4/18/2022	ANIONS	2204181350A	Fluoride, undistilled	1	mg/L	0.1	0.01		
4/18/2022	ANIONS	2204181350A	Alkalinity, Total as CaCO3	242	mg/L	2	1.8		
4/18/2022	ANIONS	2204181350A	Sulfate	350	mg/L	8	1.6		
4/18/2022	SM2540C	2204181351A	Total Dissolved Solids (TDS)	927	mg/L	10	9		
4/18/2022	6850	2204181352A	Perchlorate	0.411	ug/L	0.1	0.025		
4/18/2022	353.2	2204181353A	Nitrate+Nitrite as Nitrogen	2.79	mg/L	0.25	0.008		

Analytical Results for Sampling Events at BLM-21-400

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	8260	2203021445A	Trichlorofluoromethane (CFC 11)	72	ug/L	1	0.24		
3/2/2022	8260	2203021445A	Trichloroethene (TCE)	52	ug/L	1	0.2		
3/2/2022	8260	2203021445A	cis-1,2-Dichloroethene	0.29	ug/L	1	0.23		J
3/2/2022	8260	2203021445A	Dichlorofluoromethane (CFC 21)	0.59	ug/L	1	0.2		J
3/2/2022	8260	2203021445A	1,1,2-Trichloro-1,2,2-Trifluoroethane	260	ug/L	2.5	0.5		
3/2/2022	8260	2203021445A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.9	ug/L	1	0.2		
3/2/2022	8260	2203021445A	Tetrachloroethene (PCE)	2.2	ug/L	1	0.21		
3/2/2022	8260	2203021446A	cis-1,2-Dichloroethene	0.29	ug/L	1	0.23		J
3/2/2022	8260	2203021446A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.8	ug/L	1	0.2		
3/2/2022	8260	2203021446A	Trichlorofluoromethane (CFC 11)	75	ug/L	1	0.24		
3/2/2022	8260	2203021446A	Trichloroethene (TCE)	51	ug/L	1	0.2		
3/2/2022	8260	2203021446A	Tetrachloroethene (PCE)	2.5	ug/L	1	0.21		
3/2/2022	8260	2203021446A	Dichlorofluoromethane (CFC 21)	0.6	ug/L	1	0.2		J
3/2/2022	8260	2203021446A	1,1,2-Trichloro-1,2,2-Trifluoroethane	250	ug/L	2.5	0.5		
3/2/2022	607	2203021448A	N-Nitrodimethylamine	0.33	µg/L	0.0096	0.0048	76	
3/2/2022	607	2203021448A	Bromacil	0.51	µg/L	0.0096	0.0048	103	
3/2/2022	607	2203021448A	N-Nitrosodimethylamine	0.39	µg/L	0.0096	0.0048	46	
3/2/2022	METALS	2203021449A	Magnesium, Total	57.4	mg/L	1	0.03		
3/2/2022	METALS	2203021449A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/2/2022	METALS	2203021449A	Strontium, Total	3	mg/L	0.1	0.002		
3/2/2022	METALS	2203021449A	Sodium, Total	66.3	mg/L	1	0.2		
3/2/2022	METALS	2203021449A	Potassium, Total	4.4	mg/L	2	0.4		
3/2/2022	METALS	2203021449A	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/2/2022	METALS	2203021449A	Chromium, Total	0.003	mg/L	0.01	0.002		J
3/2/2022	METALS	2203021449A	Calcium, Total	123	mg/L	1	0.3		
3/2/2022	METALS	2203021449A	Boron, Total	0.1	mg/L	0.2	0.02		J
3/2/2022	METALS	2203021449A	Barium, Total	0.036	mg/L	0.02	0.003		
3/2/2022	METALS	2203021449A	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/2/2022	METALS	2203021449A	Zinc, Total	0.034	mg/L	0.02	0.003		
3/2/2022	METALS	2203021449A	Cobalt, Total	0.0009	mg/L	0.05	0.0009		J RB
3/2/2022	ANIONS	2203021450A	Alkalinity, Total as CaCO3	224	mg/L	2	1.8		
3/2/2022	ANIONS	2203021450A	Sulfate	351	mg/L	10	2		
3/2/2022	ANIONS	2203021450A	Chloride	66.9	mg/L	2	0.5		
3/2/2022	ANIONS	2203021450A	Fluoride, undistilled	0.57	mg/L	0.1	0.01		
3/2/2022	SM2540C	2203021451A	Total Dissolved Solids (TDS)	880	mg/L	10	9		
3/2/2022	6850	2203021452A	Perchlorate	0.399	ug/L	0.1	0.025		
3/2/2022	353.2	2203021453A	Nitrate+Nitrite as Nitrogen	2.72	mg/L	0.25	0.008		

Analytical Results for Sampling Events at BLM-23-431

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/7/2022	8260	2202071410A	Trichloroethene (TCE)	54	ug/L	1	0.2		
2/7/2022	8260	2202071410A	Tetrachloroethene (PCE)	1.6	ug/L	1	0.21		
2/7/2022	8260	2202071410A	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	15	ug/L	1	0.2		
2/7/2022	8260	2202071410A	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
2/7/2022	8260	2202071410A	Dichlorofluoromethane (CFC 21)	8.8	ug/L	1	0.2		
2/7/2022	8260	2202071410A	Trichlorofluoromethane (CFC 11)	44	ug/L	1	0.24		
2/7/2022	607	2202071412A	N-Nitrosodimethylamine	0.23	µg/L	0.0097	0.0049	49	
2/7/2022	607	2202071412A	N-Nitrodimethylamine	0.2	µg/L	0.0097	0.0049	80	
2/7/2022	607	2202071412A	Bromacil	0.51	µg/L	0.0097	0.0049	108	

Analytical Results for Sampling Events at BLM-32-543

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2022	NDMA_LL	2202021343B	N-Nitrosodimethylamine	3.21	ng/L	0.49	0.41		FB
2/2/2022	NDMA_LL	2202021343B	N-Nitrodimethylamine	0.32	ng/L	0.49	0.2		J
2/2/2022	8270	2202021405B	Benzo(a)pyrene	0.078	ug/L	0.19	0.075		J
2/2/2022	8270	2202021405B	Benzenesulfonamide, N-butyl-	2500	ug/L	NA	NA		TIC
2/2/2022	8270	2202021405B	Benzo(b)fluoranthene	0.075	ug/L	0.19	0.065		J
2/2/2022	8270	2202021405B	Unknown	770	ug/L	NA	NA		TIC
2/2/2022	METALS	2202021425B	Strontium, Total	2.03	mg/L	0.1	0.002		
2/2/2022	METALS	2202021425B	Manganese, Total	0.079	mg/L	0.01	0.004		
2/2/2022	METALS	2202021425B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/2/2022	METALS	2202021425B	Sodium, Total	39	mg/L	1	0.2		
2/2/2022	METALS	2202021425B	Potassium, Total	3.4	mg/L	2	0.4		
2/2/2022	METALS	2202021425B	Molybdenum, Total	0.008	mg/L	0.025	0.003		J RB
2/2/2022	METALS	2202021425B	Copper, Total	0.038	mg/L	0.02	0.004		
2/2/2022	METALS	2202021425B	Calcium, Total	82.8	mg/L	1	0.3		
2/2/2022	METALS	2202021425B	Boron, Total	0.1	mg/L	0.2	0.02		J
2/2/2022	METALS	2202021425B	Barium, Total	0.048	mg/L	0.02	0.003		
2/2/2022	METALS	2202021425B	Magnesium, Total	60.1	mg/L	1	0.03		
2/2/2022	METALS	2202021425B	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/2/2022	METALS	2202021425B	Antimony, Total	0.0007	mg/L	0.001	0.0002		J
2/2/2022	METALS	2202021425B	Zinc, Total	0.091	mg/L	0.02	0.003		
2/2/2022	ANIONS	2202021426B	Sulfate	270	mg/L	8	1.6		
2/2/2022	ANIONS	2202021426B	Alkalinity, Total as CaCO3	184	mg/L	2	1.8		
2/2/2022	ANIONS	2202021426B	Chloride	48.5	mg/L	2	0.5		
2/2/2022	ANIONS	2202021426B	Fluoride, undistilled	0.68	mg/L	0.1	0.01		
2/2/2022	SM2540C	2202021427B	Total Dissolved Solids (TDS)	701	mg/L	10	9		
2/2/2022	6850	2202021428B	Perchlorate	0.352	ug/L	0.1	0.025		
2/2/2022	353.2	2202021429B	Nitrate+Nitrite as Nitrogen	1.66	mg/L	0.05	0.002		

Analytical Results for Sampling Events at BLM-32-571

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/1/2022	NDMA_LL	2202011518B	N-Nitrosodimethylamine	0.54	ng/L	0.47	0.4		
2/1/2022	NDMA_LL	2202011518B	N-Nitrodimethylamine	0.24	ng/L	0.47	0.2		J
2/1/2022	NDMA_LL	2202011520B	N-Nitrosodimethylamine	0.4	ng/L	0.48	0.4		J
2/1/2022	NDMA_LL	2202011520B	N-Nitrodimethylamine	0.24	ng/L	0.48	0.2		J

Analytical Results for Sampling Events at BLM-32-632

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/1/2022	NDMA_LL	2202011532B	N-Nitrosodimethylamine	0.63	ng/L	0.48	0.4		
2/1/2022	NDMA_LL	2202011532B	N-Nitrodimethylamine	0.52	ng/L	0.48	0.2		

Analytical Results for Sampling Events at BLM-39-385

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2022	8260	2204070810Y	Dichlorofluoromethane (CFC 21)	1.4	ug/L	1	0.2		
4/6/2022	8260	2204070810Y	Trichlorofluoromethane (CFC 11)	110	ug/L	1	0.24		
4/6/2022	8260	2204070810Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.6	ug/L	1	0.2		
4/6/2022	8260	2204070810Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	170	ug/L	1	0.2		
4/6/2022	8260	2204070810Y	Tetrachloroethene (PCE)	8	ug/L	1	0.21		
4/6/2022	8260	2204070810Y	Trichloroethene (TCE)	190	ug/L	1	0.2		
4/6/2022	607	2204070811Y	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	47	
4/6/2022	607	2204070811Y	N-Nitrodimethylamine	1.17	µg/L	0.0095	0.0048	77	
4/6/2022	607	2204070811Y	Bromacil	0.37	µg/L	0.0095	0.0048	113	
4/6/2022	METALS	2204070845Y	Sodium, Total	41.8	mg/L	1	0.2		
4/6/2022	METALS	2204070845Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
4/6/2022	METALS	2204070845Y	Barium, Total	0.029	mg/L	0.02	0.003		
4/6/2022	METALS	2204070845Y	Boron, Total	0.1	mg/L	0.2	0.02		J
4/6/2022	METALS	2204070845Y	Calcium, Total	126	mg/L	1	0.3		
4/6/2022	METALS	2204070845Y	Magnesium, Total	65.3	mg/L	1	0.03		
4/6/2022	METALS	2204070845Y	Potassium, Total	3	mg/L	2	0.4		
4/6/2022	METALS	2204070845Y	Strontium, Total	2.83	mg/L	0.1	0.002		
4/6/2022	METALS	2204070845Y	Thallium, Total	0.00004	mg/L	0.001	0.00004		J
4/6/2022	METALS	2204070845Y	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/6/2022	METALS	2204070845Y	Zinc, Total	0.005	mg/L	0.02	0.003		J
4/6/2022	METALS	2204070845Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/6/2022	ANIONS	2204070846Y	Alkalinity, Total as CaCO3	263	mg/L	2	1.8		
4/6/2022	ANIONS	2204070846Y	Chloride	54	mg/L	2	0.5		
4/6/2022	ANIONS	2204070846Y	Fluoride, undistilled	0.95	mg/L	0.1	0.01		
4/6/2022	ANIONS	2204070846Y	Sulfate	315	mg/L	8	1.6		
4/6/2022	SM2540C	2204070915Y	Total Dissolved Solids (TDS)	879	mg/L	10	9		
4/6/2022	6850	2204070916Y	Perchlorate	0.341	ug/L	0.1	0.025		
4/6/2022	353.2	2204070917Y	Nitrate+Nitrite as Nitrogen	3.38	mg/L	0.25	0.008		

Analytical Results for Sampling Events at BLM-39-560

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260	2204190930Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.9	ug/L	1	0.2		
4/19/2022	8260	2204190930Y	Dichlorofluoromethane (CFC 21)	7.5	ug/L	1	0.2		
4/19/2022	8260	2204190930Y	Tetrachloroethene (PCE)	0.41	ug/L	1	0.21		J
4/19/2022	8260	2204190930Y	Trichloroethene (TCE)	10	ug/L	1	0.2		
4/19/2022	8260	2204190930Y	Trichlorofluoromethane (CFC 11)	3.3	ug/L	1	0.24		
4/19/2022	8260	2204190930Y	Vinyl Chloride	0.31	ug/L	1	0.2		J
4/19/2022	8260	2204190930Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.5	ug/L	1	0.2		
4/19/2022	8260	2204190931Y	Tetrachloroethene (PCE)	0.65	ug/L	1	0.21		J
4/19/2022	8260	2204190931Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	8.3	ug/L	1	0.2		
4/19/2022	8260	2204190931Y	Vinyl Chloride	0.39	ug/L	1	0.2		J
4/19/2022	8260	2204190931Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
4/19/2022	8260	2204190931Y	Dichlorofluoromethane (CFC 21)	9	ug/L	1	0.2		
4/19/2022	8260	2204190931Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	11	ug/L	1	0.2		
4/19/2022	8260	2204190931Y	Trichlorofluoromethane (CFC 11)	4	ug/L	1	0.24		
4/19/2022	607	2204190932Y	N-Nitrosodimethylamine	0.009	µg/L	0.0095	0.0048	44	J
4/19/2022	607	2204190955Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	44	
4/19/2022	METALS	2204191025Y	Nickel, Total	0.015	mg/L	0.04	0.003		J
4/19/2022	METALS	2204191025Y	Zinc, Total	0.015	mg/L	0.02	0.003		J EB
4/19/2022	METALS	2204191025Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/19/2022	METALS	2204191025Y	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
4/19/2022	METALS	2204191025Y	Strontium, Total	1.6	mg/L	0.1	0.002		
4/19/2022	METALS	2204191025Y	Sodium, Total	46.2	mg/L	1	0.2		
4/19/2022	METALS	2204191025Y	Potassium, Total	7.8	mg/L	2	0.4		
4/19/2022	METALS	2204191025Y	Molybdenum, Total	0.013	mg/L	0.025	0.003		J
4/19/2022	METALS	2204191025Y	Manganese, Total	0.134	mg/L	0.01	0.004		
4/19/2022	METALS	2204191025Y	Magnesium, Total	31.4	mg/L	1	0.03		
4/19/2022	METALS	2204191025Y	Calcium, Total	67.7	mg/L	1	0.3		
4/19/2022	METALS	2204191025Y	Boron, Total	0.11	mg/L	0.2	0.02		J
4/19/2022	METALS	2204191025Y	Arsenic, Total	0.0014	mg/L	0.001	0.0004		
4/19/2022	METALS	2204191025Y	Barium, Total	0.04	mg/L	0.02	0.003		

Analytical Results for Sampling Events at BLM-40-517

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/4/2022	METALS	2204041016C	Molybdenum, Total	0.023	mg/L	0.025	0.003		J
4/4/2022	METALS	2204041016C	Potassium, Total	4.4	mg/L	2	0.4		
4/4/2022	METALS	2204041016C	Sodium, Total	47.7	mg/L	1	0.2		
4/4/2022	METALS	2204041016C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/4/2022	METALS	2204041016C	Nickel, Total	0.005	mg/L	0.04	0.003		J
4/4/2022	METALS	2204041016C	Calcium, Total	76.5	mg/L	1	0.3		
4/4/2022	METALS	2204041016C	Boron, Total	0.07	mg/L	0.2	0.02		J
4/4/2022	METALS	2204041016C	Barium, Total	0.036	mg/L	0.02	0.003		
4/4/2022	METALS	2204041016C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/4/2022	METALS	2204041016C	Antimony, Total	0.0006	mg/L	0.001	0.0002		J
4/4/2022	METALS	2204041016C	Strontium, Total	2.58	mg/L	0.1	0.002		
4/4/2022	METALS	2204041016C	Magnesium, Total	45	mg/L	1	0.03		

Analytical Results for Sampling Events at BLM-40-688

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2022	8260_LL	2204150910C	1,2-Dichloroethane	0.69	ug/L	0.5	0.2		

Analytical Results for Sampling Events at BLM-41-670

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260_LL	2204190955C	1,2-Dichloroethane	0.42	ug/L	0.5	0.2		J
4/19/2022	NDMA_LL	2204190959C	N-Nitrosodimethylamine	0.57	ng/L	0.48	0.4		
4/19/2022	NDMA_LL	2204191001C	N-Nitrosodimethylamine	0.46	ng/L	0.48	0.4		J

Analytical Results for Sampling Events at BLM-42-569

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/14/2022	8260_LL	2203140945C	Chloromethane	0.34	ug/L	0.5	0.28		J RB TB

Analytical Results for Sampling Events at BLM-42-709

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/14/2022	8270	2203141414C	Di-n-butyl Phthalate	6.8	ug/L	9.1	1.7		J RB

Analytical Results for Sampling Events at BLM-5-527

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/15/2022	8260	2203151355C	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.2	ug/L	1	0.2		
3/15/2022	8260	2203151355C	Tetrachloroethene (PCE)	0.56	ug/L	1	0.21		J
3/15/2022	8260	2203151355C	Trichloroethene (TCE)	26	ug/L	1	0.2		
3/15/2022	8260	2203151355C	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
3/15/2022	8260	2203151356C	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.5	ug/L	1	0.2		
3/15/2022	8260	2203151356C	Tetrachloroethene (PCE)	0.62	ug/L	1	0.21		J
3/15/2022	8260	2203151356C	Trichloroethene (TCE)	27	ug/L	1	0.2		
3/15/2022	8260	2203151356C	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
3/15/2022	607	2203151358C	N-Nitrosodimethylamine	0.11	µg/L	0.0095	0.0048	43	
3/15/2022	607	2203151358C	N-Nitrodimethylamine	0.05	µg/L	0.0095	0.0048	69	
3/15/2022	607	2203151359C	N-Nitrodimethylamine	0.05	µg/L	0.0095	0.0048	69	
3/15/2022	607	2203151359C	N-Nitrosodimethylamine	0.11	µg/L	0.0095	0.0048	43	

Analytical Results for Sampling Events at BLM-6-488

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/18/2022	8260	2204180956A	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.5	ug/L	1	0.2		
4/18/2022	8260	2204180956A	Trichloroethene (TCE)	2.2	ug/L	1	0.2		

Analytical Results for Sampling Events at BLM-7-509

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/3/2022	METALS	2203030935A	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/3/2022	METALS	2203030935A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/3/2022	METALS	2203030935A	Strontium, Total	2.22	mg/L	0.1	0.002		
3/3/2022	METALS	2203030935A	Potassium, Total	4.1	mg/L	2	0.4		
3/3/2022	METALS	2203030935A	Magnesium, Total	65.9	mg/L	1	0.03		
3/3/2022	METALS	2203030935A	Calcium, Total	103	mg/L	1	0.3		
3/3/2022	METALS	2203030935A	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2022	METALS	2203030935A	Barium, Total	0.019	mg/L	0.02	0.003		J
3/3/2022	METALS	2203030935A	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
3/3/2022	METALS	2203030935A	Sodium, Total	41	mg/L	1	0.2		
3/3/2022	METALS	2203030936A	Potassium, Total	3.9	mg/L	2	0.4		
3/3/2022	METALS	2203030936A	Sodium, Total	38.9	mg/L	1	0.2		
3/3/2022	METALS	2203030936A	Strontium, Total	2.13	mg/L	0.1	0.002		
3/3/2022	METALS	2203030936A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/3/2022	METALS	2203030936A	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/3/2022	METALS	2203030936A	Barium, Total	0.018	mg/L	0.02	0.003		J
3/3/2022	METALS	2203030936A	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2022	METALS	2203030936A	Calcium, Total	98.3	mg/L	1	0.3		
3/3/2022	METALS	2203030936A	Magnesium, Total	62.6	mg/L	1	0.03		
3/3/2022	METALS	2203030936A	Molybdenum, Total	0.009	mg/L	0.025	0.003		J

Analytical Results for Sampling Events at BLM-9-419

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/1/2022	8260	2203010950A	1,1,2-Trichloro-1,2,2-Trifluoroethane	9.5	ug/L	1	0.2		
3/1/2022	8260	2203010950A	Trichloroethene (TCE)	2.5	ug/L	1	0.2		
3/1/2022	8260	2203010950A	Trichlorofluoromethane (CFC 11)	3.5	ug/L	1	0.24		

Analytical Results for Sampling Events at BW-1-268

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2022	8260_LL	2203100931C	Trichloroethene (TCE)	1	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100931C	Trichlorofluoromethane (CFC 11)	190	ug/L	0.5	0.24		
3/10/2022	8260_LL	2203100931C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.3	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100931C	1,1,2-Trichloro-1,2,2-Trifluoroethane	47	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100931C	Dichlorofluoromethane (CFC 21)	3.6	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100933C	Trichlorofluoromethane (CFC 11)	180	ug/L	1	0.48		
3/10/2022	8260_LL	2203100933C	1,1,2-Trichloro-1,2,2-Trifluoroethane	50	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100933C	Trichloroethene (TCE)	1	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100933C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	0.5	0.2		
3/10/2022	8260_LL	2203100933C	Dichlorofluoromethane (CFC 21)	4	ug/L	0.5	0.2		
3/10/2022	607	2203100934C	N-Nitrosodimethylamine	5.22	µg/L	0.0096	0.0048	43	
3/10/2022	607	2203100934C	N-Nitrodimethylamine	4.32	µg/L	0.0096	0.0048	69	
3/10/2022	607	2203100934C	Bromacil	2.97	µg/L	0.0096	0.0048	99	
3/10/2022	METALS	2203100935C	Potassium, Total	2.9	mg/L	2	0.4		
3/10/2022	METALS	2203100935C	Boron, Total	0.22	mg/L	0.2	0.02		
3/10/2022	METALS	2203100935C	Zinc, Total	0.009	mg/L	0.02	0.003		J
3/10/2022	METALS	2203100935C	Vanadium, Total	0.0009	mg/L	0.05	0.0007		J
3/10/2022	METALS	2203100935C	Strontium, Total	3.08	mg/L	0.1	0.002		
3/10/2022	METALS	2203100935C	Sodium, Total	93	mg/L	1	0.2		
3/10/2022	METALS	2203100935C	Magnesium, Total	64.5	mg/L	1	0.03		
3/10/2022	METALS	2203100935C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/10/2022	METALS	2203100935C	Calcium, Total	103	mg/L	1	0.3		
3/10/2022	METALS	2203100935C	Chromium, Total	0.005	mg/L	0.01	0.002		J
3/10/2022	METALS	2203100935C	Barium, Total	0.037	mg/L	0.02	0.003		
3/10/2022	METALS	2203100935C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J

Analytical Results for Sampling Events at BW-3-180

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/20/2022	8260	2204200950C	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.4	ug/L	1	0.2		
4/20/2022	8260	2204200950C	Trichlorofluoromethane (CFC 11)	0.32	ug/L	1	0.24		J
4/20/2022	8260	2204200951C	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.3	ug/L	1	0.2		
4/20/2022	8260	2204200951C	Trichlorofluoromethane (CFC 11)	0.44	ug/L	1	0.24		J
4/20/2022	607	2204200959C	Bromacil	0.23	µg/L	0.0095	0.0048	116	
4/20/2022	METALS	2204201005C	Boron, Total	0.09	mg/L	0.2	0.02		J
4/20/2022	METALS	2204201005C	Manganese, Total	0.015	mg/L	0.01	0.004		
4/20/2022	METALS	2204201005C	Zinc, Total	0.007	mg/L	0.02	0.003		J FB
4/20/2022	METALS	2204201005C	Strontium, Total	7.44	mg/L	0.1	0.002		
4/20/2022	METALS	2204201005C	Sodium, Total	128	mg/L	1	0.2		
4/20/2022	METALS	2204201005C	Potassium, Total	2.5	mg/L	2	0.4		
4/20/2022	METALS	2204201005C	Nickel, Total	0.775	mg/L	0.04	0.003		
4/20/2022	METALS	2204201005C	Molybdenum, Total	0.037	mg/L	0.025	0.003		
4/20/2022	METALS	2204201005C	Iron, Total	1	mg/L	0.1	0.07		
4/20/2022	METALS	2204201005C	Chromium, Total	0.217	mg/L	0.01	0.002		
4/20/2022	METALS	2204201005C	Calcium, Total	268	mg/L	10	3		
4/20/2022	METALS	2204201005C	Barium, Total	0.024	mg/L	0.02	0.003		
4/20/2022	METALS	2204201005C	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
4/20/2022	METALS	2204201005C	Magnesium, Total	85.7	mg/L	1	0.03		
4/20/2022	METALS	2204201005C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J

Analytical Results for Sampling Events at JER-1-483

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/5/2022	8260_LL	2204051440B	Toluene	0.28	ug/L	0.5	0.2		J
4/5/2022	NDMA_LL	2204051442B	N-Nitrodimethylamine	0.27	ng/L	0.48	0.2		J
4/5/2022	8270	2204051444B	1,4-Dioxane	1.5	ug/L	0.04	0.027		

Analytical Results for Sampling Events at JER-1-563

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/5/2022	8260_LL	2204051500B	Unknown	9.2	ug/L	NA	NA		TIC
4/5/2022	8260_LL	2204051500B	Silane, (2-methoxyethyl)trimethyl-	5.9	ug/L	NA	NA		TIC
4/5/2022	8260_LL	2204051500B	Sulfur Dioxide	17	ug/L	NA	NA		TIC
4/5/2022	8260_LL	2204051500B	Vinyl Chloride	0.41	ug/L	0.5	0.2		J
4/5/2022	8260_LL	2204051500B	Toluene	0.22	ug/L	0.5	0.2		J
4/5/2022	NDMA_LL	2204051502B	N-Nitrosodimethylamine	1.11	ng/L	0.48	0.4		
4/5/2022	NDMA_LL	2204051502B	N-Nitrodimethylamine	0.74	ng/L	0.48	0.2		
4/5/2022	8270	2204051504B	1,4-Dioxane	2.5	ug/L	0.04	0.027		

Analytical Results for Sampling Events at JER-1-683

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/5/2022	8260_LL	2204051520B	Vinyl Chloride	0.4	ug/L	0.5	0.2		J
4/5/2022	8260_LL	2204051520B	Toluene	0.22	ug/L	0.5	0.2		J
4/5/2022	NDMA_LL	2204051522B	N-Nitrosodimethylamine	1.28	ng/L	0.48	0.4		
4/5/2022	NDMA_LL	2204051522B	N-Nitrodimethylamine	0.89	ng/L	0.48	0.2		
4/5/2022	8270	2204051524B	1,4-Dioxane	3.3	ug/L	0.04	0.027		

Analytical Results for Sampling Events at JER-2-504

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2022	8260_LL	2204061411B	Toluene	0.26	ug/L	0.5	0.2		J
4/6/2022	NDMA_LL	2204061413B	N-Nitrosodimethylamine	1.39	ng/L	0.49	0.41		
4/6/2022	8270	2204061415B	1,4-Dioxane	0.65	ug/L	0.04	0.027		QD
4/6/2022	8270	2204061416B	1,4-Dioxane	0.32	ug/L	0.04	0.027		QD

Analytical Results for Sampling Events at JER-2-584

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2022	8260_LL	2204061431B	Toluene	1.2	ug/L	0.5	0.2		
4/6/2022	NDMA_LL	2204061433B	N-Nitrodimethylamine	0.23	ng/L	0.49	0.2		J
4/6/2022	NDMA_LL	2204061433B	N-Nitrosodimethylamine	1.45	ng/L	0.49	0.41		
4/6/2022	8270	2204061435B	1,4-Dioxane	0.41	ug/L	0.04	0.027		

Analytical Results for Sampling Events at JER-2-684

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2022	8260_LL	2204061451B	Toluene	0.41	ug/L	0.5	0.2		J
4/6/2022	NDMA_LL	2204061453B	N-Nitrodimethylamine	0.34	ng/L	0.48	0.2		J
4/6/2022	NDMA_LL	2204061453B	N-Nitrosodimethylamine	2.45	ng/L	0.48	0.4		
4/6/2022	8270	2204061455B	1,4-Dioxane	0.4	ug/L	0.04	0.027		

Analytical Results for Sampling Events at JP-1-424

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/1/2022	METALS	2204010930A	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/1/2022	METALS	2204010930A	Boron, Total	0.06	mg/L	0.2	0.02		J
4/1/2022	METALS	2204010930A	Calcium, Total	101	mg/L	1	0.3		
4/1/2022	METALS	2204010930A	Magnesium, Total	63.4	mg/L	1	0.03		
4/1/2022	METALS	2204010930A	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/1/2022	METALS	2204010930A	Potassium, Total	3.4	mg/L	2	0.4		
4/1/2022	METALS	2204010930A	Sodium, Total	44.8	mg/L	1	0.2		
4/1/2022	METALS	2204010930A	Strontium, Total	2.13	mg/L	0.1	0.002		
4/1/2022	METALS	2204010930A	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/1/2022	METALS	2204010930A	Zinc, Total	0.003	mg/L	0.02	0.003		J
4/1/2022	METALS	2204010930A	Barium, Total	0.023	mg/L	0.02	0.003		
4/1/2022	METALS	2204010931A	Calcium, Total	101	mg/L	1	0.3		
4/1/2022	METALS	2204010931A	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/1/2022	METALS	2204010931A	Boron, Total	0.06	mg/L	0.2	0.02		J
4/1/2022	METALS	2204010931A	Zinc, Total	0.003	mg/L	0.02	0.003		J
4/1/2022	METALS	2204010931A	Magnesium, Total	63.4	mg/L	1	0.03		
4/1/2022	METALS	2204010931A	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
4/1/2022	METALS	2204010931A	Potassium, Total	3.4	mg/L	2	0.4		
4/1/2022	METALS	2204010931A	Sodium, Total	45	mg/L	1	0.2		
4/1/2022	METALS	2204010931A	Strontium, Total	2.12	mg/L	0.1	0.002		
4/1/2022	METALS	2204010931A	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/1/2022	METALS	2204010931A	Barium, Total	0.023	mg/L	0.02	0.003		
4/1/2022	ANIONS	2204010932A	Sulfate	303	mg/L	8	1.6		
4/1/2022	ANIONS	2204010932A	Alkalinity, Total as CaCO3	212	mg/L	2	1.8		
4/1/2022	ANIONS	2204010932A	Fluoride, undistilled	0.95	mg/L	0.1	0.01		
4/1/2022	ANIONS	2204010932A	Chloride	40.9	mg/L	2	0.5		
4/1/2022	SM2540C	2204010933A	Total Dissolved Solids (TDS)	816	mg/L	10	9		
4/1/2022	6850	2204010934A	Perchlorate	0.237	ug/L	0.1	0.025		
4/1/2022	353.2	2204010935A	Nitrate+Nitrite as Nitrogen	0.955	mg/L	0.05	0.002		

Analytical Results for Sampling Events at JP-2-447

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/1/2022	METALS	2204011059A	Barium, Total	0.022	mg/L	0.02	0.003		
4/1/2022	METALS	2204011059A	Magnesium, Total	70.6	mg/L	1	0.03		
4/1/2022	METALS	2204011059A	Zinc, Total	0.01	mg/L	0.02	0.003		J
4/1/2022	METALS	2204011059A	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/1/2022	METALS	2204011059A	Boron, Total	0.06	mg/L	0.2	0.02		J
4/1/2022	METALS	2204011059A	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
4/1/2022	METALS	2204011059A	Calcium, Total	99.8	mg/L	1	0.3		
4/1/2022	METALS	2204011059A	Potassium, Total	3.1	mg/L	2	0.4		
4/1/2022	METALS	2204011059A	Sodium, Total	38.7	mg/L	1	0.2		
4/1/2022	METALS	2204011059A	Strontium, Total	2.44	mg/L	0.1	0.002		
4/1/2022	METALS	2204011059A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J

Analytical Results for Sampling Events at PL-10-484

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/5/2022	NDMA_LL	2204051411Y	N-Nitrosodimethylamine	0.45	ng/L	0.48	0.4		J
4/5/2022	METALS	2204051445Y	Zinc, Total	0.007	mg/L	0.02	0.003		J
4/5/2022	METALS	2204051445Y	Nickel, Total	0.091	mg/L	0.04	0.003		
4/5/2022	METALS	2204051445Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/5/2022	METALS	2204051445Y	Cobalt, Total	0.001	mg/L	0.05	0.0009		J
4/5/2022	METALS	2204051445Y	Calcium, Total	97.4	mg/L	1	0.3		
4/5/2022	METALS	2204051445Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/5/2022	METALS	2204051445Y	Barium, Total	0.023	mg/L	0.02	0.003		
4/5/2022	METALS	2204051445Y	Strontium, Total	3.04	mg/L	0.1	0.002		
4/5/2022	METALS	2204051445Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/5/2022	METALS	2204051445Y	Manganese, Total	0.019	mg/L	0.01	0.004		
4/5/2022	METALS	2204051445Y	Magnesium, Total	64.5	mg/L	1	0.03		
4/5/2022	METALS	2204051445Y	Iron, Total	0.14	mg/L	0.1	0.07		
4/5/2022	METALS	2204051445Y	Potassium, Total	3.2	mg/L	2	0.4		
4/5/2022	METALS	2204051445Y	Sodium, Total	44.4	mg/L	1	0.2		

Analytical Results for Sampling Events at PL-10-592

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/5/2022	NDMA_LL	2204051021Y	N-Nitrodimethylamine	0.36	ng/L	0.48	0.2		J
4/5/2022	METALS	2204051023Y	Strontium, Total	3.22	mg/L	0.1	0.002		
4/5/2022	METALS	2204051023Y	Barium, Total	0.021	mg/L	0.02	0.003		
4/5/2022	METALS	2204051023Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/5/2022	METALS	2204051023Y	Calcium, Total	99.2	mg/L	1	0.3		
4/5/2022	METALS	2204051023Y	Magnesium, Total	67.5	mg/L	1	0.03		
4/5/2022	METALS	2204051023Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/5/2022	METALS	2204051023Y	Nickel, Total	0.044	mg/L	0.04	0.003		
4/5/2022	METALS	2204051023Y	Sodium, Total	47.2	mg/L	1	0.2		
4/5/2022	METALS	2204051023Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
4/5/2022	METALS	2204051023Y	Zinc, Total	0.005	mg/L	0.02	0.003		J
4/5/2022	METALS	2204051023Y	Potassium, Total	3.4	mg/L	2	0.4		

Analytical Results for Sampling Events at PL-10-813

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/4/2022	NDMA_LL	2204041301Y	N-Nitrosodimethylamine	0.48	ng/L	0.48	0.4		
4/4/2022	METALS	2204041302Y	Zinc, Total	0.012	mg/L	0.02	0.003		J
4/4/2022	METALS	2204041302Y	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
4/4/2022	METALS	2204041302Y	Strontium, Total	2.8	mg/L	0.1	0.002		
4/4/2022	METALS	2204041302Y	Sodium, Total	74.3	mg/L	1	0.2		
4/4/2022	METALS	2204041302Y	Potassium, Total	5.6	mg/L	2	0.4		
4/4/2022	METALS	2204041302Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
4/4/2022	METALS	2204041302Y	Magnesium, Total	43.6	mg/L	1	0.03		
4/4/2022	METALS	2204041302Y	Iron, Total	0.16	mg/L	0.1	0.07		
4/4/2022	METALS	2204041302Y	Calcium, Total	72	mg/L	1	0.3		
4/4/2022	METALS	2204041302Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/4/2022	METALS	2204041302Y	Barium, Total	0.051	mg/L	0.02	0.003		
4/4/2022	METALS	2204041302Y	Arsenic, Total	0.0015	mg/L	0.001	0.0004		

Analytical Results for Sampling Events at PL-10-962

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/4/2022	NDMA_LL	2204041506Y	N-Nitrosodimethylamine	0.44	ng/L	0.48	0.4		J
4/4/2022	METALS	2204041507Y	Calcium, Total	47.4	mg/L	1	0.3		
4/4/2022	METALS	2204041507Y	Zinc, Total	0.005	mg/L	0.02	0.003		J
4/4/2022	METALS	2204041507Y	Vanadium, Total	0.016	mg/L	0.05	0.0007		J
4/4/2022	METALS	2204041507Y	Strontium, Total	2.25	mg/L	0.1	0.002		
4/4/2022	METALS	2204041507Y	Sodium, Total	119	mg/L	1	0.2		
4/4/2022	METALS	2204041507Y	Potassium, Total	4.7	mg/L	2	0.4		
4/4/2022	METALS	2204041507Y	Magnesium, Total	36.2	mg/L	1	0.03		
4/4/2022	METALS	2204041507Y	Boron, Total	0.11	mg/L	0.2	0.02		J
4/4/2022	METALS	2204041507Y	Barium, Total	0.016	mg/L	0.02	0.003		J
4/4/2022	METALS	2204041507Y	Arsenic, Total	0.0024	mg/L	0.001	0.0004		
4/4/2022	METALS	2204041507Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J

Analytical Results for Sampling Events at PL-11-470

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	8260_LL	2203021402B	Toluene	0.81	ug/L	0.5	0.2		
3/2/2022	8260_LL	2203021402B	Unknown	6.2	ug/L	NA	NA		TIC
3/2/2022	8260_LL	2203021402B	1,4-Dioxane, 2,5-dimethyl-	14	ug/L	NA	NA		TIC
3/2/2022	8260_LL	2203021402B	Sulfur Dioxide	8.1	ug/L	NA	NA		TIC
3/2/2022	8260_LL	2203021402B	1,4-Dioxane	53	ug/L	40	13		
3/2/2022	NDMA_LL	2203021404B	N-Nitrodimethylamine	0.5	ng/L	0.47	0.2		
3/2/2022	NDMA_LL	2203021404B	N-Nitrosodimethylamine	1.59	ng/L	0.47	0.4		
3/2/2022	8270	2203021408B	1,4-Dioxane	1.4	ug/L	0.04	0.027		
3/2/2022	8270	2203021409B	1,4-Dioxane	1.6	ug/L	0.04	0.027		

Analytical Results for Sampling Events at PL-11-530

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	8260_LL	2203021426B	Toluene	0.27	ug/L	0.5	0.2		J
3/2/2022	NDMA_LL	2203021428B	N-Nitrodimethylamine	0.67	ng/L	0.48	0.2		
3/2/2022	NDMA_LL	2203021428B	N-Nitrosodimethylamine	2.38	ng/L	0.48	0.4		
3/2/2022	8270	2203021430B	1,4-Dioxane	2.1	ug/L	0.04	0.027		

Analytical Results for Sampling Events at PL-11-710

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/7/2022	8260_LL	2203071406B	1,4-Dioxane	15	ug/L	40	13		J
3/7/2022	8260_LL	2203071406B	Toluene	0.32	ug/L	0.5	0.2		J
3/7/2022	NDMA_LL	2203071408B	N-Nitrodimethylamine	0.45	ng/L	0.48	0.2		J
3/7/2022	NDMA_LL	2203071408B	N-Nitrosodimethylamine	0.65	ng/L	0.48	0.4		
3/7/2022	8270	2203071410B	1,4-Dioxane	1.1	ug/L	0.04	0.027		

Analytical Results for Sampling Events at PL-11-820

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/7/2022	8260_LL	2203071421B	1,4-Dioxane	14	ug/L	40	13		J
3/7/2022	8260_LL	2203071421B	Toluene	0.49	ug/L	0.5	0.2		J

Analytical Results for Sampling Events at PL-11-980

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/7/2022	8260_LL	2203071431B	Toluene	0.57	ug/L	0.5	0.2		
3/7/2022	NDMA_LL	2203071433B	N-Nitrosodimethylamine	0.56	ng/L	0.48	0.4		

Analytical Results for Sampling Events at PL-12-570

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/8/2022	8260	2202081438C	Trichlorofluoromethane (CFC 11)	4.3	ug/L	1	0.24		
2/8/2022	8260	2202081438C	Trichloroethene (TCE)	3.9	ug/L	1	0.2		
2/8/2022	8260	2202081438C	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.1	ug/L	1	0.2		
2/8/2022	NDMA_LL	2202081440C	N-Nitrosodimethylamine	0.82	ng/L	0.48	0.4		

Analytical Results for Sampling Events at PL-12-800

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/14/2022	8260	2202141005A	Dichlorofluoromethane (CFC 21)	0.29	ug/L	1	0.2		J
2/14/2022	8260	2202141005A	1,1,2-Trichloro-1,2,2-Trifluoroethane	3.4	ug/L	1	0.2		
2/14/2022	8260	2202141005A	Trichloroethene (TCE)	7.2	ug/L	1	0.2		
2/14/2022	8260	2202141005A	Trichlorofluoromethane (CFC 11)	6.4	ug/L	1	0.24		
2/14/2022	NDMA_LL	2202141007A	N-Nitrosodimethylamine	2.14	ng/L	0.47	0.4		T
2/14/2022	NDMA_LL	2202141007A	N-Nitrodimethylamine	0.45	ng/L	0.47	0.2		T J
2/14/2022	NDMA_LL	2202141008A	N-Nitrosodimethylamine	2.26	ng/L	0.47	0.4		T
2/14/2022	NDMA_LL	2202141008A	N-Nitrodimethylamine	0.59	ng/L	0.47	0.2		T

Analytical Results for Sampling Events at PL-1-486

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260_LL	2204191512A	Trichlorofluoromethane (CFC 11)	0.29	ug/L	0.5	0.24		J
4/19/2022	8260_LL	2204191512A	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.86	ug/L	0.5	0.2		
4/19/2022	METALS	2204191518A	Zinc, Total	0.004	mg/L	0.02	0.003		J
4/19/2022	METALS	2204191518A	Barium, Total	0.022	mg/L	0.02	0.003		
4/19/2022	METALS	2204191518A	Boron, Total	0.06	mg/L	0.2	0.02		J
4/19/2022	METALS	2204191518A	Calcium, Total	117	mg/L	1	0.3		
4/19/2022	METALS	2204191518A	Magnesium, Total	65.1	mg/L	1	0.03		
4/19/2022	METALS	2204191518A	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/19/2022	METALS	2204191518A	Potassium, Total	3.4	mg/L	2	0.4		
4/19/2022	METALS	2204191518A	Sodium, Total	40.6	mg/L	1	0.2		
4/19/2022	METALS	2204191518A	Strontium, Total	2.44	mg/L	0.1	0.002		
4/19/2022	METALS	2204191518A	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/19/2022	METALS	2204191518A	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J

Analytical Results for Sampling Events at PL-2-504

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/15/2022	8260	2203150930C	Trichloroethene (TCE)	61	ug/L	1	0.2		
3/15/2022	8260	2203150930C	Trichlorofluoromethane (CFC 11)	38	ug/L	1	0.24		
3/15/2022	8260	2203150930C	Tetrachloroethene (PCE)	1.1	ug/L	1	0.21		
3/15/2022	8260	2203150930C	Dichlorofluoromethane (CFC 21)	1	ug/L	1	0.2		
3/15/2022	8260	2203150930C	Chloromethane	0.28	ug/L	2	0.28		J RB FB
3/15/2022	8260	2203150930C	1,1,2-Trichloro-1,2,2-Trifluoroethane	31	ug/L	1	0.2		
3/15/2022	8260	2203150930C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.37	ug/L	1	0.2		J
3/15/2022	607	2203150932C	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	43	
3/15/2022	607	2203150932C	N-Nitrodimethylamine	0.05	µg/L	0.0094	0.0047	69	
3/15/2022	607	2203150932C	Bromacil	0.03	µg/L	0.0094	0.0047	99	
3/15/2022	ANIONS	2203150933C	Sulfate	308	mg/L	8	1.6		
3/15/2022	ANIONS	2203150933C	Fluoride, undistilled	0.48	mg/L	0.1	0.01		
3/15/2022	ANIONS	2203150933C	Chloride	46.2	mg/L	2	0.5		
3/15/2022	ANIONS	2203150933C	Alkalinity, Total as CaCO3	204	mg/L	2	1.8		
3/15/2022	SM2540C	2203150934C	Total Dissolved Solids (TDS)	769	mg/L	10	9		
3/15/2022	6850	2203150935C	Perchlorate	0.265	ug/L	0.1	0.025		
3/15/2022	353.2	2203150936C	Nitrate+Nitrite as Nitrogen	0.94	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-4-464

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/15/2022	METALS	2203150955A	Zinc, Total	0.015	mg/L	0.02	0.003		J
3/15/2022	METALS	2203150955A	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/15/2022	METALS	2203150955A	Strontium, Total	2.38	mg/L	0.1	0.002		
3/15/2022	METALS	2203150955A	Sodium, Total	37.2	mg/L	1	0.2		
3/15/2022	METALS	2203150955A	Potassium, Total	3.1	mg/L	2	0.4		
3/15/2022	METALS	2203150955A	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
3/15/2022	METALS	2203150955A	Magnesium, Total	67.2	mg/L	1	0.03		
3/15/2022	METALS	2203150955A	Calcium, Total	107	mg/L	1	0.3		
3/15/2022	METALS	2203150955A	Boron, Total	0.06	mg/L	0.2	0.02		J
3/15/2022	METALS	2203150955A	Barium, Total	0.02	mg/L	0.02	0.003		
3/15/2022	ANIONS	2203150956A	Chloride	38.1	mg/L	2	0.5		
3/15/2022	ANIONS	2203150956A	Alkalinity, Total as CaCO3	233	mg/L	2	1.8		
3/15/2022	ANIONS	2203150956A	Fluoride, undistilled	0.71	mg/L	0.1	0.01		
3/15/2022	ANIONS	2203150956A	Sulfate	318	mg/L	8	1.6		
3/15/2022	SM2540C	2203150957A	Total Dissolved Solids (TDS)	784	mg/L	10	9		
3/15/2022	6850	2203150958A	Perchlorate	0.219	ug/L	0.1	0.025		
3/15/2022	353.2	2203150959A	Nitrate+Nitrite as Nitrogen	0.705	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-6-545

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/14/2022	NDMA_LL	2204141330Y	N-Nitrosodimethylamine	0.85	ng/L	0.5	0.42		EB
4/14/2022	METALS	2204141405Y	Manganese, Total	0.044	mg/L	0.01	0.004		
4/14/2022	METALS	2204141405Y	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
4/14/2022	METALS	2204141405Y	Barium, Total	0.023	mg/L	0.02	0.003		
4/14/2022	METALS	2204141405Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/14/2022	METALS	2204141405Y	Magnesium, Total	70.6	mg/L	1	0.03		
4/14/2022	METALS	2204141405Y	Zinc, Total	0.004	mg/L	0.02	0.003		J
4/14/2022	METALS	2204141405Y	Nickel, Total	0.323	mg/L	0.04	0.003		
4/14/2022	METALS	2204141405Y	Potassium, Total	4.1	mg/L	2	0.4		
4/14/2022	METALS	2204141405Y	Sodium, Total	42.1	mg/L	1	0.2		
4/14/2022	METALS	2204141405Y	Strontium, Total	3.03	mg/L	0.1	0.002		
4/14/2022	METALS	2204141405Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/14/2022	METALS	2204141405Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/14/2022	METALS	2204141405Y	Calcium, Total	102	mg/L	1	0.3		
4/14/2022	ANIONS	2204141406Y	Sulfate	328	mg/L	8	1.6		
4/14/2022	ANIONS	2204141406Y	Fluoride, undistilled	1.2	mg/L	4	0.4		J
4/14/2022	ANIONS	2204141406Y	Alkalinity, Total as CaCO3	236	mg/L	2	1.8		
4/14/2022	ANIONS	2204141406Y	Chloride	35.8	mg/L	8	1.7		
4/14/2022	SM2540C	2204141407Y	Total Dissolved Solids (TDS)	800	mg/L	10	9		
4/14/2022	6850	2204141408Y	Perchlorate	0.145	ug/L	0.1	0.025		
4/14/2022	353.2	2204141409Y	Nitrate+Nitrite as Nitrogen	0.373	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-6-725

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/13/2022	NDMA_LL	2204131050Y	N-Nitrosodimethylamine	0.64	ng/L	0.48	0.4		EB
4/13/2022	METALS	2204131051Y	Zinc, Total	0.031	mg/L	0.02	0.003		
4/13/2022	METALS	2204131051Y	Vanadium, Total	0.006	mg/L	0.05	0.0007		J
4/13/2022	METALS	2204131051Y	Barium, Total	0.027	mg/L	0.02	0.003		
4/13/2022	METALS	2204131051Y	Boron, Total	0.12	mg/L	0.2	0.02		J
4/13/2022	METALS	2204131051Y	Calcium, Total	98.1	mg/L	1	0.3		
4/13/2022	METALS	2204131051Y	Magnesium, Total	59.9	mg/L	1	0.03		
4/13/2022	METALS	2204131051Y	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
4/13/2022	METALS	2204131051Y	Potassium, Total	5.3	mg/L	2	0.4		
4/13/2022	METALS	2204131051Y	Sodium, Total	50.2	mg/L	1	0.2		
4/13/2022	METALS	2204131051Y	Strontium, Total	3.52	mg/L	0.1	0.002		
4/13/2022	METALS	2204131051Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/13/2022	ANIONS	2204131410Y	Sulfate	322	mg/L	8	1.6		
4/13/2022	ANIONS	2204131410Y	Alkalinity, Total as CaCO3	206	mg/L	2	1.8		
4/13/2022	ANIONS	2204131410Y	Chloride	44.5	mg/L	2	0.5		
4/13/2022	ANIONS	2204131410Y	Fluoride, undistilled	0.4	mg/L	0.1	0.01		
4/13/2022	SM2540C	2204131411Y	Total Dissolved Solids (TDS)	802	mg/L	10	9		
4/13/2022	6850	2204131412Y	Perchlorate	0.167	ug/L	0.1	0.025		
4/13/2022	353.2	2204131413Y	Nitrate+Nitrite as Nitrogen	0.709	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-7-480

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/8/2022	NDMA_LL	2202081516Y	N-Nitrosodimethylamine	1.85	ng/L	0.47	0.4		

Analytical Results for Sampling Events at PL-7-630

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/7/2022	8260_LL	2202071330Y	Cyclotetrasiloxane, octamethyl-	5.1	ug/L	NA	NA		TIC TB EB
2/7/2022	NDMA_LL	2202071355Y	N-Nitrosodimethylamine	0.47	ng/L	0.48	0.4		J
2/7/2022	METALS	2202071356Y	Manganese, Total	0.013	mg/L	0.01	0.004		
2/7/2022	METALS	2202071356Y	Zinc, Total	0.016	mg/L	0.02	0.003		J
2/7/2022	METALS	2202071356Y	Vanadium, Total	0.013	mg/L	0.05	0.0007		J
2/7/2022	METALS	2202071356Y	Strontium, Total	3.12	mg/L	0.1	0.002		
2/7/2022	METALS	2202071356Y	Sodium, Total	52.4	mg/L	1	0.2		
2/7/2022	METALS	2202071356Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
2/7/2022	METALS	2202071356Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/7/2022	METALS	2202071356Y	Magnesium, Total	57.4	mg/L	1	0.03		
2/7/2022	METALS	2202071356Y	Iron, Total	0.43	mg/L	0.1	0.07		
2/7/2022	METALS	2202071356Y	Chromium, Total	0.007	mg/L	0.01	0.002		J
2/7/2022	METALS	2202071356Y	Calcium, Total	86.2	mg/L	1	0.3		
2/7/2022	METALS	2202071356Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/7/2022	METALS	2202071356Y	Beryllium, Total	0.0003	mg/L	0.003	0.0002		J
2/7/2022	METALS	2202071356Y	Barium, Total	0.047	mg/L	0.02	0.003		
2/7/2022	METALS	2202071356Y	Aluminum, Total	0.84	mg/L	0.1	0.03		
2/7/2022	METALS	2202071356Y	Potassium, Total	7.7	mg/L	2	0.4		
2/7/2022	ANIONS	2202071425Y	Alkalinity, Total as CaCO3	171	mg/L	2	1.8		
2/7/2022	ANIONS	2202071425Y	Chloride	43.2	mg/L	2	0.5		
2/7/2022	ANIONS	2202071425Y	Fluoride, undistilled	0.26	mg/L	0.1	0.01		
2/7/2022	ANIONS	2202071425Y	Sulfate	313	mg/L	8	1.6		
2/7/2022	SM2540C	2202071426Y	Total Dissolved Solids (TDS)	781	mg/L	10	9		
2/7/2022	6850	2202071427Y	Perchlorate	0.261	ug/L	0.1	0.025		
2/7/2022	353.2	2202071428Y	Nitrate+Nitrite as Nitrogen	1.2	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-8-455

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2022	8270	2203101350Y	1,4-Dioxane	0.083	ug/L	0.04	0.027		RB
3/10/2022	8270	2203101350Y	1,4-Dioxane	0.057	ug/L	0.04	0.027		RB
3/10/2022	METALS	2203101351Y	Potassium, Total	3.7	mg/L	2	0.4		
3/10/2022	METALS	2203101351Y	Zinc, Total	0.006	mg/L	0.02	0.003		J
3/10/2022	METALS	2203101351Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/10/2022	METALS	2203101351Y	Sodium, Total	43.2	mg/L	1	0.2		
3/10/2022	METALS	2203101351Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/10/2022	METALS	2203101351Y	Magnesium, Total	74.1	mg/L	1	0.03		
3/10/2022	METALS	2203101351Y	Calcium, Total	109	mg/L	1	0.3		
3/10/2022	METALS	2203101351Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/10/2022	METALS	2203101351Y	Barium, Total	0.024	mg/L	0.02	0.003		
3/10/2022	METALS	2203101351Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/10/2022	METALS	2203101351Y	Strontium, Total	2.7	mg/L	0.1	0.002		
3/10/2022	ANIONS	2203101435Y	Alkalinity, Total as CaCO3	234	mg/L	2	1.8		
3/10/2022	ANIONS	2203101435Y	Chloride	44	mg/L	2	0.5		
3/10/2022	ANIONS	2203101435Y	Fluoride, undistilled	0.82	mg/L	0.1	0.01		
3/10/2022	ANIONS	2203101435Y	Sulfate	329	mg/L	8	1.6		
3/10/2022	SM2540C	2203101436Y	Total Dissolved Solids (TDS)	819	mg/L	10	9		
3/10/2022	6850	2203101437Y	Perchlorate	0.265	ug/L	0.1	0.025		
3/10/2022	353.2	2203101438Y	Nitrate+Nitrite as Nitrogen	0.969	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-8-605

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/8/2022	NDMA_LL	2203081051Y	N-Nitrosodimethylamine	0.48	ng/L	0.48	0.4		*
3/8/2022	8270	2203081305Y	1,4-Dioxane	0.12	ug/L	0.04	0.027		
3/8/2022	METALS	2203081306Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/8/2022	METALS	2203081306Y	Potassium, Total	3.6	mg/L	2	0.4		
3/8/2022	METALS	2203081306Y	Sodium, Total	48	mg/L	1	0.2		
3/8/2022	METALS	2203081306Y	Strontium, Total	3.2	mg/L	0.1	0.002		
3/8/2022	METALS	2203081306Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/8/2022	METALS	2203081306Y	Zinc, Total	0.008	mg/L	0.02	0.003		J
3/8/2022	METALS	2203081306Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
3/8/2022	METALS	2203081306Y	Barium, Total	0.025	mg/L	0.02	0.003		
3/8/2022	METALS	2203081306Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/8/2022	METALS	2203081306Y	Calcium, Total	101	mg/L	1	0.3		
3/8/2022	METALS	2203081306Y	Magnesium, Total	68.5	mg/L	1	0.03		
3/8/2022	ANIONS	2203081307Y	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
3/8/2022	ANIONS	2203081307Y	Chloride	43.7	mg/L	2	0.5		
3/8/2022	ANIONS	2203081307Y	Fluoride, undistilled	0.79	mg/L	0.1	0.01		
3/8/2022	ANIONS	2203081307Y	Sulfate	332	mg/L	8	1.6		
3/8/2022	SM2540C	2203081308Y	Total Dissolved Solids (TDS)	811	mg/L	10	9		
3/8/2022	6850	2203081309Y	Perchlorate	0.165	ug/L	0.1	0.025		
3/8/2022	353.2	2203081310Y	Nitrate+Nitrite as Nitrogen	0.601	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PL-8-780

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/8/2022	METALS	2203090936Y	Barium, Total	0.036	mg/L	0.02	0.003		
3/8/2022	METALS	2203090936Y	Strontium, Total	3.07	mg/L	0.1	0.002		
3/8/2022	METALS	2203090936Y	Vanadium, Total	0.007	mg/L	0.05	0.0007		J
3/8/2022	METALS	2203090936Y	Zinc, Total	0.004	mg/L	0.02	0.003		J
3/8/2022	METALS	2203090936Y	Potassium, Total	4.3	mg/L	2	0.4		
3/8/2022	METALS	2203090936Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/8/2022	METALS	2203090936Y	Magnesium, Total	53.8	mg/L	1	0.03		
3/8/2022	METALS	2203090936Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/8/2022	METALS	2203090936Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/8/2022	METALS	2203090936Y	Sodium, Total	51.1	mg/L	1	0.2		
3/8/2022	METALS	2203090936Y	Calcium, Total	91.9	mg/L	1	0.3		

Analytical Results for Sampling Events at PL-8-965

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/9/2022	NDMA_LL	2203091431Y	N-Nitrosodimethylamine	2.25	ng/L	0.48	0.4		
3/9/2022	NDMA_LL	2203091431Y	N-Nitrodimethylamine	0.3	ng/L	0.48	0.2		J
3/9/2022	METALS	2203091432Y	Strontium, Total	1.3	mg/L	0.1	0.002		
3/9/2022	METALS	2203091432Y	Arsenic, Total	0.0036	mg/L	0.001	0.0004		
3/9/2022	METALS	2203091432Y	Barium, Total	0.014	mg/L	0.02	0.003		J
3/9/2022	METALS	2203091432Y	Boron, Total	0.23	mg/L	0.2	0.02		
3/9/2022	METALS	2203091432Y	Calcium, Total	42.2	mg/L	1	0.3		
3/9/2022	METALS	2203091432Y	Chromium, Total	0.004	mg/L	0.01	0.002		J
3/9/2022	METALS	2203091432Y	Magnesium, Total	21.7	mg/L	1	0.03		
3/9/2022	METALS	2203091432Y	Molybdenum, Total	0.019	mg/L	0.025	0.003		J
3/9/2022	METALS	2203091432Y	Nickel, Total	0.011	mg/L	0.04	0.003		J
3/9/2022	METALS	2203091432Y	Potassium, Total	4.5	mg/L	2	0.4		
3/9/2022	METALS	2203091432Y	Sodium, Total	117	mg/L	1	0.2		
3/9/2022	METALS	2203091432Y	Vanadium, Total	0.018	mg/L	0.05	0.0007		J
3/9/2022	METALS	2203091432Y	Zinc, Total	0.01	mg/L	0.02	0.003		J
3/9/2022	ANIONS	2203091500Y	Alkalinity, Total as CaCO3	148	mg/L	2	1.8		
3/9/2022	ANIONS	2203091500Y	Chloride	37.5	mg/L	2	0.5		
3/9/2022	ANIONS	2203091500Y	Fluoride, undistilled	0.52	mg/L	0.1	0.01		
3/9/2022	ANIONS	2203091500Y	Sulfate	236	mg/L	8	1.6		
3/9/2022	SM2540C	2203091501Y	Total Dissolved Solids (TDS)	596	mg/L	10	9		
3/9/2022	6850	2203091502Y	Perchlorate	0.201	ug/L	0.1	0.025		
3/9/2022	353.2	2203091503Y	Nitrate+Nitrite as Nitrogen	1.08	mg/L	0.05	0.002		

Analytical Results for Sampling Events at ST-2-466

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2022	NDMA_LL	2202021443C	N-Nitrosodimethylamine	0.56	ng/L	0.47	0.4		
2/2/2022	METALS	2202021445C	Chromium, Total	0.003	mg/L	0.01	0.002		J
2/2/2022	METALS	2202021445C	Boron, Total	0.07	mg/L	0.2	0.02		J
2/2/2022	METALS	2202021445C	Calcium, Total	103	mg/L	1	0.3		
2/2/2022	METALS	2202021445C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/2/2022	METALS	2202021445C	Magnesium, Total	69	mg/L	1	0.03		
2/2/2022	METALS	2202021445C	Strontium, Total	2.58	mg/L	0.1	0.002		
2/2/2022	METALS	2202021445C	Sodium, Total	38.2	mg/L	1	0.2		
2/2/2022	METALS	2202021445C	Potassium, Total	3.4	mg/L	2	0.4		
2/2/2022	METALS	2202021445C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J RB
2/2/2022	METALS	2202021445C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/2/2022	METALS	2202021445C	Barium, Total	0.021	mg/L	0.02	0.003		
2/2/2022	METALS	2202021445C	Zinc, Total	0.009	mg/L	0.02	0.003		J
2/2/2022	METALS	2202021446C	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2022	METALS	2202021446C	Zinc, Total	0.009	mg/L	0.02	0.003		J
2/2/2022	METALS	2202021446C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/2/2022	METALS	2202021446C	Strontium, Total	2.63	mg/L	0.1	0.002		
2/2/2022	METALS	2202021446C	Sodium, Total	39.1	mg/L	1	0.2		
2/2/2022	METALS	2202021446C	Potassium, Total	3.4	mg/L	2	0.4		
2/2/2022	METALS	2202021446C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J RB
2/2/2022	METALS	2202021446C	Magnesium, Total	70.7	mg/L	1	0.03		
2/2/2022	METALS	2202021446C	Boron, Total	0.07	mg/L	0.2	0.02		J
2/2/2022	METALS	2202021446C	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/2/2022	METALS	2202021446C	Calcium, Total	105	mg/L	1	0.3		

Analytical Results for Sampling Events at ST-4-481

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/7/2022	METALS	2203070954A	Zinc, Total	0.009	mg/L	0.02	0.003		J
3/7/2022	METALS	2203070954A	Sodium, Total	40.9	mg/L	1	0.2		
3/7/2022	METALS	2203070954A	Boron, Total	0.07	mg/L	0.2	0.02		J
3/7/2022	METALS	2203070954A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/7/2022	METALS	2203070954A	Potassium, Total	3.8	mg/L	2	0.4		
3/7/2022	METALS	2203070954A	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/7/2022	METALS	2203070954A	Strontium, Total	2.51	mg/L	0.1	0.002		
3/7/2022	METALS	2203070954A	Calcium, Total	102	mg/L	1	0.3		
3/7/2022	METALS	2203070954A	Barium, Total	0.026	mg/L	0.02	0.003		
3/7/2022	METALS	2203070954A	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
3/7/2022	METALS	2203070954A	Magnesium, Total	64.3	mg/L	1	0.03		
3/7/2022	METALS	2203070955A	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/7/2022	METALS	2203070955A	Strontium, Total	2.5	mg/L	0.1	0.002		
3/7/2022	METALS	2203070955A	Potassium, Total	3.8	mg/L	2	0.4		
3/7/2022	METALS	2203070955A	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
3/7/2022	METALS	2203070955A	Sodium, Total	40.3	mg/L	1	0.2		
3/7/2022	METALS	2203070955A	Barium, Total	0.025	mg/L	0.02	0.003		
3/7/2022	METALS	2203070955A	Boron, Total	0.07	mg/L	0.2	0.02		J
3/7/2022	METALS	2203070955A	Calcium, Total	101	mg/L	1	0.3		
3/7/2022	METALS	2203070955A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/7/2022	METALS	2203070955A	Zinc, Total	0.009	mg/L	0.02	0.003		J
3/7/2022	METALS	2203070955A	Magnesium, Total	63.5	mg/L	1	0.03		

Analytical Results for Sampling Events at ST-4-690

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/7/2022	METALS	2203071407A	Magnesium, Total	19.4	mg/L	1	0.03		
3/7/2022	METALS	2203071407A	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/7/2022	METALS	2203071407A	Arsenic, Total	0.0025	mg/L	0.001	0.0004		
3/7/2022	METALS	2203071407A	Barium, Total	0.032	mg/L	0.02	0.003		
3/7/2022	METALS	2203071407A	Boron, Total	0.2	mg/L	0.2	0.02		
3/7/2022	METALS	2203071407A	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/7/2022	METALS	2203071407A	Iron, Total	0.15	mg/L	0.1	0.07		
3/7/2022	METALS	2203071407A	Molybdenum, Total	0.039	mg/L	0.025	0.003		
3/7/2022	METALS	2203071407A	Nickel, Total	0.004	mg/L	0.04	0.003		J
3/7/2022	METALS	2203071407A	Potassium, Total	8.7	mg/L	2	0.4		
3/7/2022	METALS	2203071407A	Sodium, Total	119	mg/L	1	0.2		
3/7/2022	METALS	2203071407A	Strontium, Total	1.38	mg/L	0.1	0.002		
3/7/2022	METALS	2203071407A	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
3/7/2022	METALS	2203071407A	Calcium, Total	34.4	mg/L	1	0.3		

Analytical Results for Sampling Events at ST-5-481

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/23/2022	8260_LL	2202231000A	Chloromethane	0.32	ug/L	0.5	0.28		J
2/23/2022	8260_LL	2202231000A	Silane, methoxytrimethyl-	8.9	ug/L	NA	NA		TIC
2/23/2022	METALS	2202240840A	Chromium, Total	0.002	mg/L	0.01	0.002		J
2/23/2022	METALS	2202240840A	Potassium, Total	3.3	mg/L	2	0.4		
2/23/2022	METALS	2202240840A	Zinc, Total	0.007	mg/L	0.02	0.003		J RB
2/23/2022	METALS	2202240840A	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/23/2022	METALS	2202240840A	Sodium, Total	37.8	mg/L	1	0.2		
2/23/2022	METALS	2202240840A	Magnesium, Total	67.5	mg/L	1	0.03		
2/23/2022	METALS	2202240840A	Calcium, Total	97.3	mg/L	1	0.3		
2/23/2022	METALS	2202240840A	Boron, Total	0.06	mg/L	0.2	0.02		J
2/23/2022	METALS	2202240840A	Barium, Total	0.021	mg/L	0.02	0.003		
2/23/2022	METALS	2202240840A	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/23/2022	METALS	2202240840A	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/23/2022	METALS	2202240840A	Strontium, Total	2.34	mg/L	0.1	0.002		
2/23/2022	ANIONS	2202240841A	Alkalinity, Total as CaCO3	221	mg/L	2	1.8		
2/23/2022	ANIONS	2202240841A	Chloride	40.2	mg/L	2	0.5		
2/23/2022	ANIONS	2202240841A	Fluoride, undistilled	0.78	mg/L	0.1	0.01		
2/23/2022	ANIONS	2202240841A	Sulfate	311	mg/L	8	1.6		
2/23/2022	SM2540C	2202240842A	Total Dissolved Solids (TDS)	764	mg/L	10	9		
2/23/2022	6850	2202240920A	Perchlorate	0.229	ug/L	0.1	0.025		
2/23/2022	353.2	2202240921A	Nitrate+Nitrite as Nitrogen	0.884	mg/L	0.05	0.002		

Analytical Results for Sampling Events at ST-5-485

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2022	METALS	2202021030Y	Strontium, Total	2.38	mg/L	0.1	0.002		
2/2/2022	METALS	2202021030Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/2/2022	METALS	2202021030Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/2/2022	METALS	2202021030Y	Sodium, Total	39	mg/L	1	0.2		
2/2/2022	METALS	2202021030Y	Potassium, Total	3.8	mg/L	2	0.4		
2/2/2022	METALS	2202021030Y	Molybdenum, Total	0.006	mg/L	0.025	0.003		J RB
2/2/2022	METALS	2202021030Y	Magnesium, Total	68.3	mg/L	1	0.03		
2/2/2022	METALS	2202021030Y	Calcium, Total	90.8	mg/L	1	0.3		
2/2/2022	METALS	2202021030Y	Boron, Total	0.08	mg/L	0.2	0.02		J
2/2/2022	METALS	2202021030Y	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2022	METALS	2202021030Y	Zinc, Total	0.003	mg/L	0.02	0.003		J

Analytical Results for Sampling Events at ST-5-655

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/1/2022	NDMA_LL	2202011345Y	N-Nitrosodimethylamine	0.77	ng/L	0.48	0.4		
2/1/2022	METALS	2202011346Y	Calcium, Total	62.5	mg/L	1	0.3		
2/1/2022	METALS	2202011346Y	Molybdenum, Total	0.014	mg/L	0.025	0.003		J RB
2/1/2022	METALS	2202011346Y	Nickel, Total	0.004	mg/L	0.04	0.003		J
2/1/2022	METALS	2202011346Y	Sodium, Total	51.4	mg/L	1	0.2		
2/1/2022	METALS	2202011346Y	Strontium, Total	2.49	mg/L	0.1	0.002		
2/1/2022	METALS	2202011346Y	Vanadium, Total	0.007	mg/L	0.05	0.0007		J
2/1/2022	METALS	2202011346Y	Zinc, Total	0.006	mg/L	0.02	0.003		J
2/1/2022	METALS	2202011346Y	Magnesium, Total	45.7	mg/L	1	0.03		
2/1/2022	METALS	2202011346Y	Chromium, Total	0.002	mg/L	0.01	0.002		J
2/1/2022	METALS	2202011346Y	Barium, Total	0.027	mg/L	0.02	0.003		
2/1/2022	METALS	2202011346Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
2/1/2022	METALS	2202011346Y	Potassium, Total	5.2	mg/L	2	0.4		
2/1/2022	METALS	2202011346Y	Boron, Total	0.12	mg/L	0.2	0.02		J
2/1/2022	ANIONS	2202011420Y	Sulfate	253	mg/L	8	1.6		
2/1/2022	ANIONS	2202011420Y	Fluoride, undistilled	0.45	mg/L	0.1	0.01		
2/1/2022	ANIONS	2202011420Y	Alkalinity, Total as CaCO3	144	mg/L	2	1.8		
2/1/2022	ANIONS	2202011420Y	Chloride	36	mg/L	2	0.5		
2/1/2022	SM2540C	2202011421Y	Total Dissolved Solids (TDS)	621	mg/L	10	9		
2/1/2022	6850	2202011422Y	Perchlorate	0.244	ug/L	0.1	0.025		
2/1/2022	353.2	2202011423Y	Nitrate+Nitrite as Nitrogen	0.985	mg/L	0.05	0.002		

Analytical Results for Sampling Events at ST-6-528

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/8/2022	8270	2203081405B	1,4-Dioxane	2.3	ug/L	0.04	0.027		

Analytical Results for Sampling Events at ST-6-568

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/8/2022	8260_LL	2203081421B	Trichlorofluoromethane (CFC 11)	0.53	ug/L	0.5	0.24		
3/8/2022	8260_LL	2203081421B	Trichloroethene (TCE)	0.74	ug/L	0.5	0.2		
3/8/2022	8260_LL	2203081421B	Toluene	0.2	ug/L	0.5	0.2		J
3/8/2022	8270	2203081426B	1,4-Dioxane	1.8	ug/L	0.04	0.027		
3/8/2022	NDMA_LL	2203151451B	N-Nitrodimethylamine	0.34	ng/L	0.47	0.2		J
3/8/2022	NDMA_LL	2203151451B	N-Nitrosodimethylamine	0.41	ng/L	0.47	0.4		J

Analytical Results for Sampling Events at ST-6-678

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/9/2022	8270	2203091405B	1,4-Dioxane	0.91	ug/L	0.04	0.027		

Analytical Results for Sampling Events at ST-6-824

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/9/2022	8260_LL	2203091421B	Toluene	0.77	ug/L	0.5	0.2		

Analytical Results for Sampling Events at ST-6-970

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/9/2022	8260_LL	2203091441B	Toluene	0.44	ug/L	0.5	0.2		J

Analytical Results for Sampling Events at ST-7-453

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/7/2022	8260_LL	2204071431B	Trichloroethene (TCE)	0.24	ug/L	0.5	0.2		J
4/7/2022	NDMA_LL	2204071433B	N-Nitrodimethylamine	0.3	ng/L	0.48	0.2		J

Analytical Results for Sampling Events at ST-7-544

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/7/2022	8260_LL	2204071446B	Trichlorofluoromethane (CFC 11)	1.7	ug/L	0.5	0.24		
4/7/2022	8260_LL	2204071446B	Trichloroethene (TCE)	1.9	ug/L	0.5	0.2		
4/7/2022	8260_LL	2204071446B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.93	ug/L	0.5	0.2		

Analytical Results for Sampling Events at WW-1-452

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	METALS	2203021006A	Sodium, Total	37.6	mg/L	1	0.2		
3/2/2022	METALS	2203021006A	Zinc, Total	0.008	mg/L	0.02	0.003		J
3/2/2022	METALS	2203021006A	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
3/2/2022	METALS	2203021006A	Strontium, Total	2.33	mg/L	0.1	0.002		
3/2/2022	METALS	2203021006A	Potassium, Total	3.1	mg/L	2	0.4		
3/2/2022	METALS	2203021006A	Magnesium, Total	67	mg/L	1	0.03		
3/2/2022	METALS	2203021006A	Calcium, Total	104	mg/L	1	0.3		
3/2/2022	METALS	2203021006A	Boron, Total	0.07	mg/L	0.2	0.02		J
3/2/2022	METALS	2203021006A	Barium, Total	0.023	mg/L	0.02	0.003		
3/2/2022	METALS	2203021006A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/2/2022	METALS	2203021006A	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
3/2/2022	ANIONS	2203021007A	Fluoride, undistilled	0.7	mg/L	0.1	0.01		
3/2/2022	ANIONS	2203021007A	Sulfate	326	mg/L	10	2		
3/2/2022	ANIONS	2203021007A	Chloride	38.3	mg/L	2	0.5		
3/2/2022	ANIONS	2203021007A	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
3/2/2022	SM2540C	2203021008A	Total Dissolved Solids (TDS)	800	mg/L	10	9		
3/2/2022	6850	2203021009A	Perchlorate	0.249	ug/L	0.1	0.025		
3/2/2022	353.2	2203021010A	Nitrate+Nitrite as Nitrogen	0.702	mg/L	0.05	0.002		

Analytical Results for Sampling Events at WW-2-489

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2022	METALS	2203101429A	Calcium, Total	63	mg/L	1	0.3		
3/10/2022	METALS	2203101429A	Boron, Total	0.14	mg/L	0.2	0.02		J
3/10/2022	METALS	2203101429A	Barium, Total	0.024	mg/L	0.02	0.003		
3/10/2022	METALS	2203101429A	Vanadium, Total	0.011	mg/L	0.05	0.0007		J
3/10/2022	METALS	2203101429A	Zinc, Total	0.005	mg/L	0.02	0.003		J
3/10/2022	METALS	2203101429A	Strontium, Total	2.97	mg/L	0.1	0.002		
3/10/2022	METALS	2203101429A	Sodium, Total	69.5	mg/L	1	0.2		
3/10/2022	METALS	2203101429A	Arsenic, Total	0.001	mg/L	0.001	0.0004		
3/10/2022	METALS	2203101429A	Chromium, Total	0.042	mg/L	0.01	0.002		
3/10/2022	METALS	2203101429A	Iron, Total	0.16	mg/L	0.1	0.07		
3/10/2022	METALS	2203101429A	Magnesium, Total	47.6	mg/L	1	0.03		
3/10/2022	METALS	2203101429A	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
3/10/2022	METALS	2203101429A	Nickel, Total	0.098	mg/L	0.04	0.003		
3/10/2022	METALS	2203101429A	Potassium, Total	3.4	mg/L	2	0.4		
3/10/2022	353.2	2203101430A	Nitrate+Nitrite as Nitrogen	0.828	mg/L	0.05	0.002		

Analytical Results for Sampling Events at WW-2-664

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2022	METALS	2203100954A	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
3/10/2022	METALS	2203100954A	Molybdenum, Total	0.017	mg/L	0.025	0.003		J
3/10/2022	METALS	2203100954A	Zinc, Total	0.004	mg/L	0.02	0.003		J
3/10/2022	METALS	2203100954A	Strontium, Total	2.97	mg/L	0.1	0.002		
3/10/2022	METALS	2203100954A	Sodium, Total	70.1	mg/L	1	0.2		
3/10/2022	METALS	2203100954A	Potassium, Total	3.4	mg/L	2	0.4		
3/10/2022	METALS	2203100954A	Nickel, Total	0.036	mg/L	0.04	0.003		J
3/10/2022	METALS	2203100954A	Iron, Total	0.15	mg/L	0.1	0.07		
3/10/2022	METALS	2203100954A	Chromium, Total	0.03	mg/L	0.01	0.002		
3/10/2022	METALS	2203100954A	Calcium, Total	63	mg/L	1	0.3		
3/10/2022	METALS	2203100954A	Boron, Total	0.15	mg/L	0.2	0.02		J
3/10/2022	METALS	2203100954A	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
3/10/2022	METALS	2203100954A	Barium, Total	0.025	mg/L	0.02	0.003		
3/10/2022	METALS	2203100954A	Magnesium, Total	47.4	mg/L	1	0.03		
3/10/2022	353.2	2203100955A	Nitrate+Nitrite as Nitrogen	0.829	mg/L	0.05	0.002		

Analytical Results for Sampling Events at WW-3-469

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	NDMA_LL	2203021411Y	N-Nitrosodimethylamine	0.53	ng/L	0.47	0.4		
3/2/2022	METALS	2203021412Y	Potassium, Total	3	mg/L	2	0.4		
3/2/2022	METALS	2203021412Y	Zinc, Total	0.007	mg/L	0.02	0.003		J
3/2/2022	METALS	2203021412Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/2/2022	METALS	2203021412Y	Strontium, Total	2.38	mg/L	0.1	0.002		
3/2/2022	METALS	2203021412Y	Sodium, Total	42.7	mg/L	1	0.2		
3/2/2022	METALS	2203021412Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/2/2022	METALS	2203021412Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/2/2022	METALS	2203021412Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/2/2022	METALS	2203021412Y	Magnesium, Total	68.6	mg/L	1	0.03		
3/2/2022	METALS	2203021412Y	Cobalt, Total	0.002	mg/L	0.05	0.0009		J RB
3/2/2022	METALS	2203021412Y	Calcium, Total	104	mg/L	1	0.3		
3/2/2022	METALS	2203021412Y	Barium, Total	0.029	mg/L	0.02	0.003		

Analytical Results for Sampling Events at WW-3-569

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/1/2022	8260_LL	2203011025Y	Silane, methoxytrimethyl-	8.9	ug/L	NA	NA		TIC
3/1/2022	METALS	2203011027Y	Magnesium, Total	65.6	mg/L	1	0.03		
3/1/2022	METALS	2203011027Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/1/2022	METALS	2203011027Y	Strontium, Total	2.62	mg/L	0.1	0.002		
3/1/2022	METALS	2203011027Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/1/2022	METALS	2203011027Y	Potassium, Total	3.6	mg/L	2	0.4		
3/1/2022	METALS	2203011027Y	Zinc, Total	0.006	mg/L	0.02	0.003		J
3/1/2022	METALS	2203011027Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/1/2022	METALS	2203011027Y	Barium, Total	0.026	mg/L	0.02	0.003		
3/1/2022	METALS	2203011027Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/1/2022	METALS	2203011027Y	Sodium, Total	43.8	mg/L	1	0.2		
3/1/2022	METALS	2203011027Y	Calcium, Total	99.2	mg/L	1	0.3		
3/1/2022	ANIONS	2203011028Y	Chloride	41.6	mg/L	2	0.5		
3/1/2022	ANIONS	2203011028Y	Fluoride, undistilled	0.65	mg/L	0.1	0.01		
3/1/2022	ANIONS	2203011028Y	Alkalinity, Total as CaCO3	220	mg/L	2	1.8		
3/1/2022	ANIONS	2203011028Y	Sulfate	326	mg/L	10	2		
3/1/2022	SM2540C	2203011029Y	Total Dissolved Solids (TDS)	792	mg/L	10	9		
3/1/2022	6850	2203011100Y	Perchlorate	0.249	ug/L	0.1	0.025		
3/1/2022	353.2	2203011101Y	Nitrate+Nitrite as Nitrogen	0.685	mg/L	0.05	0.002		

Analytical Results for Sampling Events at WW-3-710

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/2/2022	NDMA_LL	2203020941Y	N-Nitrosodimethylamine	0.47	ng/L	0.48	0.4		J
3/2/2022	NDMA_LL	2203020942Y	N-Nitrosodimethylamine	0.45	ng/L	0.48	0.4		J
3/2/2022	METALS	2203021005Y	Strontium, Total	2.92	mg/L	0.1	0.002		
3/2/2022	METALS	2203021005Y	Sodium, Total	58.5	mg/L	1	0.2		
3/2/2022	METALS	2203021005Y	Zinc, Total	0.011	mg/L	0.02	0.003		J
3/2/2022	METALS	2203021005Y	Magnesium, Total	56.6	mg/L	1	0.03		
3/2/2022	METALS	2203021005Y	Potassium, Total	4.7	mg/L	2	0.4		EB
3/2/2022	METALS	2203021005Y	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/2/2022	METALS	2203021005Y	Boron, Total	0.09	mg/L	0.2	0.02		J
3/2/2022	METALS	2203021005Y	Barium, Total	0.029	mg/L	0.02	0.003		
3/2/2022	METALS	2203021005Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
3/2/2022	METALS	2203021005Y	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
3/2/2022	METALS	2203021005Y	Calcium, Total	83	mg/L	1	0.3		

Analytical Results for Sampling Events at WW-3-978

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/3/2022	NDMA_LL	2203030946Y	N-Nitrosodimethylamine	0.85	ng/L	0.48	0.4		
3/3/2022	METALS	2203030947Y	Magnesium, Total	23	mg/L	1	0.03		
3/3/2022	METALS	2203030947Y	Zinc, Total	0.291	mg/L	0.02	0.003		
3/3/2022	METALS	2203030947Y	Vanadium, Total	0.007	mg/L	0.05	0.0007		J
3/3/2022	METALS	2203030947Y	Strontium, Total	1.33	mg/L	0.1	0.002		
3/3/2022	METALS	2203030947Y	Sodium, Total	147	mg/L	1	0.2		
3/3/2022	METALS	2203030947Y	Potassium, Total	4	mg/L	2	0.4		
3/3/2022	METALS	2203030947Y	Manganese, Total	0.104	mg/L	0.01	0.004		
3/3/2022	METALS	2203030947Y	Boron, Total	0.24	mg/L	0.2	0.02		
3/3/2022	METALS	2203030947Y	Barium, Total	0.023	mg/L	0.02	0.003		
3/3/2022	METALS	2203030947Y	Arsenic, Total	0.0027	mg/L	0.001	0.0004		
3/3/2022	METALS	2203030947Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/3/2022	METALS	2203030947Y	Molybdenum, Total	0.023	mg/L	0.025	0.003		J
3/3/2022	METALS	2203030947Y	Calcium, Total	49.8	mg/L	1	0.3		

Analytical Results for Sampling Events at WW-5-459

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/13/2022	8260_LL	2204131310B	Toluene	0.86	ug/L	0.5	0.2		
4/13/2022	NDMA_LL	2204131312B	N-Nitrodimethylamine	0.42	ng/L	0.48	0.2		J
4/13/2022	NDMA_LL	2204131312B	N-Nitrosodimethylamine	1.78	ng/L	0.48	0.4		

Analytical Results for Sampling Events at WW-5-579

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/13/2022	8260_LL	2204131400B	Toluene	0.57	ug/L	0.5	0.2		
4/13/2022	NDMA_LL	2204131402B	N-Nitrosodimethylamine	2.73	ng/L	0.47	0.4		
4/13/2022	NDMA_LL	2204131402B	N-Nitrodimethylamine	0.59	ng/L	0.47	0.2		

Analytical Results for Sampling Events at WW-5-809

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/13/2022	8260_LL	2204131415B	Toluene	1.7	ug/L	0.5	0.2		
4/13/2022	NDMA_LL	2204131417B	N-Nitrosodimethylamine	5.02	ng/L	0.48	0.4		
4/13/2022	NDMA_LL	2204131417B	N-Nitrodimethylamine	0.91	ng/L	0.48	0.2		

Analytical Results for Sampling Events at WW-5-909

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/13/2022	8260_LL	2204131440B	Toluene	1.1	ug/L	0.5	0.2		
4/13/2022	NDMA_LL	2204131442B	N-Nitrosodimethylamine	2.01	ng/L	0.47	0.4		
4/13/2022	NDMA_LL	2204131442B	N-Nitrodimethylamine	0.44	ng/L	0.47	0.2		J

Appendix A.3
PFTS Indicator Parameters

Summary of Water Quality Parameters
for the Plume Front Sampling Events in this Reporting Period

Well ID B650-EFF-1 Event Date 2/3/2022

Sample	Parameter	Result	Units
2202031300	Conductivity	1208	µS/cm
2202031300	pH	7.04	NA
2202031300	Temperature	24.8	ºC
2202031300	Turbidity	0.43	NTU

Well ID B650-EFF-1 Event Date 3/18/2022

Sample	Parameter	Result	Units
2203180541	Conductivity	1079	µS/cm
2203180541	pH	8.08	NA
2203180541	Temperature	24.2	ºC
2203180541	Turbidity	0.11	NTU

Well ID B650-EFF-1 Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150603	Conductivity	1096	µS/cm
2204150603	pH	7.81	NA
2204150603	Temperature	25.0	ºC
2204150603	Turbidity	0.28	NTU

Well ID B650-INF-1 Event Date 2/3/2022

Sample	Parameter	Result	Units
2202031307	Conductivity	1124	µS/cm
2202031307	pH	7.04	NA
2202031307	Temperature	24.6	ºC
2202031307	Turbidity	0.43	NTU

Well ID B650-INF-1 Event Date 3/18/2022

Sample	Parameter	Result	Units
2203180556	Conductivity	1085	µS/cm
2203180556	pH	7.27	NA
2203180556	Temperature	24.5	ºC
2203180556	Turbidity	0.29	NTU

Well ID B650-INF-1 Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150730	Conductivity	1042	µS/cm
2204150730	pH	7.15	NA
2204150730	Temperature	20.8	ºC
2204150730	Turbidity	0.22	NTU

Well ID PFE-2 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190912	Conductivity	1093	µS/cm
2204190912	pH	7.20	NA
2204190912	Temperature	25.3	ºC
2204190912	Turbidity	1.60	NTU

Well ID PFE-4A Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150800	Conductivity	1090	µS/cm
2204150800	pH	6.93	NA
2204150800	Temperature	24.0	ºC
2204150800	Turbidity	1.28	NTU

Well ID PFE-5 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190847	Conductivity	1015	µS/cm
2204190847	pH	7.51	NA
2204190847	Temperature	24.7	ºC
2204190847	Turbidity	1.88	NTU

Well ID PFE-7 Event Date 4/19/2022

Sample	Parameter	Result	Units
2204190945	Conductivity	1074	µS/cm
2204190945	pH	7.28	NA
2204190945	Temperature	24.9	ºC
2204190945	Turbidity	0.26	NTU

Appendix A.4
PFTS Analytical Data

Detections for Plume Front Treatment System Sampling Events in this Reporting Period

Analytical Results for Sampling Events at B650-EFF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/18/2022	607	2203180548	Bromacil	0.01	µg/L	0.0096	0.0048	111	
4/15/2022	8260_LL	2204150608	Silane, methoxytrimethyl-	5.6	ug/L	NA	NA		TIC

Analytical Results for Sampling Events at B650-INF-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/3/2022	8260	2202031308	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	ug/L	1	0.2		
2/3/2022	8260	2202031308	Trichloroethene (TCE)	28	ug/L	1	0.2		
2/3/2022	8260	2202031308	Trichlorofluoromethane (CFC 11)	21	ug/L	1	0.24		
2/3/2022	8260	2202031308	Tetrachloroethene (PCE)	1.1	ug/L	1	0.21		
2/3/2022	607	2202031310	Bromacil	0.008	µg/L	0.0099	0.005	111	J
2/3/2022	607	2202031310	N-Nitrodimethylamine	0.036	µg/L	0.0099	0.005	80	
2/3/2022	607	2202031310	N-Nitrosodimethylamine	0.073	µg/L	0.0099	0.005	49	
3/18/2022	8260	2203180600	1,1,2-Trichloro-1,2,2-Trifluoroethane	29	ug/L	1	0.2		
3/18/2022	8260	2203180600	Tetrachloroethene (PCE)	0.89	ug/L	1	0.21		J
3/18/2022	8260	2203180600	Trichloroethene (TCE)	24	ug/L	1	0.2		
3/18/2022	8260	2203180600	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
3/18/2022	8260	2203180601	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
3/18/2022	8260	2203180601	Trichloroethene (TCE)	25	ug/L	1	0.2		
3/18/2022	8260	2203180601	Tetrachloroethene (PCE)	0.81	ug/L	1	0.21		J
3/18/2022	8260	2203180601	1,1,2-Trichloro-1,2,2-Trifluoroethane	29	ug/L	1	0.2		
3/18/2022	607	2203180603	N-Nitrodimethylamine	0.04	µg/L	0.01	0.005	77	
3/18/2022	607	2203180603	N-Nitrosodimethylamine	0.07	µg/L	0.01	0.005	46	
3/18/2022	607	2203180603	Bromacil	0.01	µg/L	0.01	0.005	111	
4/15/2022	8260	2204150731	Trichlorofluoromethane (CFC 11)	23	ug/L	1	0.24		
4/15/2022	8260	2204150731	1,1,2-Trichloro-1,2,2-Trifluoroethane	35	ug/L	1	0.2		
4/15/2022	8260	2204150731	Tetrachloroethene (PCE)	0.87	ug/L	1	0.21		J
4/15/2022	8260	2204150731	Trichloroethene (TCE)	23	ug/L	1	0.2		
4/15/2022	8260	2204150732	Trichlorofluoromethane (CFC 11)	24	ug/L	1	0.24		
4/15/2022	8260	2204150732	Trichloroethene (TCE)	23	ug/L	1	0.2		
4/15/2022	8260	2204150732	Tetrachloroethene (PCE)	0.72	ug/L	1	0.21		J
4/15/2022	8260	2204150732	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	ug/L	1	0.2		
4/15/2022	607	2204150734	N-Nitrodimethylamine	0.036	µg/L	0.0097	0.0049	76	
4/15/2022	607	2204150734	N-Nitrosodimethylamine	0.068	µg/L	0.0097	0.0049	44	
4/15/2022	607	2204150734	Bromacil	0.014	µg/L	0.0097	0.0049	116	

Analytical Results for Sampling Events at PFE-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260	2204190918	Trichloroethene (TCE)	58	ug/L	1	0.2		
4/19/2022	8260	2204190918	Tetrachloroethene (PCE)	2.4	ug/L	1	0.21		
4/19/2022	8260	2204190918	Trichlorofluoromethane (CFC 11)	62	ug/L	1	0.24		
4/19/2022	8260	2204190918	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.26	ug/L	1	0.2		J
4/19/2022	8260	2204190918	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1	0.2		
4/19/2022	8260	2204190918	Dichlorofluoromethane (CFC 21)	0.35	ug/L	1	0.2		J
4/19/2022	607	2204190920	N-Nitrosodimethylamine	0.15	µg/L	0.0095	0.0048	44	
4/19/2022	607	2204190920	N-Nitrodimethylamine	0.08	µg/L	0.0095	0.0048	76	
4/19/2022	607	2204190920	Bromacil	0.015	µg/L	0.0095	0.0048	116	

Analytical Results for Sampling Events at PFE-4A

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2022	8260	2204150805	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.3	ug/L	1	0.2		
4/15/2022	8260	2204150805	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
4/15/2022	8260	2204150805	Trichlorofluoromethane (CFC 11)	1.1	ug/L	1	0.24		
4/15/2022	607	2204150807	Bromacil	0.012	µg/L	0.0096	0.0048	116	

Analytical Results for Sampling Events at PFE-5

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260	2204190852	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.22	ug/L	1	0.2		J
4/19/2022	8260	2204190852	1,1,2-Trichloro-1,2,2-Trifluoroethane	15	ug/L	1	0.2		
4/19/2022	8260	2204190852	Tetrachloroethene (PCE)	1.6	ug/L	1	0.21		
4/19/2022	8260	2204190852	Trichlorofluoromethane (CFC 11)	22	ug/L	1	0.24		
4/19/2022	8260	2204190852	Trichloroethene (TCE)	52	ug/L	1	0.2		
4/19/2022	8260	2204190853	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.34	ug/L	1	0.2		J
4/19/2022	8260	2204190853	Dichlorofluoromethane (CFC 21)	0.27	ug/L	1	0.2		J
4/19/2022	8260	2204190853	Tetrachloroethene (PCE)	1.9	ug/L	1	0.21		
4/19/2022	8260	2204190853	Trichloroethene (TCE)	49	ug/L	1	0.2		
4/19/2022	8260	2204190853	Trichlorofluoromethane (CFC 11)	21	ug/L	1	0.24		
4/19/2022	8260	2204190853	1,1,2-Trichloro-1,2,2-Trifluoroethane	15	ug/L	1	0.2		
4/19/2022	607	2204190855	N-Nitrodimethylamine	0.14	µg/L	0.0096	0.0048	76	
4/19/2022	607	2204190855	Bromacil	0.044	µg/L	0.0096	0.0048	116	
4/19/2022	607	2204190855	N-Nitrosodimethylamine	0.29	µg/L	0.0096	0.0048	44	
4/19/2022	607	2204190856	N-Nitrodimethylamine	0.16	µg/L	0.0098	0.0049	76	
4/19/2022	607	2204190856	Bromacil	0.042	µg/L	0.0098	0.0049	116	
4/19/2022	607	2204190856	N-Nitrosodimethylamine	0.32	µg/L	0.0098	0.0049	44	

Analytical Results for Sampling Events at PFE-7

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/19/2022	8260	2204190950	Trichloroethene (TCE)	4.1	ug/L	1	0.2		
4/19/2022	8260	2204190950	Trichlorofluoromethane (CFC 11)	3.8	ug/L	1	0.24		
4/19/2022	8260	2204190950	1,1,2-Trichloro-1,2,2-Trifluoroethane	4	ug/L	1	0.2		
4/19/2022	NDMA_LL	2204190953	N-Nitrosodimethylamine	1.06	ng/L	0.47	0.4		
4/19/2022	NDMA_LL	2204190953	N-Nitrodimethylamine	0.5	ng/L	0.47	0.2		
4/19/2022	NDMA_LL	2204190954	N-Nitrosodimethylamine	0.99	ng/L	0.49	0.41		
4/19/2022	NDMA_LL	2204190954	N-Nitrodimethylamine	0.41	ng/L	0.49	0.21		J

Appendix A.5
MPITS Indicator Parameters

Summary of Water Quality Parameters
for the Mid-plume Sampling Events in this Reporting Period

Well ID B655-EFF-2 Event Date 2/4/2022

Sample	Parameter	Result	Units
2202040730	Conductivity	1128	µS/cm
2202040730	pH	8.6	NA
2202040730	Temperature	20.8	ºC
2202040730	Turbidity	0.20	NTU

Well ID B655-EFF-2 Event Date 3/18/2022

Sample	Parameter	Result	Units
2203180712	Conductivity	1118	µS/cm
2203180712	pH	8.06	NA
2203180712	Temperature	21.9	ºC
2203180712	Turbidity	0.27	NTU

Well ID B655-EFF-2 Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150530	Conductivity	1109	µS/cm
2204150530	pH	7.95	NA
2204150530	Temperature	22.0	ºC
2204150530	Turbidity	0.20	NTU

Well ID B655-INF-2 Event Date 2/4/2022

Sample	Parameter	Result	Units
2202040745	Conductivity	1124	µS/cm
2202040745	pH	7.04	NA
2202040745	Temperature	22.8	ºC
2202040745	Turbidity	0.40	NTU

Well ID B655-INF-2 Event Date 3/18/2022

Sample	Parameter	Result	Units
2203180740	Conductivity	1122	µS/cm
2203180740	pH	7.10	NA
2203180740	Temperature	24.2	ºC
2203180740	Turbidity	0.62	NTU

Well ID B655-INF-2 Event Date 4/15/2022

Sample	Parameter	Result	Units
2204150541	Conductivity	1111	µS/cm
2204150541	pH	7.06	NA
2204150541	Temperature	23.2	ºC
2204150541	Turbidity	0.18	NTU

Well ID MPE-1 Event Date 2/16/2022

Sample	Parameter	Result	Units
2202160818	Conductivity	1286	µS/cm
2202160818	pH	7.13	NA
2202160818	Temperature	22.3	ºC
2202160818	Turbidity	0.18	NTU

Well ID MPE-10 Event Date 2/16/2022

Sample	Parameter	Result	Units
2202160907	Conductivity	1298	µS/cm
2202160907	pH	7.22	NA
2202160907	Temperature	22.4	ºC
2202160907	Turbidity	1.77	NTU

Well ID MPE-11 Event Date 2/17/2022

Sample	Parameter	Result	Units
2202170956	Conductivity	1053	µS/cm
2202170956	pH	7.30	NA
2202170956	Temperature	25.9	ºC
2202170956	Turbidity	0.52	NTU

Well ID MPE-8 Event Date 2/16/2022

Sample	Parameter	Result	Units
2202160851	Conductivity	1298	µS/cm
2202160851	pH	7.01	NA
2202160851	Temperature	22.6	ºC
2202160851	Turbidity	0.93	NTU

Well ID MPE-9 Event Date 2/16/2022

Sample	Parameter	Result	Units
2202160836	Conductivity	1157	µS/cm
2202160836	pH	6.96	NA
2202160836	Temperature	17.2	ºC
2202160836	Turbidity	0.86	NTU

Appendix A.6
MPITS Analytical Data

Detections for MPITS Sampling Events in this Reporting Period

Analytical Results for Sampling Events at B655-EFF-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2022	8260_LL	2204150535	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.1	ug/L	0.5	0.2		FB
4/15/2022	8260_LL	2204150535	Trichlorofluoromethane (CFC 11)	0.39	ug/L	0.5	0.24		J

Analytical Results for Sampling Events at B655-INF-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/4/2022	8260	2202040746	1,1,2-Trichloro-1,2,2-Trifluoroethane	170	ug/L	1	0.2		
2/4/2022	8260	2202040746	Dichlorofluoromethane (CFC 21)	1.1	ug/L	1	0.2		
2/4/2022	8260	2202040746	Tetrachloroethene (PCE)	2.5	ug/L	1	0.21		
2/4/2022	8260	2202040746	Trichloroethene (TCE)	47	ug/L	1	0.2		
2/4/2022	8260	2202040746	Trichlorofluoromethane (CFC 11)	82	ug/L	1	0.24		
2/4/2022	8260	2202040746	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
2/4/2022	607	2202040748	Bromacil	0.26	µg/L	0.0094	0.0047	111	
2/4/2022	607	2202040748	N-Nitrosodimethylamine	1.64	µg/L	0.0094	0.0047	49	
2/4/2022	607	2202040748	N-Nitrodimethylamine	0.8	µg/L	0.0094	0.0047	80	
3/18/2022	8260	2203180741	Tetrachloroethene (PCE)	2.5	ug/L	1	0.21		
3/18/2022	8260	2203180741	Dichlorofluoromethane (CFC 21)	1.2	ug/L	1	0.2		
3/18/2022	8260	2203180741	1,1,2-Trichloro-1,2,2-Trifluoroethane	180	ug/L	2.5	0.5		
3/18/2022	8260	2203180741	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.6	ug/L	1	0.2		
3/18/2022	8260	2203180741	Trichloroethene (TCE)	51	ug/L	1	0.2		
3/18/2022	8260	2203180741	Trichlorofluoromethane (CFC 11)	98	ug/L	1	0.24		
3/18/2022	607	2203180743	N-Nitrosodimethylamine	1.48	µg/L	0.0094	0.0047	46	
3/18/2022	607	2203180743	N-Nitrodimethylamine	0.71	µg/L	0.0094	0.0047	77	
3/18/2022	607	2203180743	Bromacil	0.27	µg/L	0.0094	0.0047	111	
3/18/2022	607	2203180744	Bromacil	0.26	µg/L	0.0094	0.0047	111	
3/18/2022	607	2203180744	N-Nitrodimethylamine	0.7	µg/L	0.0094	0.0047	77	
3/18/2022	607	2203180744	N-Nitrosodimethylamine	1.45	µg/L	0.0094	0.0047	46	
4/15/2022	8260	2204150545	1,1,2-Trichloro-1,2,2-Trifluoroethane	200	ug/L	2	0.4		
4/15/2022	8260	2204150545	Dichlorofluoromethane (CFC 21)	1.4	ug/L	1	0.2		
4/15/2022	8260	2204150545	Tetrachloroethene (PCE)	2.6	ug/L	1	0.21		
4/15/2022	8260	2204150545	Trichloroethene (TCE)	46	ug/L	1	0.2		
4/15/2022	8260	2204150545	Trichlorofluoromethane (CFC 11)	120	ug/L	1	0.24		
4/15/2022	8260	2204150545	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.6	ug/L	1	0.2		
4/15/2022	607	2204150547	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	44	
4/15/2022	607	2204150547	N-Nitrodimethylamine	0.82	µg/L	0.0095	0.0048	76	
4/15/2022	607	2204150547	Bromacil	0.37	µg/L	0.0095	0.0048	116	

Analytical Results for Sampling Events at MPE-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/16/2022	8260	2202160824	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1	0.2		
2/16/2022	8260	2202160824	1,1,2-Trichloro-1,2,2-Trifluoroethane	270	ug/L	2.5	0.5		
2/16/2022	8260	2202160824	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1	0.2		
2/16/2022	8260	2202160824	Tetrachloroethene (PCE)	3.5	ug/L	1	0.21		
2/16/2022	8260	2202160824	Trichloroethene (TCE)	74	ug/L	1	0.2		
2/16/2022	8260	2202160824	cis-1,2-Dichloroethene	0.34	ug/L	1	0.23		J
2/16/2022	8260	2202160824	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
2/16/2022	8260	2202160825	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.2	ug/L	1	0.2		
2/16/2022	8260	2202160825	1,1,2-Trichloro-1,2,2-Trifluoroethane	250	ug/L	2.5	0.5		
2/16/2022	8260	2202160825	Dichlorofluoromethane (CFC 21)	1.6	ug/L	1	0.2		
2/16/2022	8260	2202160825	Tetrachloroethene (PCE)	3.9	ug/L	1	0.21		
2/16/2022	8260	2202160825	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
2/16/2022	8260	2202160825	Trichloroethene (TCE)	75	ug/L	1	0.2		
2/16/2022	607	2202160827	N-Nitrosodimethylamine	3.18	µg/L	0.0096	0.0048	45	
2/16/2022	607	2202160827	N-Nitrodimethylamine	1.52	µg/L	0.0096	0.0048	74	
2/16/2022	607	2202160827	Bromacil	0.7	µg/L	0.0096	0.0048	101	
2/16/2022	607	2202160828	N-Nitrosodimethylamine	3.16	µg/L	0.0095	0.0048	45	
2/16/2022	607	2202160828	N-Nitrodimethylamine	1.52	µg/L	0.0095	0.0048	74	
2/16/2022	607	2202160828	Bromacil	0.72	µg/L	0.0095	0.0048	101	

Analytical Results for Sampling Events at MPE-10

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/16/2022	8260	2202160914	Trichloroethene (TCE)	56	ug/L	1	0.2		
2/16/2022	8260	2202160914	Trichlorofluoromethane (CFC 11)	70	ug/L	1	0.24		
2/16/2022	8260	2202160914	Tetrachloroethene (PCE)	2.8	ug/L	1	0.21		
2/16/2022	8260	2202160914	Dichlorofluoromethane (CFC 21)	2.2	ug/L	1	0.2		
2/16/2022	8260	2202160914	1,1,2-Trichloro-1,2,2-Trifluoroethane	83	ug/L	1	0.2		
2/16/2022	8260	2202160914	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.7	ug/L	1	0.2		
2/16/2022	607	2202160916	N-Nitrosodimethylamine	2.96	µg/L	0.0095	0.0048	45	
2/16/2022	607	2202160916	N-Nitrodimethylamine	1.38	µg/L	0.0095	0.0048	74	
2/16/2022	607	2202160916	Bromacil	0.38	µg/L	0.0095	0.0048	101	

Analytical Results for Sampling Events at MPE-11

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/17/2022	8260	2202171001	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.59	ug/L	1	0.2		J
2/17/2022	8260	2202171001	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.8	ug/L	1	0.2		
2/17/2022	8260	2202171001	Dichlorofluoromethane (CFC 21)	0.83	ug/L	1	0.2		J
2/17/2022	8260	2202171001	Tetrachloroethene (PCE)	0.27	ug/L	1	0.21		J
2/17/2022	8260	2202171001	Trichloroethene (TCE)	4.6	ug/L	1	0.2		
2/17/2022	8260	2202171001	Trichlorofluoromethane (CFC 11)	7.3	ug/L	1	0.24		
2/17/2022	607	2202171003	Bromacil	0.02	µg/L	0.01	0.0051	101	
2/17/2022	607	2202171003	N-Nitrodimethylamine	0.13	µg/L	0.01	0.0051	74	
2/17/2022	607	2202171003	N-Nitrosodimethylamine	0.28	µg/L	0.01	0.0051	45	

Analytical Results for Sampling Events at MPE-8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/16/2022	8260	2202160858	1,1,2-Trichloro-1,2,2-Trifluoroethane	310	ug/L	2.5	0.5		
2/16/2022	8260	2202160858	Dichlorofluoromethane (CFC 21)	1.6	ug/L	1	0.2		
2/16/2022	8260	2202160858	Tetrachloroethene (PCE)	3.3	ug/L	1	0.21		
2/16/2022	8260	2202160858	Trichloroethene (TCE)	71	ug/L	1	0.2		
2/16/2022	8260	2202160858	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
2/16/2022	8260	2202160858	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2	ug/L	1	0.2		
2/16/2022	8260	2202160858	Sulfur Dioxide	17	ug/L	NA	NA		TIC
2/16/2022	607	2202160900	N-Nitrosodimethylamine	2.14	µg/L	0.0097	0.0049	45	
2/16/2022	607	2202160900	N-Nitrodimethylamine	1.05	µg/L	0.0097	0.0049	74	
2/16/2022	607	2202160900	Bromacil	0.4	µg/L	0.0097	0.0049	101	

Analytical Results for Sampling Events at MPE-9

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/16/2022	8260	2202160843	Dichlorofluoromethane (CFC 21)	1.4	ug/L	1	0.2		
2/16/2022	8260	2202160843	Tetrachloroethene (PCE)	3.1	ug/L	1	0.21		
2/16/2022	8260	2202160843	Trichloroethene (TCE)	78	ug/L	1	0.2		
2/16/2022	8260	2202160843	Trichlorofluoromethane (CFC 11)	43	ug/L	1	0.24		
2/16/2022	8260	2202160843	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1	ug/L	1	0.2		
2/16/2022	8260	2202160843	1,1,2-Trichloro-1,2,2-Trifluoroethane	37	ug/L	1	0.2		
2/16/2022	607	2202160845	Bromacil	0.52	µg/L	0.0097	0.0049	101	
2/16/2022	607	2202160845	N-Nitrosodimethylamine	3.84	µg/L	0.0097	0.0049	45	
2/16/2022	607	2202160845	N-Nitrodimethylamine	1.77	µg/L	0.0097	0.0049	74	

Appendix B
Sampling Event Logbook Entries and Internal CoC Forms

ROJECT 100-A-182 ENV-0053

Notebook No. D32 # 124 c

Continued from page

Dan Halvorsen & Tony Torrez present. Weather is clear and cool. This well ill be purged and sampled using a dedicated bladder pump. Samples will be ollected using a new Teflon discharge hose. Water quality parameters will be onitored using a QED MP-20 Flowcell and water analyzer. Casing G3 in use.

ibrations:

DO Sensor = In Saturated air at 643 mm/Hg.

H Sensor = Using a 3pt. (4,7,10) Buffer method.

onductivity = Using a 1413 us/cm STD. Solution.

rbidity meter = # 21 STD = 10.8 RDG = 10.6 STD = LOT Exp = 2/22

rameters (Time)	Temp	Cond	DO	PH	ORP	TURB	DTW (ft)
220207 1422 c	20.73	1145	3.18	7.22	119	0.63	
—— 1424 c	20.74	1148	3.15 ~~3.15~~	7.20	118	0.59	
—— 1426 c	20.72	1148	3.16	7.17	119	0.62	

SAMPLES

ple #	Analysis	Preserve	Container	LOT	LAB
220207 1430 c	VOA by 8260	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 1431 c	" " (Dup)	"	"	"	"
—— 1432 c	" " (FB)	"	"	"	"
—— 1433 c	NDMA NDMN Bromacil by 607	Ice	(1) 1L amber	200416	SRI
—— 1434 c	GRO by 8015D	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 1435 c	Svoa by 8270 D	Ice	(2) 1L amber		"
—— 1436 c	Total metals	Ice/HNO3	(2) 125 ml Poly	210910	"
—— 1437 c	DRO by 8015 D	Ice	(1) 1L amber	~~2621~~	"

IDW = 2 gal.

Continued from page

Signed 2-7-2022

Read and Understood By

Signed 2-8-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-7-2022

Page 1 of 1

Sample Location: 100-A 182

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA	607	GRO	SVOA	metals			XGMO Charge Number
2202071430 c	3	A	X							
— 1431 c	3		X							
— 1432 c FB	3		X							
— 1433 c	1			X						
— 1434 c	3				X					
— 1435 c	2					X				
— 1436 c	2						X			

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	DRO							Charge Number
2202071437 c	1	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-7-2022 1530			2-8-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 100·C·365 ENV.0053

Notebook No. D32# 124 (c)

Continued from page

Dan Halvorsen & Tony Torrez present. The weather is clear & cool. The zone will be purged using a dedicated Teflon bladder pump. Samples collec from a Teflon discharge tube. Water quality param's collected from a QED MP.20 flowcell. Carboy G-3

CALIBRATIONS.

Do sensor cal'd in 643mm Hg saturated air.

Cond sensor cal'd in 1413us/cm standard.

pH sensor cal'd in 4,7,10 buffers.

Turb meter # 21 std 10.8 NTU's Rdg 10.8 NTU's Exp. 2.28.22 lot# 200445

Parameters	Temp	Cond	~~pH~~	DO	ORP	Turb
1) 220209 1430c	21.69	0.775	7.81	5.15	76	0.41
2) —— 1431c	21.70	0.772	7.85	5.25	76	0.38
3) —— 1432c	21.63	0.775	7.89	5.20	76	0.43

SAMPLES

Sample#	Analysis	Preserv	Lot#	Cont	Lab
220209 1435c	8260cl	Ice/HCl	2621	(3) 40ml vials	ALS
—— 1436c	" (FB)	"	"	"	"
—— 1437c	GRO	Ice	"	"	"
—— 1438c	607	"	200416	(1) 1L amber	SRI
—— 1439c	SVOA	"	N/A	(2) "	ALS
—— 1440c	DRO	"	"	(1) "	"
—— 1441c	Total metals	Ice/HNO3	210910	(2) 125ml poly	"

Continued from page

Read and Understood By

Signed 2-9-22 Date

Signed 2-10-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-22

Page 1 of 1

Sample Location: 100-C-365

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	620	607	500A	D20	TOTAL METALS		Charge Number XGMD
220209 1435c	3		X							
—— 1436c	3		X							
—— 1437c	3			X						
—— 1438c	1				X					
—— 1439c	1					X				
—— 1440c	1						X			
—— 1441c	1							X		

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	2-9-22 / 1530		2-10-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

ROJECT 200-C-170 WJI ENV-0020

Notebook No. D64 #128(Y)

Continued from page ______

Bob Tufts & Craig Del Ferraro present. Weather is clear & cold. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. n use. Probe # 1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202140930Y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS

Initial Parameters

ime - 2202140957Y
H - 8.05
emp - 18.6°c
ond - 996 us/cm
urb - 0.63 NTU's
Hpre - 7.12/10.08 (14.9°c)
Hpost - 7.13/10.06
TW - 147.85 ft.
Atmos - 12.53 psia

Final

Time - 2202141041Y
PH - 8.09
Temp - 18.5°c
Cond - 1007 us/cm
Turb - 0.59 NTU's
pH pre - 7.13/10.09 (15.2°c)
pH post - 7.10/10.08
DTW - 147.96 ft.
Atmos - 12.50 psia
IDW - 1/2 gal.

Meter ID

pH/Cond - 12
Turb - 7
" Std - 47.3
" rdg - 49.0
" lot - 200415
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108656	2/23
10	4103681	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202141020Y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS
—— 1021Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
—— 1040Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

uns			
	1) 26.15	2) 26.11	3) 26.05
	29.95	29.97	29.97
	29.91	29.97	29.91
	26.15	26.14	26.08

Continued from page

Craig Del Ferraro 2/14/22
Signed Date

Read and Understood By

2-14-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/14/22

Page 1 of 1

Sample Location: 200-C-170

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260	607	Total Metals					
2202140930Y (EB)	3	A	✓							XGMD
——1020Y	3	A	✓							〃
——1021Y	1	A		✓						〃
——1040Y	2	A			✓					〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig	2/14/22 1105hrs.			2-15-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT 200-C-225 WJI ENV-0020

Notebook No. D64#128(Y)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe#1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202101350Y	VOA by 8260	ice/HCL	(3)40ml vials	2596	ALS

Initial Parameters	Final	Meter ID
Time - 2202101418Y	Time - 2202101501Y	pH/Cond - 12
PH - 7.95	PH - 7.91	Turb - 7
Temp - 20.4°C	Temp - 20.6°C	" std - 47.3
Cond - 1179us/cm	Cond - 1189us/cm	" rdg - 48.8
Turb - 0.68 NTU's	Turb - 0.62 NTU's	" lot - 200445
pH pre - 7.04/10.08 (20.2°C)	pH pre - 7.02/10.06 (22.0°C)	" Exp - 2/28/22
pH post - 7.03/10.09	pH post - 7.02/10.05	
DTW - 147.71ft.	DTW - 147.85ft.	Buffers Lot Exp
Atmos - 12.48psia	Atmos - 12.48psia	7 2108G56 2/23
	IDW - 1/2 gal.	10 4103G81 9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202101440Y	VOA by 8260	ice/HCL	(3)40ml vials	2596	ALS
——— 1441Y	607/Bromacil	ice	(1)1L Amber	0100301H	SRI
——— 1500Y	Total Metals	ice/HNO_3	(2)125ml poly's	21-09-10	ALS

Runs	1) 50.10	2) 50.04	3) 50.02
	53.68	53.65	53.66
	53.65	53.67	53.69
	50.10	50.06	50.02

Continued from page

Craig Del Ferraro 2/10/22

Signed Date

Read and Understood By

2-14-22

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/10/22

Page 1 of 1

Sample Location: 200-C-225

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260	607	Total Metals					
220210 1350Y (EB)	3	A	✓							XGMD
—— 1440Y	3	A	✓							"
—— 1441Y	1	A		✓						"
—— 1500Y	2	A			✓					"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	2/10/22 1530hrs.			2-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 200-C-270 WJI ENV-0020

Notebook No. D64#128(Y)

Continued from page ________

Bob Tufts & Craig Del Ferraro present. Weather is clear & cold. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202100945Y	VOA by 8260	ice/HCL	(3) 40ml vials	cd ~~2621~~2596	ALS
——— 0946Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	"

Initial Parameters	Final	Meter ID
Time - 2202101010Y	Time - 2202101105Y	pH/cond - 12
PH - 7.92	PH - 7.84	Turb - 7
Temp - 18.5°C	Temp - 18.8°C	" Std - 47.3
Cond - 1194 us/cm	Cond - 1190 us/cm	" rdg - 48.8
Turb - 1.24 NTU's	Turb - 1.13 NTU's	" lot - 200445
pH pre - 7.10/10.14 (15.5°c)	pH pre - 7.09/10.11 (15.9°c)	" Exp - 2/28/22
pH post - 7.08/10.15	pH post - 7.09/10.13	
DTW - 147.58 ft.	DTW - 147.71 ft.	
Atmos - 12.51 psia	Atmos - 12.49 psia	
	IDW - 1/2 gal.	

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220210 1030Y	VOA by 8260	ice/HCL	(3) 40ml vials	cd ~~2621 2596~~ 2596	ALS
——— 1031Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——— 1032Y	" (FB)	"	"	"	"
——— 1100Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS
——— 1101Y	Anions/Alk	ice	"	N/A	"
——— 1102Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1103Y	Perchlorate by 6850	"	"	"	"
——— 1104Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Runs			
	1) 69.84	2) 69.76	3) 69.74
	73.22	73.17	73.16
	73.20	73.16	73.18
	69.85	69.81	69.74

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

2/10/22
Date

Signed

2-14-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/10/22

Page 1 of 1

Sample Location: 200-C-270

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk				Charge Number
2202100945Y (EB)	3	A	✓							XGMD
———— 0946Y (EB)	2	A			✓					〃
———— 1030Y	3	A	✓							〃
———— 1031Y	1	A		✓						〃
———— 1032Y (FB)	1	A		✓						〃
———— 1100Y	2	A			✓					〃
———— 1101Y	2	A				✓				〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
2202101102Y	1	A	✓							XGMD
———— 1103Y	1	A		✓						〃
———— 1104Y	1	A			✓					〃

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	2/10/22 1120hrs.	Jon W [illegible]	2-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT 200-F-225 WJI ENV-0020

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202151350y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS

Initial Parameters

Time - 2202151433y
PH - 7.88
Temp - 21.0°c
Cond - 1064us/cm
Turb - 1.14 NTU's
pH pre - 7.04/10.09 (18.6°c)
pH post - 7.05/10.09
DTW - 177.04 ft.
Atmos - 12.29 psia

Final

Time - 2202160945y
PH - 7.81
Temp - 20.8°c
Cond - 1047 us/cm
Turb - 0.97 NTU's
pH pre - 7.17/10.13 (13.2°c)
pH post - 7.16/10.13
DTW - 177.17 ft.
Atmos - 12.34 psia
IDW - 1/2 gal.

Meter ID

PH/Cond - 12
Turb - 7
" Std - 47.3
" rdg - 49.6
" lot - 200445
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202160840y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS
——— 0841y	607/Bromacil	ice	(1) 1L Amber	0300301H	SRI
——— 0915y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS
——— 0916y	Anions/Alk.	ice	(2) "	N/A	"
——— 0917y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0918y	Perchlorate by 6850	"	"	"	"
——— 0919y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

*Samples were a bit aerated.

Runs				
	1) 36.87	2) 36.83	3) 36.79	4) 36.77
	43.27	43.29	41.31	41.42
	43.21	42.79	41.13	41.17
	36.91	36.81	36.82	36.80

Continued from page

Read and Understood By

Craig Del Ferraro 2/16/22 2-17-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2\15\22

Page 1 of 2

Sample Location: 200-F-225

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260							Charge Number
2202151350Y	3	A	✓							XGMD

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerro	2\15\22 1500hrs.			2-16-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/16/22

Page 2 of 2

Sample Location: 200-F-225

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk	TDS	Perchlorate	NO2/NO3	Charge Number
2202160840Y	3	A	✓							XGMD
——— 0841Y	1	A		✓						"
——— 915Y	2	A			✓					"
——— 916Y	2	A				✓				"
——— 0917Y	1	A					✓			"
——— 0918Y	1	A						✓		"
——— 0919Y	1	A							✓	"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	2/16/22 1000hrs.		Jon W Munch	2-17-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 200-F-370 WJI ENV-0020

Notebook No. D64#129(y) 1

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202141445y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS

Initial Parameters	Final	Meter ID
Time - 2202141510y	Time - 2202150921y	pH/cond - 12
PH - 7.83	PH - 7.89	Turb - 7
Temp - 21.6°c	Temp - 20.9°C	" std - 47.3
Cond - 1200 us/cm	Cond - 1212 us/cm	" rdg - 49.0
Turb - 0.71 NTU's	Turb - 0.63 NTU's	" lot - 200415
pH pre - 7.05/10.02 (25.4°c)	pH pre - 7.12/10.10 (16.0°c)	" Exp - 2/28/22
pH post - 7.04/10.00	pH post - 7.14/10.09	
DTW - 176.76 ft.	DTW - 176.87 ft.	
Atmos - 12.38 psia	Atmos - 12.35 psia	
	IDW - 1/2 gal.	

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202150855y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS
——0856y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——0857y	Total Metals	ice/HNO3	(2) 125ml poly's	21-09-10	ALS
——0920y	" (Dupl.)	"	"	"	"

*Samples were very aerated.

Runs	1)	2)	3)
	99.82	99.72	99.75
	105.67	105.64	105.66
	105.70	105.61	105.68
	99.82	99.73	99.72

Continued from page

Read and Understood By

Craig Del Ferraro 2/15/22

Signed Date

2-16-22

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/14/22

Page 1 of 2

Sample Location: 200-F-370

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260							
2202141445Y (EB)	3	A	✓							XGMD

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	2/14/22 1530 hrs.			2-15-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ________________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/15/22

Page 2 of 2

Sample Location: 200-F-370

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals				Charge Number
2202150855Y	3	A	✓						XGMD
———0856Y	1	A		✓					"
———0857Y	2	A			✓				"
———0920Y (Dupl.)	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fierro	2/15/22 1120hrs.		2-16-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D64 #129(y)
Continued from page

ROJECT 200-F-420 WJI ENV-0020

ob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This ne will be sampled using 5 triple rinsed, stainless steel sample tubes. obe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

ample	Analysis	Preservative	Container	Lot	Lab
220215100SY	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS

nitial Parameters
ime - 2202151042Y
H - 7.76
emp - 21.4°c
ond - 1339 us/cm
urb - 1.61 NTU's
H pre - 7.09/10.12 (16.8°c)
H post - 7.06/10.13
TW - 176.87 ft.
tmos - 12.37 psia

Final
Time - 2202151301Y
PH - 7.61
Temp - 21.1°c
Cond - 1351 us/cm
Turb - 1.33 NTU's
pH pre - 7.06/10.09 (19.0°c)
pH post - 7.04/10.10
DTW - 177.04 ft.
Atmos - 12.39 psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 12
Turb - 7
" std - 47.3
" rdg - 49.6
" lot - 200445
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202151110Y	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS
——— 1111Y	* " (M.S.)*	"	"	"	"
——— 1112Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRS
——— 1300Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

*Samples were very aerated.

Runs			
	1) 121.12	2) 121.07	3) 121.03
	127.86	126.55	126.75
	127.84	126.52	126.68
	121.13	121.03	120.99

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

2/15/22
Date

Signed

2-16-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2\15\22

Page 1 of 1

Sample Location: 200-F-420

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals				Charge Number
22021510054 (EB)	3	A	✓						XGMD
——— 11104	3	A	✓						"
——— 11114 (MS)	3	A	✓						"
——— 11124	1	A		✓					"
——— 13004	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerro	2/15/22 1500hrs.		2-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 300- A-170 ENV-0053

Continued from page

Dan Halvorsen a Tony Torrez present. Weather is Clear, windy and Cool. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 flowcell and water analyzer. Carboy G1 in use.

Calibrations:

Do Sensor: In Saturated air @ 643 mm/Hg.

PH Sensor: Using a 3pt (4,7,10) Buffer method.

Conductivity: Using a 1413 us/cm STD. Solution.

Turbidity meter: # 8 STD: 61.9 RDG: 60.4 Lot # 200445 Exp: 2/22

Parameters (Time)	Temp	Cond	Do	PH	ORP	TurB	DTW (ft.)
2202151420 c	21.18	911	6.24	7.03	96	5.93	
—— 1422 c	21.20	913	6.27	7.01	95	5.90	
—— 1424 c	21.21	910	6.25	7.03	95	5.93	

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	LAB
2202151427 c	Voa by 8260	Ice/Hcl	(3) 40 ml Vial	2621	ALS
—— 1428 c	" " (FB)	"	"	"	"
—— 1429 c	NDMA/DMN Bromacil by 607	Ice	(1) 1L Amber	200416	SRL
—— 1430 c	Total Metals	Ice/HNO3	(2) 125 ml Poly	210910	ALS
—— 1431 c	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	N/A	"

IDW = 1 gal

Continued from page

Read and Understood By

Signed 2-15-2022 Date

Signed 2-16-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-15-2022

Page 1 of 1

Sample Location: 300-A-170

Pertinent Notes (if any)

Charge Number: XGMD

Sample Number	# of Containers	Sample Matrix*	VOA	SOC	Metals	NO2/NO3				Charge Number
22021514127C	3	D	φ							
—— 1428C FB	3		φ							
—— 1429C	1			φ						
—— 1430C	2				φ					
—— 1431C	1					φ				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-15-2022 1500			2-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT 300 · B · 166 WJI ENV · 0053

Notebook No. D32 # 123(A)

Continued from page

Marcus Avalos & Robert Burrows, present. Weather is clear & cold. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a PH/Cond meter. No ORP or DO will be taken. Carboy G-1

Meter ID

PH/Cond - #11

Turb - #8

" STD - 61.9 NTU

" RDG - 60.9 NTU

" LOT - 200445

" Exp - 2/28/22

Buffers	Lot	Exp
7	2100656	2/23
10	4103681	9/22

PH pre - 7.03/10.05 (14.5°c)

PH post - 7.06/10.03

arameters (time)	Temp(°C)	Cond(uS/cm)	PH	Turb (NTU)	DTW(ft)
2202070950A	18.9	948	7.78	4.60	160.85
——— 0952A	18.2	956	7.63	4.17	"
——— 0954A	18.4	955	7.61	3.43	"

Samples

ample #	Analysis	Preserve	Container	lot	lab
2202071000A	VOA by 8260	HCl/Ice	(3) 40ml vials	2621	Als
——— 1001A	" (FB)	"	"	"	"
——— 1002A	607/Bromacil	Ice	(1) 1L Amber	020040106	SRL
——— 1003A	" (Dup)	"	"	"	"
——— 1004A	Total Metals	HNO3/Ice	(2) 125 ml poly	210910	Als
——— 1005A	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly	210920	"

itial DTW - 159.60'

tal Gallons Purged - 2.5 gal

Continued from page

Signed 2/7/22

Date

Read and Understood By

2-8-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/7/22

Page 1 of 1

Sample Location: 300 · B · 166

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement										
			8260	607/Bro	T. Metals	NO2 NO3							
2202071000A	3	A	X										
—1001 A (FB)	3	|	X										
—1002A	1	|		X									
—1003A (Rp)	1	|		X									
—1004A	2	|			X							
—1005A	1	|				X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	2/7/22 @ 1055		2-8-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (03/09)

PROJECT 300-E-138 WJI ENV-0020

Notebook No. D64 #129(Y)
Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. n use. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks – Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
1315Y ~~1310Y~~ 220216 ~~1250Y~~ ~~NA~~	VOA by 8260	ice/HCL	(3) 40ml vials	2596	ALS

Initial Parameters

ime – 220216 1340Y
H – 7.23
emp – 19.4°C
ond – 1201 us/cm
urb – 3.52 NTU
Hpre – 7.02/10.04 (18.1°C)
Hpost – 7.05/10.06
TW – 138.75'
Hmos – 12.22 psia

Final

Time – 220216 1440Y
PH – 7.06
Temp – 19.0°C
Cond – 1428 us/cm
Turb – 0.93 NTU
pHpre – 7.03/10.05 (18.5°C)
pHpost – 7.05/10.04
DTW – ~~8~~ 138.95'
Atmos – 12.17 psia
IDW – 0.25 gal

Meter ID

pH/Cond – 12
Turb – 7
" Std – 47.3
" rdg – 49.0
" lot – 200445
" Exp – 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

ample	Analysis	Preservative	Container	Lot	Lab
220216 1250Y	VOA by 8260 (TB)	ice/HCL	(3) 40ml vials	2596	ALS
— 1400 Y	VOA by 8260	"	"	"	"
— 1401Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRS
— 1420Y	Total Metals	ice/HNO$_3$	(2) 125ml poly's	21-09-10	ALS

Marcus Avalos & Robert Burrows replaced Bob Tufts & Craig Del Ferraro for this sample event.

uns 1) 15.98	2) 15.92	3) 15.87	4) 15.83
22.57	22.52	22.56	22.50
22.59	22.52	22.55	22.53
15.96	15.90	15.87	15.80

Continued from page

Read and Understood By

Signed 2/16/22 Date

Signed 2-17-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/16/22 Page 1 of 1

Sample Location: 300 · E · 138

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260	607/300	T. Metals				Charge Number
2202161250Y (TB)	3	A	X						YGMD
— 1315Y (EB)	3		X						
— 1400Y	3		X						
— 1401Y	1			X					
— 1420Y	2				X				

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/16/22 @ 1620			2-17-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT 300-E-183 WJI ENV-0020

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This well will be ~~purg~~ cd sampled using 5 triple rinsed, stainless steel sample tubes. Gen in use. Probe # 1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202170910Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 0911Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters
Time - 2202170930Y
PH - 7.98
Temp - 19.4°C
Cond - 984 us/cm
Turb - 1.42 NTU's
pH pre - 7.14/10.10 (15.0°C)
pH post - 7.11/10.09
DTW - 138.95 ft.
Atmos - 12.37 psia

Final
Time - 2202171045Y
PH - 8.02
Temp - 19.2°C
Cond - 995 us/cm
Turb - 1.13 NTU's
pH pre - 7.13/10.06 (15.3°C)
pH post - 7.14/10.09
DTW - ~~138~~ cd 139.12 ft.
Atmos - 12.35 psia
IDW - 1/2 gal.

Meter ID
PH/cond - 12
Turb - 7
" std - 47.3
" rdg - 48.8
" lot - 200445
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202171000Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 1001Y	" (Dupl.)	"	"	"	"
——— 1002Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——— 1025Y	" (Dupl.)	"	"	"	"
——— 1026Y	Total Metals	ice/HNO$_3$	(2) 125ml poly's	21-09-10	ALS

*Samples were very aerated.

Runs	1)	2)	3)	4)
	35.69	35.68	35.67	35.69
	42.03	42.07	42.01	42.04
	41.98	42.04	41.97	42.04
	35.67	35.62	36.69	35.63

Continued from page

Read and Understood By

Craig Del Ferraro 2/17/22
Signed Date

Signed 2-17-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/17/22 Page 1 of 1

Sample Location: 300-E-183

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals				Charge Number
2202170910Y (EB)	3	A	✓						XAMD
——0911Y (EB)	1	A		✓					"
——1000Y	3	A	✓						"
——1001Y (Dupl.)	3	A	✓						"
——1002Y	1	A		✓					"
——1025Y (Dupl.)	1	A		✓					"
——1026Y	2	A			✓				"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	2/17/22 1055hrs.		2-17-22/1100

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

0
ROJECT 400 · EU · 131

Notebook No. 032 # 124 (c)
Continued from page ____

Marcus Avalos & Dan Halvorsen present. Weather is cloudy + cool. This well will be purged + sampled using a dedicated bladder pump. Samples will be collected using a dedicated discharge tube. Water quality parameters will be monitored using a QED MP·20 flow cell + water analyzer. Carboy G·3

alibrations
DO · Cal in saturated air @ 641 mm/Hg.
onductivity · Cal using 1413 uS/cm STD solution.
H · Cal using Oakton Buffers (4,7,10)
Turbidity Meter · #21 STD · 10.8 NTU RDG · 10.7 NTU LOT · 200445 Exp · 2/28/22

arameter (time)		Temp (°C)	Cond (mS/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) 220201	1350c	18.03	1.389	2.79	162	6.78	5.44	142.65'
2) ———	1352c	18.04	1.380	2.74	163	6.82	4.91	"
3) ———	1354c	17.98	1.392	2.71	164	6.80	4.73	"

Samples

ample #	Analysis	Preserve	Container	lot	lab
220201 1400C	VOA by 8260	HCl / Ice	(3) 40 ml vials	2621	ALS
——— 1401C	" (FB)	"	"	"	"

Initial DTW · 142.45'

Total Gallons Purged · 0.5 gal

Continued from page

Read and Understood By

Signed 2/1/22 Date

Lori Mumck Signed 2-2-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/22

Page ______ of ______

Sample Location: 400·EV·131

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement 8260							Charge Number
2202011400C	3	A	X							XGMD
—— 1401C (FB)	3	+	X							↓

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/1/22 @ 1440			2-2-22 - /0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT 400·GU·125

Notebook No. D32 #124(C) 19

Continued from page

Marcus Avalos & Dan Halvorsen present. Weather is clear & cool. This zone will be purged & sampled using a dedicated bladder pump. Samples will be collected using a dedicated discharge tube. Water quality parameters will be monitored using a QED MP-
Flowcell & Water analyzer. Carboy G·3 in use.

Calibrations

DO · Cal in saturated air @ 641 mm/Hg.

Conductivity - Cal using 1413 µS/cm STD

PH · Cal using Oakton Buffers (4,7,10)

Turbidity Meter · #21 STD - 10.8 NTU RDG · 10.7 NTU Lot# 200445 Exp: 2/28/22

Parameter(time)	Temp(°C)	Cond( )	DO	ORP	PH	Turb	DTW(ft
1) 220201 1000C	19.32	1.382	6.95	192	6.82	2.56	131.15'
2) ——— 1002C	19.35	1.385	6.88	191	6.85	2.34	"
3) ——— 1004C	19.38	1.383	7.07	190	6.87	2.12	"

Sample #	Analysis	Samples Preserve	Container	lot	lab
220201 1010C	VOA by 8260	HCl/Ice	(3) 40ml Vials	2621	Als
——— 1011C	" (FB)	"	"	"	"

Initial DTW - 131.08 ~~138.08~~ MA

Total Gallons Purged: 0.5 gal

Continued from page

Read and Understood By

Signed 2/1/22 Date

2-2-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/22

Page 1 of 1

Sample Location: 400 · GU · 125

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260							Charge Number
2202011010C	3	A	X							XGMD
—— 1011C (FB)	3	|	X							|

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/1/22 @ 1100			2-2-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

PROJECT 400·JV·150 WJI ENV·0053

Marcus Avalos & Dan Halvorsen present. Weather is partly cloudy & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a dedicated discharge tube. Water quality parameters will be monitored using a QED MP·20 flow cell & water analyzer. Carboy G·3

Calibrations
DO· Cal in saturated air @ 641 mm/Hg.
Conductivity. Cal using 1413 us/cm STD solution.
pH· Cal using Oakton Buffers (4,7,10)
Turbidity Meter· #21 STD· 10.8 NTU RDG· 10.6 NTU Lot-200445 Exp-2/28/22

Parameter (time)	Temp (°C)	Cond (ms/cm)	DO	ORP	pH	Turb (NTU)	DTW (ft)
1) 220202 0940C	17.47	2.05	4.06	186	6.96	3.16	147.90
2) ——— 0942C	17.46	2.05	4.09	185	6.97	1.45	"
3) ——— 0944C	17.50	2.05	3.98	185	6.98	1.14	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220202 0950C	VOA by 8260	HCl/Ice	(3) 40 ml vials	2621	ALS
——— 0951C	" (FB)	"	"	"	"

Initial DTW· 146.65' Total Gallons Purged - 0.5 gal

Continued from page

Read and Understood By

Signed 2/2/22 Date

Signed 2-3-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/22

Page 1 of 1

Sample Location: 400 · JV · 150

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260							Charge Number
✓ 2202020950C	3	A	X							XGMD
✓ ——0951C (FB)	3	↓	X							↓

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/2/22 @ 1020			2-3-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D64 ~~D32ce~~ #128(Y) 89

PROJECT 600-E-280 WJI ENV-0020

Continued from page ________

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & breezy. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe # 1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202021330Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS

Initial Parameters	Final	Meter ID
Time - 2202021400Y	Time - 2202021448Y	pH/cond - 12
PH - 8.61	PH - 8.70	Turb - 7
Temp - 19.5°C	Temp - 19.7°C	" std - 47.3
Cond - 1143 us/cm	Cond - 1138 us/cm	" rdg - 48.8
Turb - 4.06 NTU's	Turb - 2.72 NTU's	" lot - 200445
pH pre - 7.16/10.12 (14.8°C)	pH pre - 7.15/10.12 (14.5°C)	" Exp - 2/28/22
pH post - 7.18/10.11	pH post - 7.12/10.16	
DTW - 256.82 ft.	DTW - 256.96 Ft.	
Atmos - 12.33 psia	Atmos - 12.31 psia	
	IDW - 1/2 gal.	

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202021420Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
———— 1421Y	607/Bromacil	ice	(1) 1L Amber	02004016	SRI
———— 1445Y	Total Metals	ice/HNO3	(2) 125ml poly's	21-09-10	ALS
———— 1446Y	*" (MS)*	"	"	"	"
———— 1447Y	" (FB)	"	"	"	"

Runs	1)	2)	3)
	25.03	25.00	25.02
	52.90	52.77	52.70
	52.86	52.75	52.68
	25.02	25.01	24.98

Continued from page

Read and Understood By

Craig Del Ferraro 2/2/22 2-3-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2\2\22

Page 1 of 1

Sample Location: 600-E-280

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals					Charge Number
2202021330Y (EB)	3	A	✓							XGMD
——1420Y	3	A	✓							"
——1421Y	1	A		✓						"
——1445Y	2	A			✓					"
——1446Y (MS)	2	A			✓					"
——1447Y (FB)	2	A			✓					"

Sample Location:

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	2/2/22 1510 hrs.			2-3-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32 # 123 (A)

PROJECT BIM·23·431 WJI ENV·0053

Continued from page

Marcus Avalos & Robert Burrows present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a PH/Cond meter. No ORP or DO will be taken. Canopy G-1

Meter ID
PH/Cond - # 11
Turb - # 8
= STD - 61.9 NTU
= RDG - 60.9 NTU
= LOT - 200445
= Exp - 2/28/22

Buffers	Lot	Exp
7	2108656	2/23
10	4103681	9/22

PH pre - 7.01 | 10.03 (16.2)
PH post - 7.00 | 10.05

Parameters (time)	Temp (°C)	Cond ( )	PH	Turb (NTU)	DTW (ft)
1) 220207 1400A	18.2	1333	7.16	1.64	330.10
2) ——— 1402A	18.1	1360	7.10	1.15	"
3) ——— 1404A	17.9	1306	7.15	1.43	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220207 1410A	VOA by 8260	HCl / Ice	(3) 40 ml vials	2621	Als
——— 1411A	" (FB)	"	"	"	"
——— 1412A	607 / Bromacil	Ice	(1) 1L Amber	0200406	SRI

Initial DTW - 329.70'

Total Gallons Purged - 2 gal

Continued from page

2/7/22

Read and Understood By

Lori

2-8-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/7/22

Page 1 of 1

Sample Location: BLM-23-431

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/820						Charge Number
2202071410A	3	A	X							XGMD
1411A (FB)	3	|	X							|
1412A	1	|		X						|

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/7/22 @ 1530			2-8-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT Blm-32.543 Ewu. 0000

Notebook No. D32 #122(B) 65

Continued from page

Robert. Burrows & Tony Torrez present. The weather is clear & cool. This zone will be purged & sampled using a Flute sample system. Samples collected from a dedicated Teflon tube. Purge pressure set @ 281 & sample pressure set @ 252 psi. Bubbler set @ 8psi & stage @ 10psi. 15 mins of recovery time between purges. Min of 4 gallons purged prior to sampling. Parameter stabilization prior to sampling. Can-bay G-1.

Param's Pre

pH	7.60	7.75	7.80
Temp	18.4	19.2°c	19.0
Cond	979	965	973
Turb	0.62	0.75	0.70

Meter ID's

pH/cond	11
Turb #	8
" std	61.9
" rdg	61.8
" exp	2-28-22
" lot#	200445

	Initial	Final
	220202 1320B	220202 1430B
pH	7.58	7.63
Temp	16.0°c	16.1
Cond	971	968
Turb	1.09	0.90
pH pre	7.15/10.18(15.0)	7.15/10.18(14.8°)
pH post	7.15/10.17	7.18/10.18

Samples

Sample#	Analysis	Preserv	Lot#	Cont	Lab
220202 1340B	8260	ice/HCl	2621	(3) 40ml VOAs	ALS
— 1341B	" (FB)	"	"	"	"
— 1342B	607	ice	103501	(1) 1L amber	SRL
— 1343B	LL NDMA	"	"	"	"
— 1344B	" (FB)	"	"	"	"
— 1405B	8220	"	N/A	(2) "	ALS
— 1425B	Total metals	ice/HNO_3	"	(2) 125ml poly	"
— 1426B	Anions/ALK	ice	"	"	"
— 1427B	TDS	"	"	(1) "	"
— 1428B	Perchlorate	"	"	"	"
— 1429B	NO_2/NO_3	ice/H_2SO_4	"	(1) 250ml poly	"
			"		

Continued from page

Read and Understood By

Signed 2-2-22 Date

Signed 2-3-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-2-22

Page 1 of 1

Sample Location: BLM-32-543

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	LLNDMA	8270	TOTAL METALS			Charge Number
										XGMD
220202 1340B	3	A	X							
— 1341B (FB)	3		X							
— 1342B	1			X						
— 1343B	1				X					
— 1344B (FB)	1				X					
— 1465B	2					X				
— 1425B	2						X			

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	ANIONS/ALK	TDS	PERCHLORATE	NO2/NO3				Charge Number
— 1426B	2	A	X							
— 1427B	1			X						
— 1428B	1				X					
— 1429B	1					X				

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	2-2-22/1530			2-3-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

PROJECT Blm. 32.591

Notebook No. D32# 122(B)

Continued from page

Robert Burrows & Tony Torrez present. The weather is clear & cool. This zone will be purged & sampled using a Flute Sampling System. Samples will be collected from a dedicate Teflon Tube. Purge pressure set @ 281 psi & sample @ 251 Bubbler set @ 3psi and stage @ 10psi 15 mins of recovery time. Min of 4 gallons purged prior to sampling. Param's stabalized prior to sampling carboy 6-1.

Param Pre:			
pH	8.23	8.36	8.43
Temp	18.6°c	19.2°c	19.1°c
Cond	1004 µs/cm	979	980
Turb	1.38	1.00	0.89

Meter ID's

pH/Cond 11

Turb# 8

" Std 61.9

" Rdg 61.7

" Lot# 200445

" Exp: 2.28.22

	Initial	Final
	220201 1515B	1521
pH	8.46	8.46
temp	17.9°c	17.4
Cond	993	995
Turb	0.86	0.91
pH pre	7.15/10.17(12.9)	7.15/10.17
pH post	7.17/10.17	7.15/10.19

Samples

Sample#		Analysis	Preserv	Lot#	Cont	Lab
220201	1516B	8260	ICE/HCl	22621	(3) 40ml vials	ACS
—	1517B	" (FB)	"	"	"	"
—	1518B	LLNDMA	ICE	103501	(1) 1L amber	SRI
—	1519B	" (FB)	"	"	"	"
—	1520B	" Dup)	"	"	"	"

Continued from page

T. D

2.1.22

Read and Understood By

2-2-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2·1·22

Page 1 of 1

Sample Location: Blm·32·571

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	((NDMA						Charge Number
										XGmD
220201 ~~[illegible]~~ 1516B	3	A	X							
— 1517B	3		X							
— 1518B	1			X						
— 1519B	1			X						
— 1520B	1			X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-1-22			2-2-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32#122(B) 67

Continued from page

PROJECT Blm. 32-632

ROBERT BURROWS & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL This well will be purged & SAMPLED using A FLUTE SAMPLE SYSTEM. SAMPLES will be COLLECTED from A DEDICATED TEFLON TUBE. PURGE PRESSURE SET @ 281 & SAMPLE PRESSURE SET @ 252psi. Bubbler SET @ 3psi & STABLE @ 10psi. min of 4gallons purged PRIOR TO SAMPLING. 15 mins of RECOVERY BETWEEN purges. PARAM'S STABALIZATION PRIOR TO SAMPLING. CARBOY G-1

PARAM PRE			
pH	8.17	8.31	8.40
TEmp	19.2°c	18.4°c	19.0°c
COND	966us/cm	965	969
Turb	0.81NTU's	1.10	1.18

METER ID'S
pH/Cond 11
Turb# 8
" Std 61.9
" Rdg 61.7
" Lot# ~~200405~~ 200445
" Exp. 7.28.22

	INITIAL	FINAL
	220201 1525B	220201 1535B
pH	8.29	8.30
TEmp	17.7	17.9
Cond	969	973
Turb	1.54	1.25
pH pre	7.18/10.15(17.4)	7.17/10.15
pH post	7.17/10.17	7.15/10.10

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
220201 1530B	8260	ICE/HCl		(3) 40ml vials	AS
— 1531B	" (FB)	"		"	"
— 1532B	LLNDMA	ICE		(1) 1LT Amber	SRI
— 1533B	" (FB)	"		"	"

Continued from page

Signed 2.1.22 Date

Read and Understood By

Signed 2-2-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-1-22

Page 1 of 1

Sample Location: BLM-32-632

Pertinent Notes (if any)

Charge Number: X6MD

Sample Number	# of Containers	Sample Matrix*	8260	LLNDMA						Charge Number
220201 1530B	3	A	X							
— 1531B (FB)	3	|	X							
— 1532B	1	|		X						
— 1533B (FB)	1	|		X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-1-22/1545			2-2-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32 # 124C

PROJECT NASA 3   ENV-0053

Continued from page

Dan Halvorsen & Tony Torrez present. Weather is Clear and Cool. This well will be purged and sampled using dedicated bladder pump. Samples will be Collected using a new Teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 Flowcell and Water analyzer. Carboy G3 in use.

Calibrations:

DO Sensor = In Saturated air at 643 mmHg.

PH Sensor: using a 3pt (4,7,10) Buffer method.

Conductivity = using a 1413 us/cm STD. Solution.

Turbidity meter: # 21 STD: 10.8 RDG: 10.7 LOT # : 200445 Exp: 2/22

Parameters (Time)	Temp	Cond	DO	PH	ORP	TURB	DTW (ft)
2202101420 C	20.38	902	5.89	7.15	99	1.24	
—— 1422 C	20.41	905	5.86	7.12	99	1.21	
—— 1424 C	20.38	901	5.90	7.16	98	1.25	

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
2202101430 C	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 1431 C	" " (FB)	"	"	"	"
—— 1432 C	NDMA LL	Ice	(1) 1L Amber	200416	SRI
—— 1433 C	" " (FB)	"	"	"	"

Trip Blanks

Sample #	Analysis	Preserve	Container	LOT	LAB
2202101300 C	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 1301 C	NDMA LL	Ice	(1) 1L Amber	200416	SRI

IDW = 1/2 gal.

Continued from page

Signed   2-10-2022 Date

Read and Understood By

Signed   2-14-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-2022

Page 1 of 1

Sample Location: NAJA 3

Pertinent Notes (if any) Sample Number		# of Containers	Sample Matrix*	VOC	NDMA LL						Charge Number XGMO
2202101300c	TB	3	A	X							
—— 1301c	TB	1			X						
—— 1430 c		3		X							
—— 1431 c	FB	3		X							
—— 1432 c		1			X						
—— 1433 c	FB	1			X						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-10-2022 1530			2-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT PL-7-480 WJI ENV-0020

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202081345y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1346y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters

Time - 2202081435y
PH - 8.18
Temp - 20.8°c
Cond - 888 us/cm
Turb - 0.87 NTU's
pH pre - 7.09/10.06 (17.2°c)
pH post - 7.11/10.06
DTW - 481.76ft.
Atmos - 12.58psia

Final

Time - 2202091435y
PH - 8.24
Temp - 20.1°C
Cond - 865 us/cm
Turb - 0.77 NTU's
pHpre - 7.06/10.11 (18.7°c)
pHpost - 7.04/10.12
DTW - 481.81ft.
Atmos - 12.57psia
IDW - 0

Meter ID

pH/cond - 12
Turb - 7
" std - 47.3
" rdg - 49.4
" lot - 200445
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103GB1	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202081515y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1516y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

*LL NDMA sample was started on 2/8, put in fridge @ bldg 637 for the night, and completed on 2/9.

Runs	1)	2)	3)	4)	5)	6)	7)
	16.18	16.14	16.21	16.19	16.16	16.09	16.07
	13.71	13.71	13.79	13.80	13.76	13.75	13.74
	13.70	13.72	13.76	13.75	13.74	13.75	13.76
	16.18	16.14	16.21	16.19	16.13	16.10	16.11

Continued from page

Craig Del Ferraro 2/9/22
Signed Date

Read and Understood By

2-10-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/22 Page 1 of 1

Sample Location: PL-7-480

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260 LL	LL NDMA						
2202081345Y (EB)	3	A	✓							XGMD
—— 1346Y (EB)	1	A		✓						"
—— 1515Y	3	A	✓							"
—— 1516Y	1	A		✓						"

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Fiero	2/8/22 1535hrs		2-9-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

ROJECT PL-7-560 WJI ENV-0020

Notebook No. D64#128(Y)

Continued from page ______

ob Tufts & Craig Del Ferraro present. Weather is clear & cold. This zone will be ampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. obe #1539. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
220208 0855Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 0856Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G2

ample	Analysis	Preservative	Container	Lot	Lab
220208 1005Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 1006Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

nitial Parameters

ime - 2202081037Y

H - 8.22

emp - 20.7°c

ond - 967us/cm

urb - 2.33 NTU's

H pre - 7.18/10.15 (12.7°c)

H post - 7.18/10.14

DTW - 481.62ft.

Atmos - 12.67 psia

Final

Time - 2202081305Y

PH - 8.25

Temp - 21.2°c

Cond - 981us/cm

Turb - 2.02 NTU's

pH pre - 7.13/10.10 (16.0°c)

pH post - 7.14/10.08

DTW - 481.76ft.

Atmos - 12.67 psia

IDW - 1/2 gal.

Meter ID

pH/cond - 12

Turb - 7

" std - 47.3

" rdg - 49.4

" lot - 200445

" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202081105Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 1106Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

*Sampling event delayed a few hours during the morning due to below freezing temps.

Runs

1)	2)	3)
51.11	51.05	51.02
48.03	48.00	48.03
48.03	48.01	48.02
51.10	51.06	51.05

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

2/8/22
Date

Signed

2-9-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/22 Page 1 of 1

Sample Location: PL-7-560

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA						Charge Number
2202080855Y (TB)	3	A	✓							XGMD
——— 0856Y (TB)	1	A		✓						〃
——— 1005Y (EB)	3	A	✓							〃
——— 1006Y (EB)	1	A		✓						〃
——— 1105Y	3	A	✓							〃
——— 1106Y	1	A		✓						〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	2/8/22 1535hrs.			2-9-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

ROJECT PL-7-630 WJI ENV-0020

Notebook No. D64 #128(y)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & cold. This ~~zone~~ will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. n use. Probe #1539. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2202070810y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
—— 0811y	Low Level NDMA	ice	(1) 1L Amber	~~02004016~~ CD 00081383	SRI

Sample event delayed for a few hours due to below freezing temps.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202071035y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
—— 1036y	Low Level NDMA	ice	(1) 1L Amber	~~02004016~~ CD 00081383.	SRI

Initial Parameters

Time - 2202071305y
H - 8.17
emp - 21.7°c
Cond - 904us/cm
urb - 3.19 NTU's
H pre - 7.10 / 10.16 (15.2°c)
Hpost - 7.13 / 10.17
DTW - 481.48 Ft.
Atmos - 12.72 psia

Final

Time - 2202071429y
PH - 8.06
Temp - 21.4°c
Cond - 921 us/cm
Turb - 2.22 NTU's
pHpre - 7.08 / 10.13 (17.0°c)
pHpost - 7.09 / 10.16
DTW - 481.62 ft.
Atmos - 12.68 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 12
Turb - 7
〃 std - 47.3
〃 rdg - 48.9
〃 lot - 200445
〃 Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202071330y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
—— 1331y	607/Bromacil	ice	(1) 1L Amber	~~02004016~~ CD 00081383	SRI
—— 1355y	Low Level NDMA	〃	〃	〃	〃
—— 1356y	Total Metals	ice / HNO_3	(2) 125ml poly's	21-09-10	ALS
—— 1425y	Anions / Alk.	ice	〃	N/A	〃
—— 1426y	TDS by SM2540C	〃	〃	〃	〃

Continued ~~from~~ on page 91

Read and Understood By

Craig Del Ferraro 2/7/22
Signed Date

2-8-22
Signed Date

PROJECT PL-7-630 WJI ENV-0020

Notebook No. D64#128(Y)

Continued from page 90

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220207 1427Y	Perchlorate by 6850	ice	(1) 125ml poly	N/A	ALS
——— 1428Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Runs	1) 81.73	2) 81.59	3) 81.57	4) 81.51
	78.35	78.36	78.38	78.39
	78.35	78.37	78.40	78.42
	81.69	81.62	81.57	81.55

Continued from page

Craig Del Ferro
Signed

2/7/22
Date

Read and Understood By

Signed

2-8-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/7/22 Page 1 of 1

Sample Location: PL-7-630

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA				Charge Number
2202070810Y (TB)	3	A	✓						XGMD
——— 0811Y (TB)	1	A			✓				"
——— 1035Y (EB)	3	A	✓						"
——— 1036Y (EB)	1	A			✓				"
——— 1330Y	3	A	✓						"
——— 1331Y	1	A		✓					"
——— 1355Y	1	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
2202071356Y	2	A	✓							XGMO
——— 1425Y	2	A		✓						"
——— 1426Y	1	A			✓					"
——— 1427Y	1	A				✓				"
——— 1428Y	1	A					✓			"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	2/7/22 1455hrs.			2-8-22/0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT PL-12-570 ENV-0053

Continued from page

Dan Halvorsen & Tony Torrez present. Weather is Clear and Cold. This well will be purged and sampled using a dedicated bladder pump. Samples will be Collected using a new Teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 Flowcell and water analyzer. Canbag G3 in use.

Calibrations:

DO Sensor = In Saturated air @ 643 mm/Hg.
PH Sensor= using a 3pt. (4,7,10) Buffer method.
Conductivity = using a 1413 us/cm STD. Solution.
Turbidity meter = 21 STD = 10.8 RDG = 10.6 Lot # = 200445 Exp = 2/22

Parameters (Time)	Temp	Cond	DO	PH	ORP	Turb	DTW (FT)
2202081430 c	19.71	1004	6.27	7.29	111	0.66	
—— 14132 c	19.74	1007	6.24	7.31	110	0.69	
—— 1434 c	19.73	1003	6.27	7.27	110	0.65	

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
2202081438 c	Voa by 8260	Ice/HCl	(3)40 ml vial		ALS
—— 1439 c	" " (FB)	"	"		"
—— 1440 c	NDMA LL	Ice	(1)1L Amber		SRI
——	" " (Dup)	"	"		"
—— 1441 c	" " (FB)	"	"		"

±DW = 2 gal.

Continued from page

Read and Understood By

2-8-2022 2-9-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-8-2022

Page 1 of 1

Sample Location: PL-12-570

Pertinent Notes (if any)

Charge Number: X6MD

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA 1L					
2202081438c	3	A	X						
——— 1439c FB	3		X						
——— 1440c	1			X					
——— 1441c FB	1			X					

Sample Location:

Pertinent Notes (if any)

Charge Number

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-8-2022 1530			2-9-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

ROJECT P1.12.800 WJI ENV.0053

Notebook No. 032 # 123(A)

Continued from page

Marcus Avalos & Robert Burrows present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new eflon discharge hose. Water quality parameters will be monitored using a QED MP.20 Flow cell & water analyzer. Carboy G.1

Calibrations
DO. Calibrated in saturated air @ 641 mmHg
Conductivity: Cal using a 1413 uS/cm STD solution.
pH - Calibrated using Oakton Buffers (4,7,10)
Turbidity Meter. # 8 STD - 61.9 NTU RDG - 61.1 NTU Lot - 200445 Exp. 2/28/22

Trip Blanks

Sample #	Analysis	Preserve	Container	lot	lab
220214 0800 A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2621	ALS
—— 0801 A	Low level NDMA	Ice	(1) 1L Amber	0100301H	SRI

Parameters (time)	Temp (°C)	Cond (mS/cm)	pH	Turb	DO	ORP	DTW
1 220214 0955 A	19.53	1.023	7.11	1.43	1.20	137	N/A
2) —— 0957 A	19.58	1.031	7.12	1.54	1.23	136	"
3) —— 0959 A	14.60	1.029	7.10	1.37	1.27	136	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220214 1005 A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2621	ALS
—— 1006 A	" (FB)	"	"	"	"
—— 1007 A	Low Level NDMA	Ice	(1) 1L Amber	0100301H	SRI
—— 1008 A	" (Dup)	"	"	"	"
—— 1009 A	" (FB)	"	"	"	"

Packer Pressure - 26 psi

Total Gallons Purged - 2.5 gal

Continued from page

Read and Understood By

Signed 2/14/22 Date

Signed 2-16-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/14/22 Page 1 of 1

Sample Location: Pl.12.800

Pertinent Notes (if any):

Sample Number	# of Containers	Sample Matrix*	8260	LL NDMA						Charge Number
2202140800A (TB)	3	A	X							XGMD
—— 0801A (TB)	1	|		X						|
—— 1005A	3	|	X							|
—— 1006A (FB)	3	|	X							|
—— 1007A	1	|		X						|
—— 1008A (Dup)	1	|		X						|
—— 1009A (FB)	1	|		X						|

Sample Location:

Pertinent Notes (if any):

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/14/22 @ 1100			2-15-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT ST-2-466 WJI ENV-0053

Notebook No. D32 # 124(C)

Continued from page ______

Marcus Avalos & Dan Halvorsen present. Weather is cloudy & cold. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell & water analyzer. Carboy Co-3

Calibrations

DO - Cal in saturated air @ 641 mm/Hg.

Conductivity - Cal using 1413 us/cm STD solution.

PH - Cal using Oakton Buffers (4,7,10)

Turbidity Meter - #21 STD - 10.8 NTU RDG - 10.7 NTU LOT - 200445 Exp - 2/28/22

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	ORP	PH	Turb(NTU)	DTW(ft)
) 220202 1430C	19.91	1.023	6.70	171	7.22	0.87	436.85'
) ——— 1432C	19.97	1.029	7.10	171	7.23	0.97	-
) ——— 1434C	20.05	1.017	7.41	171	7.25	0.82	-

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220202 1440C	VOA by 8260C	HCl/Ice	(3) 40ml vials	2621	ALS
——— 1441C	= (FB)	=	=	=	=
——— 1442C	607/Bromacil	Ice	(1) 1L Amber	02004016	SRI
——— 1443C	Low Level NDMA	=	=	=	=
——— 1444C	= (FB)	=	=	=	=
——— 1445C	Total Metals	HNO3/Ice	(2) 125ml poly	210910	ALS
——— 1446C	= (Dup)	=	=	=	=

Initial DTW - 436.80'

Total Gallons Purged - 2 gal

Continued from page

Signed

Date 2/2/22

Read and Understood By

Signed

Date 2-3-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/22 Page 1 of 1

Sample Location: ST. 2-466

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	607/Bro	LL NDMA	T. Metals							
2202021440C	3	A	X										
— 1441C (FB)	3		X										
— 1442C	1			X									
— 1443C	1				X								
— 1444C (FB)	1				X								
— 1445C	2					X							
— 1446C	2					X							

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	2/2/22 @1500		2-3-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (03/09)

PROJECT ST-4-589 ENV-0053

Continued from page

Dan Halvorsen & Tony Torrez present. Weather is clear and cold. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using an MP-20 Flowcell and water analyzer. Carboy G3 in use.

Calibrations:

Do Sensor = In Saturated air @ 643 mm/Hg.

PH Sensor = Using a 3pH (4,7,10) Buffer method.

Conductivity: Using a 1413 us/cm STD. Solution.

Turbidity Meter: #21 STD: 10.8 RDG: 10.6 LOT #: Exp: 2/22

Parameters (Time)	Temp	Cond	Do	PH	ORP	Turb.	DTW (ft.)
220207 1000 c	20.99	737	1.89	7.43	132	0.49	
—— 1002 c	20.98	734	1.91	7.40	131	0.52	
—— 1004 c	20.96	738	1.88	7.44	131	0.47	

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
2202071008 c	Voa by 8260 LL	Ice/Hcl	(3) 40 ml Vial	2621	ALS
—— 1009 c	" " (FB)	"	"	"	"
—— 1010 c	NDMA LL	Ice	(1) 1L Amber	200416	SRC
—— 1011 c	" " (FB)	"	"	"	"

IDW ~ 2 gal.

Continued from page

Signed 2.7.2022 Date

Read and Understood By

Signed 2-8-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-7-2022

Page 1 of 1

Sample Location: ST-41-589

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOC	NDMA 4						Charge Number X6MD
2202071008c	3	A	X							
—— 1009c	3	/	X							
—— 1010c	1	/		X						
—— 1011c	1	/		X						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-7-2022 1045			2-8-22 /0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

ROJECT ST-5-481 WJI ENV-0053

Notebook No. D32 #123 (A)

Continued from page ____

3ob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This well ill be purged using a dedicated bladder pump. Samples will be collected sing a teflon discharge hose. Water quality parameters will be monitored sing a QED MP-20 flow cell and water analyzer. Carboy G3 in use.

alibrations

)O - calibrated in saturated air @ 640 mm/Hg.
onductivity - calibrated using 1413 us/cm std. solution.
H - calibrated using Oakton buffers (7-10).
urb. meter #21 std - 10.8 rdg - 12.2 lot - 200445 Exp - 2/28/22

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
220223 0825A	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2596	ALS
—— 0826A	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

arameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 220223 0950A	19.47	0.990	5.19	161	7.48	2.11	425.39
2) —— 0953A	19.53	1.001	5.08	160	7.46	1.70	425.39
3) —— 0956A	19.59	1.000	4.86	156	7.43	1.58	425.39

Samples

ample	Analysis	Preservative	Container	Lot	Lab
220223 1000A	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2596	ALS
—— 1001A	u (FB)	u	u	u	u
—— 1002A	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
—— 1410A	* u (N.S.) *	u	u	u	u
220224 0750A	Low Level NDMA	u	u	u	u
—— 0751A	u (FB)	u	u	u	u
—— 0840A	Total Metals	ice/HNO_3	(2) 125ml poly's	21-12-12	ALS
—— 0841A	Anions/Alk.	ice	u	N/A	u
—— 0842A	TDS by SM2540C	u	(1) 125ml poly	u	u
—— 0920A	Perchlorate by 6850	u	u	u	u
—— 0921A	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	u

nitial DTW - 425.19 ft. Total gallons purged - 1.5

Continued from page

Read and Understood By

Craig Del Ferraro 2/24/22
Signed Date

Lori Munch 2-24-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/22

Page 1 of 2

Sample Location: ST-5-481

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	LL NDMA					Charge Number
2202230825A (TB)	3	A	✓							XGMD
——0826A (TB)	1	A			✓					"
——1000A	3	A	✓							"
——1001A (FB)	3	A	✓							"
——1002A	1	A		✓						"
——1410A (MS)	1	A		✓						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTermo	2/23/22 1530hrs.		Jon W Munch	2-24-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2|24|22 Page 2 of 2

Sample Location: ST-5-481

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	LL NDMA	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3		Charge Number
2202240750A	1	A	✓							XGMD
—— 0751 A (FB)	1	A	✓							"
—— 0840A	2	A		✓						"
—— 0841A	2	A			✓					"
—— 0842A	1	A				✓				"
—— 0920A	1	A					✓			"
—— 0921A	1	A						✓		"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	2/24/22 1000hrs.			2-24-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

B
ROJECT ST-5-485 WJI ENV-0020

Notebook No. D64#128(Y)
Continued from page

ob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be impled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. urface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
202020745Y	Low Level NDMA	ice	(1) 1L Amber	0200401G	SRI

30 Min. Equipment Blanks - Carboy G2

ample	Analysis	Preservative	Container	Lot	Lab
20202 0835Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0836Y	Low Level NDMA	ice	(1) 1L Amber	0200401G	SRI

nitial Parameters
ime - 2202020910Y
H - 8.54
emp - 19.9°C
ond - 892 us/cm
urb - 1.10 NTU's
H pre - 7.15/10.11 (16.1°C)
H post - 7.13/10.13
TW - 475.43 ft.
Hmos - 12.49 psia

Final
Time - 2202021031Y
PH - 8.45
Temp - 19.6°C
Cond - 881 us/cm
Turb - 0.79 NTU's
pH pre - 7.14/10.09 (15.5°C)
pH post - 7.13/10.12
DTW - 475.51 ft.
Atmos - 12.52 psia
IDW - 1/2 gals.

Meter ID
pH/Cond - 12
Turb - 7
" Std - 47.3
" rdg - 48.8
" lot - 200415
" Exp - 2/28/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

ample	Analysis	Preservative	Container	Lot	Lab
220202 0940Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0941Y	607/Bromacil	ice	(1) 1L Amber	0200401G	SRI
——— 1005Y	Low Level NDMA	"	"	"	"
——— 1030Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

Runs	1) 21.27	2) 21.26	3) 21.23	4) 21.22
	40.32	40.35	40.34	40.35
	40.35	40.40	40.32	40.38
	21.27	21.29	21.25	21.19

Continued from page

Craig Del Ferro
Signed

2/2/22
Date

Read and Understood By

Lori
Signed

2-3-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/22 Page 1 of 1

Sample Location: ST-5-485

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement 8260 LL	607	LL NDMA	Total Metals				Charge Number
2202020745Y (TB)	3	A			✓					XGMD
0835Y (EB)	3	A	✓							〃
0836Y (EB)	1	A			✓					〃
0940Y	3	A	✓							〃
0941Y	1	A		✓						〃
1005Y	1	A			✓					〃
1030Y	2	A				✓				〃

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	2/2/22 1100hrs.			2-3-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT ST-5-655 WJI ENV-0020

Notebook No. D64 #128(Y)
Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & breezy. this zon will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to samplin
*Crew started sampling event late due to problems with Westbay equipment.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2202010830Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
—— 0831Y	Low Level NDMA	ice	(1) 1L Amber	02004016	SRI

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
2202011000Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
—— 1001Y	Low Level NDMA	ice	(1) 1L Amber	02004016	SRI

Initial Parameters
Time - 2202011045Y
PH - 8.69
Temp - 21.2°c
Cond - 815 us/cm
Turb - 3.71 NTU's
pH pre - 7.14/10.10 (15.3°c)
pH post - 7.16/10.10
DTW - 475.24 ft. (top of well head)
Atmos - 12.44 psia

Final
Time - 2202011424Y
PH - 8.72
Temp - 20.8°c
Cond - 829 us/cm
Turb - 2.48 NTU's
pH pre - 7.11/10.07 (16.3°c)
pH post - 7.13/10.05
DTW - 475.43 ft.
Atmos - 12.47 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 12
Turb - 7
〃 Std - 47.3
〃 rdg - 48.3
〃 lot - 200445
〃 Exp - 2/28/2

Buffers	Lot	Exp
7	2108G56	2/2
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202011315Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
—— 1316Y	607/Bromacil	ice	(1) 1L Amber	02004016	SRI
—— 1345Y	Low Level NDMA	〃	〃	〃	〃
—— 1346Y	Total Metals	ice/HNO₃	(2) 125ml poly's	21-09-10	ALS
—— 1420Y	Anions/Alk.	ice	〃	N/A	〃
—— 1421Y	TDS by SM2540C	〃	(1) 125ml poly	〃	〃
—— 1422Y	Perchlorate by 6850	〃	〃	〃	〃

Continued ~~from~~ on page 87

Read and Understood By

Craig Del Ferraro
Signed

2/1/22
Date

Signed

2-2-22
Date

PROJECT ST-5-655 WJI ENV-0020

Notebook No. D64 #128(y)

Continued from page 86

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2202011423y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml/poly	21-09420	ALS

Runs	1) 95.60	2) 95.57	3) 95.49	4) 95.39
	113.97	113.98	113.96	113.97
	113.98	114.01	113.97	114.00
	95.61	95.59	95.48	95.42

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

2/1/22
Date

Signed

2-2-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/22

Page 1 of 1

Sample Location: ST-5-655

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA				Charge Number
2202010830Y (TB)	3	A	✓						XGMD
—— 0831Y (TB)	1	A			✓				"
—— 1000Y (EB)	3	A	✓						"
—— 1001Y (EB)	1	A			✓				"
—— 1315Y	3	A	✓						"
—— 1316Y	1	A		✓					"
—— 1345Y	1	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
2202011346Y	2	A	✓							XGMD
—— 1420Y	2	A		✓						"
—— 1421Y	1	A			✓					"
—— 1422Y	1	A				✓				"
—— 1423Y	1	A					✓			"

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig DelFerne	2/1/22 1500hrs.		2-2-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT B650-EFF-1

Notebook No. PFTS#10

Continued from page N/A

Frank Gallegos present. Samples will be taken in bldg 650 from a dedicated sampling port that has been pursed for one minute prior to samples being taken, carboy "Plumefront"

Parameters	Meter ID	Buffers	Lot #	Exp
Time - 2202031300	Ph/cond - Plumefront	7	40002691	8/22
Ph - 7.04	Turb - Plumefront	10	40001005	6/22
Temp - 24.8°C	" STD - 9.40			
cond - 1208 us/cm	" RDG - 9.42			
Turb - 0.43 NTUs	" Lot #			
Ph Pre - 7.10/10.08 (24.2°)	" Exp - 2/28/22			
Ph Post - 7.08/10.06				

Samples

Sample #	Analysis	Pres	Lot #	LAB	CONT
2202031301	VOA by 8260C	ICE & HCl	4-086-004	ALS	(3) 40mL Vial
——— 1302	" (FB)	"	"	"	"
——— 1303	NDMA/DMNBIO by 607	ICE		SWRI	(1) Lt amber
——— 1304	LL NDMA	"	"	"	"
——— 1305	" (FB)	"	"	"	"

Continued from page N/A

2-3-22

Signed

Date

Read and Understood By

2-4-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-3-22 Page 1 of 1

Sample Location: B650-EFF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260C(LL)	NDMA/DMN/ BDO by 607	LL NDMA					Charge Number X GMD
2202031301	3	A	X							"
—— 1302 (FB)	3	A	X							"
—— 1303	1	A		X						"
—— 1304	1	A			X					"
—— 1305 (FB)	1	A			X					"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-3-22 (1412)			2-7-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT B650-INF-1

Notebook No. PFTS #1
Continued from page N/A.

Frank Gallegos present. Samples will Be taken from bldg 650 from a dedicated sampling port that will Be pursed one Minute prior to sampling, carboy "Planefront"

Parameters	Meter ID	Buffers	Lot#	Exp
Time - 2202031307	ph/cond - Planefront	7 -	4002691	8/22
Ph - 7.04	Turb - Planefront	10 -	4001005	6/22
Temp - 24.6°C	" STD - 9.40			
Cond - 1124 us/cm	" RD6 - 9.42			
Turb - 0.43 NTUs	" Lot#			
Ph pre - 7.10 / 10.08 (24.4°)	Exp			
Ph post - 7.08 / 10.06				

Samples

Sample#	Analysis	Pres	Lot#	LAB	CONT
2202031308	VOA by 8260	ICE & HCL	4-086-009	ALS	(3) 40ml Vial
— 1309	" (FB)	"	"	"	"
— 1310	NDMA/DMN/B by 607	ICE		SWRI	(1) L ambe

Continued from page N/A

2-3-22
Signed
Date

Read and Understood By
Signed
2-4-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-3-22 Page 1 of 1

Sample Location: B650-INF-1

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA-Y 8260	NDMA (DW) Br04/607						X GMD Charge Number
220203~~1415~~1308	3	A	X							"
—— 1309(FB)	3	A	X							"
—— 1310	1	A		X						"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-3-22 (1415)			2-7-22 / 0830

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT B655-~~EFE~~ EFF 2

Notebook No. [illegible]

Continued from page N/A

Frank Gallegos present. Samples will be taken from a dedicated sampling port in bldg 655. Sampling port will be purged for one minute before samples are taken. Carboy "Plumefront"

Parameters	Meter ID	Buffers Lot#	Exp
Time - ~~Z~~220204~~0800~~ 0730	Ph/cond - Plumefront	7 - 4002691	8/22
Ph - 8.06	Turb - Plumefront	10 - 4001005	6/22
Temp - 20.8°C	" STD - 9.40		
cond - 1128 us/cm	" RDG - 9.44		
Turb - 0.20 NTUs	" Lot#		
Ph pre - 7.10/10.02 (20.6)	Exp - 2/28/22		
Ph post - 7.06/10.00			

Samples

Sample#	Analysis	Presv	Lot#	Lab	Cont
220204 0731	VOA by 8260(LL)	ICE & HCL	2621	ALS	(3) 40ml vial
——— 0732	" (FB)	"	"	"	"
——— 0733	NDMA (DMN/B1) by 607	ICE		SWRI	(1) L+amber
——— 0734	LLNDMA	"	"	"	"
——— 0736	" (FB)	"	"	"	"

TRIP BLANKS

Sample#	Analysis	Presv	Lot#	Lab	Cont
220204 0700	VOA by 8260(LL)	ICE & HCL	2621	ALS	(3) 40mL vial
——— 0701	LLNDMA	ICE		SWRI	(1) L+amber

Continued from page N/A

Signed 2-4-22 Date

Read and Understood By

Signed 2-4-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-22

Page 1 of 1

Sample Location: B 655-EFF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 (LL)	NDMA (low) Bio by 607	LC NDMA				Charge Number XGMD
22 0204 0731	3	A	X						''
0732 (FB)	3	A	X						''
0733	1	A		X					''
0734	1	A			X				''
0735 (FB)	1	A			X				''
220204 0700 (TB)	3	A	X						''
—— 0701 (TB)	1	A			X				''

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-4-22 (0830)			2-7-22 / 0830

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Frank Gallegos present. ~~We~~ Samples will Be taken from bldg 655 from a dedicated sampling port that will Be purged for one minute prior to samples being taken. carboy "Plume front"

Parameters	Meter ID	Buffers	Lot#	Exp
Time-2202040745	PH/cond-Plume front	7 -	4002691	8/22
Ph-7.04	Turb-Plume front	10 -	4001005	0/22
Temp-22.8°C	" STD-9.40			
cond-1124 us/cm	" RDG-9.44			
Turb-0.40 NTU	" Lot#			
PhPre-7.02/10.04(20.4°C)	Exp 2/28/22			
PhPost-7.04/10.02				

Samples

Sample#	Analysis	Pres	Lot#	LAB	Cont
220204 0746	VOA's/8260	ICE & HCl	2621	ALS	(3) 40mL Vial
— 0747	" (FB)	"	"	"	"
— 0748	NDMA/DMN/B1064607	ICE		SWRI	(1) Lt amber

Continued from page N/A

Signed 2-4-22 Date

Read and Understood By

Signed 2.4.22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-22

Page 1 of 1

Sample Location: B655-INF-2

Pertinent Notes (if any)			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN/ Bio by 607						Charge Number X GMD
220204 0746	3	A	X							''
— 0747 (FB)	3	A	X							''
— 0748	1	A		X						''

Sample Location:

Pertinent Notes (if any)			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-4-22 (0830)			2-7-22 / 0830

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT MPE-1

Notebook No. PFTS#10 43
Continued from page N/A

Frank Gallegos present. Samples will be taken from a sampling dedicated to the system. Well will be purged for one minute prior to sampling. Carboy Plumefront

Parameters		METER ID		Buffers	LOT#	EXP
Time -	~~2202160743~~ 2202160818	ph/cond - Plumeflort		7 -	4002691	8/22
pH	7.13	Turb - Plumeflort		10-	4001005	6/22
Temp	22.3°c	" STD	9.40 NTU			
Cond	1286 us/cm	" RDG	9.48 NTU			
Turb	0.18 NTU	" LOT#				
pH pre	7.00-10.00 (18.9°c)	" Exp				
pH post						

Samples

Sample#	Analysis	Pres	LOT#	LAB	CONT.
2202160824 ~~0746~~	VOA by 8260	ICE; HCL	2612	ALS	(3) 40ml vial
— 0825 ~~0747~~	" (Dup)	"	"	"	"
— 0826	" (FB)	"	"	"	"
— 0827	NDMA/DMN/B1064607	ICE	0100501H	SWRI	(1) Lt amber
— 0828	" (Dup)	"		"	"

Continued from page N/A

2-16-22

Read and Understood By

2-16-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-16-22

Page 1 of 1

Sample Location: MPE-1

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA by 8260B	NDMA/DMN/ Bio by 607						X6MD Charge Number
22021 60824	3	A	X							"
— 0825 (Dup)	3	A	X							"
— 0826 (FB)	3	A	X							"
— 0827	1	A		X						"
— 0828 (Dup)	1	A		X						"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-16-22 (0930)			2-17-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT MPE-8

Notebook No. PFTS #10

Continued from page N/A

Frank Gallegos present. This well will be purged & sampled w/dedicated sampling port. Prior to sampling well will be purged for one minute. Colboy "Plume front"

Parameters	Meter ID	Buffers	LOT#	EXP
Time - 2202160851	Ph/cond-Plumefront	7 -	4002691	8/22
Ph - 7.01	Turb-Plumefront	10 -	4001005	6/22
Temp - 22.6°c	" STD - 9.40 NTU			
Cond - 1298 us/cm	" RDG - 9.43 NTU			
Turb - 0.93 NTU	" LOT#			
Ph Pre - 7.01-10.00 (13.3°c) Exp -				
Ph Post -				

Samples

Sample #	Analysis	Pres	LOT#	LAB	CONT
2202160858	VOA 8260	ICE & HCl	2612	ALS	(3) 40ml vial
0859	" (FB)	"	"	"	"
0900	NMAIDMN/Bioby007	ICE	0100301	SwRI	(1) 1L amber

Continued from page N/A

2-16-22

Read and Understood By

2-16-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-16-22

Page 1 of 1

Sample Location: MPE-8

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607						Charge Number Y GMA
220216 0858	3	A	X							"
— 0859(FB)	3	A	X							"
— 0900	1	A		X						"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-16-22(0930)			2-17-28 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT MPE-9

Notebook No. PWTSH 10

Continued from page N/A

Frank Gallegos present. ~~weather is~~ This well will be sampled from a sampling port thats dedicated to the system. Prior to sampling well will be purged for one minute. Calboy "Plmeflont"

Parameters		Meter ID	Buffers	Lot#	Exp
Time	220216 0836	Ph/cond-Plmeflont	7	4002691	8/22
Ph	6.96	Turb-Plmeflont	10	4001005	6/22
Temp	17.2°c	" STD 9.40 NTU			
Cond	1157 us/cm	" RDG 9.41 NTU			
Turb	0.86 NTU	" Lot#			
Ph pre	7.00-10.01 (15.7°c)	" Exp			
Ph post					

Samples

Sample#	Analysis	Pres	Lot#	LAB	CONT
220216 0843	VOA by 8260	ICE & HCl	Z612	ALS	
— 0844	" (FB)	"	"	"	"
— 0845	NDMA/DMN/B10by607	ICE	01003Q1	H5WRL	

Continued from page N/A

2-16-22

Signed

Date

Read and Understood By

2-16-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-16-22

Page 1 of 1

Sample Location: MPE-9

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 607						Charge Number X6MD
220216 0843	3	A	X							"
0844(FB)	3	A	X							"
0845	1	A		X						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-16-22(0930)			2-17-22 /0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT MPE-10

Notebook No. PFTS #10

Continued from page N/A

Frank Gallegos present. This well will Be pulged and sampled w/dedicated sampling port. Prior to sampling well will Be purged for one minute. Carboy "Plume front"

Parameters		METER ID	Buffers Lot#	EXP
Time	2202160907	ph/cond - Plumefront	7-4002691	8/22
ph	7.22	Turb - Plumefront	10-4001005	6/22
Temp	22.4°c	" STD - 9.40 NTU		
cond	1298 us/cm	" RDG - 9.47 NTU		
Turb	1.77 NTU	" Lot# -		
Ph Pe	7.00-10.01 (14.91)	" EXP -		
Ph Post				

Samples

Sample#	Analysis	Pres	LOT#	LAB	CONT
2202160914	VOA by 8260	ICE/HCl	2612	ALS	(5) 40mL vial
— 0915	" (TB)	"	"	"	"
— 0916	NDMA/DMN/Bro by 607	ICE	0100301H	SWRI	(1) 1L amber

Continued from page N/A

Read and Understood By

2/16/22

Signed

Date

2-16-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-16-22 Page 1 of 1

Sample Location: MPE-16

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN B/N by 607						Charge Number XG1A
220216 0914	3	A	X							"
0915 (FB)	3	A	X							"
0916	1	A		X						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-16-22 (0930)			2-17-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT MPE 11

Notebook No. PFTS#12
Continued from page N/A

Frank Gallegos present. This well will Be sampled and purged with a dedicated ~~bladder pum~~ sampling port. Prior to sampling well will Be purged for one minute. Colboy "Plume front"

Parameters — METER ID — Buffers — Lot# — Exp

Time 2202171006 — Ph/cond-Plumefront 7 - 40002691 — 8/22
Ph 7.30 — Turb Plumefront 10 - 40001005 — 6/22
Temp 25.9c — " STD 9.40 NTU
Cond 1053 uS/CM — " RDG 9.39 NTU
Turb 0.52 NTU — " LOT# N/A
Ph pre 7.00-10.00 (21.6c) — " EXP N/A
Ph POST - N/A

Samples

Sample#	Analysis	Pres	Lot#	LAB	Cont
202171001	VOA by 8260	ICE & HCl	2612	ALS	(3) 40ml vial
— 1002	" (FB)	"	"	"	"
— 1003	N$ MAIDMN/BIO by 6007	ICE	0100301	HSWRL	(1) Lt amber

Continued from page N/A

17 Feb 2022

Read and Understood By

2-17-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-17-22 Page 1 of 1

Sample Location: MPE-11

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN B/0 by 607						Charge Number XGMD
22021710 01	3	A	X							''
—— 1002 (FB)	3	A	X							''
—— 1003	1	A		X						''

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-17-22 / 1018			2-17-22 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT 100-HG-139 WJI ENV-0053

Notebook No. D32 # 123(A)

Continued from page

Marius Avalos & Dan Halvorsen present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a dedicated discharge tube. Water quality parameters will be monitored using a In-Situ Aqua Troll 500. Carboy G-1

Calibrations

DO - Cal in 100% saturated air @ 638 mm/Hg.

pH - Cal using Oakton Buffers (4, 7, 10)

Conductivity - Cal using 1413 uS/cm STD.

Turb Meter - #7 STD - 52.0 NTU RDG - 50.1 NTU LOT - 200445 Exp - 3/31/22

arameters (time)	Temp (°C)	Cond (uS/cm)	DO	ORP	pH	Turb (NTU)	DTW (ft)
) 2203140943A	19.24	1273.563	4.14	239	7.40	~~50~~ 2.54	128.20′
) —— 0945A	19.56	1281.255	4.17	240	7.40	1.91	"
3) —— 0947A	19.20	1276.473	4.19	241	7.40	2.22	"

Samples

ample #	Analysis	Preserve	Container	lot	lab
2203140950A	VOA by 8260	HCl / Ice	(3) 40 ml vials	2596	ALS
—— 0951A	" (Dup)	"	"	"	"
—— 0952A	" (FB)	"	"	"	"
—— 0953A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
—— 0954A	Total Metals	HNO3/Ice	(2) 125 ml poly	211212	ALS
—— 0955A	" (FB)	"	"	"	"

Blind Controls

ample #	Analysis	Preserve	Container	lot	lab
2203141100A	VOA by 8260	HCl / Ice	(3) 40 ml vials	~~2596~~ 22MM138B	ALS
—— 1101A	607/Bromacil	Ice	(1) 1L Amber	~~0100301H~~ 22MM138C	SRI
—— 1102A	Total Metals	HNO3/Ice	(2) 125 ml poly	22MM138D	ALS

nitial DTW - 127.75′

otal Gallons Purged - 2.5 gal

Continued from page

Read and Understood By

Signed 3/14/22

3-16-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/14/22

Page 1 of 1

Sample Location: 100 · HG · 139

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/8270	T. Metals					Charge Number
2203140950 A	3	A	X							XGMD
— 0951A (Dup)	3		X							
— 0952 A (FB)	3		X							
— 0953 A	1			X						
— 0954 A	2				X					
— 0955 A (FB)	2				X					

Sample Location: 100 · HG · 139

Pertinent Notes (if any)

Blind Controls

Sample Number	# of Containers	Sample Matrix*	8260	607	METALS					Charge Number
220314 1100A	3	A	X							
2203141101 A	1	A		X						
2203141102A	1	A			X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
				3-15-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT 200·D·240 WSI ENV·0053

Notebook No. D32 # 123(A)

Continued from page

Marcus Avalos & Dan Halvorsen present. Weather is clear & warm. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using a In-Situ Aqua Troll 500. Carboy G-1

Calibrations

DO · Cal in 100% saturated air @ 638 mm/Hg.

PH · Cal using Oakton Buffers (4,7,10)

Conductivity · Cal using 1413 uS/cm STD.

Turb Meter · #7 STD · 52.0 NTU RDG · 50.8 NTU Lot · 100445 Exp - 3/31/22

Parameters (time)	Temp (°C)	Cond (uS/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) ~~220318~~ MA 220317 0955A	19.71	1510	4.52	215	8.05	0.93	127.65'
2) MA ~~—~~ 220317 0957A	19.79	1536	4.06	218	8.06	0.41	"
3) MA ~~—~~ 220317 0959A	19.68	1534	3.95	219	8.05	0.88	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
~~220315~~ MA 220317 1005A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2546	ALS
MA ~~—~~ — 1006A	" (FB)	"	"	"	"
MA ~~—~~ — 1007A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
MA ~~—~~ — 1008A	Total Metals	HNO3/Ice	(2) 125 ml poly	211212	ALS

Initial DTW - 127.10'

Total Gallons Purged - 1 gal

Continued from page

Read and Understood By

Signed 3/17/22 Date

Signed 3-18-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/17/22

Page 1 of 1

Sample Location: 200 · D · 240

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	TOC	T. Metals					Charge Number
2203171005A	3	A	X							XGMD
—— 1006A (FB)	3		X							
—— 1007A	1			X						
—— 1008A	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/17/22 @ 1030			3-18-22/0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 700-A-253 Landfill

Notebook No. D-32 # 123 (A)

Continued from page N/A

Robert Burrows & Don Halverson present. Weather is cloudy & cold & sunny. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge tube. Water quality parameters will be monitored using a In-Situ Aqua Troll 500#. Carboy B-3 in use.

Calibrations

DO - Cal in 100% saturated air @ ms 678 mm/Hg. Initial DTW - 186.54 Ft.

PH - Cal using Oakton Buffers (4,7,10,). Final DTW - 186.85 Ft.

Conductivity - Cal using 1413 us/cm std.

Turb meter - - 6 #, std - 2.73 (ntu's), Rdg - (ntu's) Lot # - 200446, Exp - 3-31-22

Parameters Time	Temp (°c)	Cond (us/cm)	DO	ORP	PH	Turb (ntu's)	DTW (ft)
1) 2203230909A	20.797	0.055	33.911	257.267	7.47	1.88	186.85
2) —— 0910A	21.434	" "	34.48	258.259	7.48	0.41	" "
3) —— 0911A	21.967	" "	33.85	261.451	7.43	0.39	" "

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
2203231011A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1012A	" " (FB)	" "	(3) " "	" "	" "
—— 1013A	NDMA/ODMA/ Bromacil by 607	ICE	(1) 1L Amber	010031H	SRI
—— 1014A	Perchlorate by 6850	ICE/ 1/3 H.S.	(1) 125 ml poly	N/A	ALS

Landfill Short H.T.

Sample #	Analysis	Preservative	Container	Lot #	Lab
2203230912A	Cl, F, SO4, Total phosphate, PH, Nitrate (NO3 as N) Nitrite (NO2 as N) TDS, Alkalinity	ICE	(1) 1L HDPE	N/A	Heal
2203230913A	Ammonia, NO2/NO3 TKN, Total N	ICE/ H2SO4	(1) 500 ml poly	N/A	Heal

Landfill Trip Blanks

Sample #	Analysis	Preservative	Container	Lot #	Lab
2203231015A	VOA + MTBE + 1,2,4-Trichlorobenzene	ICE/HCl	(2) 40 ml vials	60358	Heal
—— 1016A	EDB/DBCP	ICE/$Na_2S_2O_3$ (3oth)	(1) 40 ml vials	" "	" "

Continued from page N/A

Robert Burrows
Signed

3-23-22
Date

Read and Understood By

Lori Munck
Signed

3-23-22
Date

Notebook No. D-32 #123(A) 65

PROJECT 700-A-253 Landfill

Continued from page 64

Landfill Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
220323 1017A	VOA+MTBE+1,2,4, Trichlorobenzene	ICE/HCl	(4) 40 ml vials	600358	HEAL
—— 1018A	EDB/DBCP	ICE/$Na_2S_2O_3$ (50 Th)	(2) " "	" "	" "
	SVOA, Atrazine, PAH's				
220323 1019A	Pentachlorophenol PCB's BEHP	ICE	(4) 1L Amber	N/A	" "
—— 1020A	" " (Dup)	" "	(4) " "	" "	" "
—— 1021A	Phenols 9067_W	ICE/H_2SO_4	(1) " "	" "	" "
—— 1022A	Cyanide 335.4	ICE/NaOH	(1) 500 ml RB ~~poly~~ amber	" "	" "
—— 1023A	Metals 200.7, 200.8 245.1	ICE/HNO_3	(1) 250 ml poly	" "	" "
—— 1024A	RADCM: Ra 226/228	" "	(2) 1L poly	" "	" "
—— 1025A	Total Organic Carbon TOC	ICE/HCl	(2) 40 ml vials	59072	" "

Total IDW – 2½ gals.

Continued from page 64

Robert Burrows
Signed

3-23-22
Date

Read and Understood By

Munch
Signed

3-23-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-22

Page 2 of 2

Sample Location: 700-A-253

Pertinent Notes (if any)

TASK Memo - 11058

Land Fill

Sample Number	# of Containers	Sample Matrix*	VOAs by 8260	NDMA/DMN/Bromacil by 607	Perchlorate by 6850					Charge Number XGMD
2203231011A	3		X							
—— 1012A	3		X							
—— 1013A	1			X						
—— 1014A	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	3-23-22/ 11:18			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-22

Page 3 of 3

Sample Location: 700-A-253

Pertinent Notes (if any):
TASK Memo - 11058
LAND Fill

Charge Number: XPCC

Sample Number	# of Containers	Sample Matrix*	624+MTBE+1,2,4, Trichlorobenzene	EDB/DBCP	SVOA, PAH's, PCB's, BEAP	Phenols 9067 W				Charge Number
2203231015A (TB)	2	A	X							↓
——1016A (TB)	1	↓		X						↓
——1017A	4	↓	X							↓
——1018A	2	↓		X						↓
——1019A	4	↓			X					↓
——1020A (Dup)	4	↓			X					↓
——1021A	1	↓				X				↓

Sample Location: 700-A-253

Pertinent Notes (if any):
TASK-Memo - 11058
LAND Fill

Charge Number: XPCC

Sample Number	# of Containers	Sample Matrix*	Cyanide 335.4	Metals 200.7, 200.8 245.1	226/228 Radium	TOC-Carbon Total Organic				Charge Number
2203231022A	1	A	X							↓
——1023A	1	↓		X						↓
——1024A	2	↓			X					↓
——1025A	2	↓				X				↓

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Bernoud	3-23-22/ 11:18			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT 700-D-186 Land Fill

Notebook No. D32 #123 (A)
Continued from page N/A

Robert Burrows & Dan Halverson present. Weather is cloudy & cold & sleeting. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using a In-Situ Aqua Troll 500#. Carboy G-3 in use. Had problems with software Didnt get DO, ORP, DTW.

Calibration

DO - Cal in 100% saturated air @ MS 638 mm/Hg.
PH - Cal using Oakton Buffers (4,7,10).
Conductivity - Cal using 1413 us/cm std.
Turb meter - #6#, std - 2.73 (ntu's) Rdg - 2.96 (ntu's), Lot # - 200445, Exp - 3-31-22

Parameters (Time)	Temp (°c)	Cond (us/cm)	DO	ORP	PH	Turb (ntus)	DTW
1) 220321 1321A	19.3	1358	N/A	N/A	6.76	0.23	N/A
2) —— 1324A	19.8	1357	" "	" "	6.85	0.20	" "
3) —— 1326A	20.8	1338	" "	" "	6.80	013	" "

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
220321 1327A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1328A	" " (D)	" "	(3) " "	" "	" "
—— 1329A	" " (FB)	" "	(3) " "	" "	" "
—— 1330A	NDMA/DMN/Bromacil by 607	ICE	(1) 1L amber	0100314	SRI
—— 1332A	Perchlorate by 6850	ICE/1/3 H.S.	(1) 125 ml poly	N/A	ALS

Land Fill / Short H.T.

Sample #	Analysis	Preservative	Container	Lot #	Lab
220323 0829A	Cl, F, SO4, Total phosphate, PH, Nitrate (NO3 as N) Nitrite (NO2 as N) TDS, Alkalinity	ICE	(1) 1L HDPE	N/A	Hea
220323 0830A	Ammonia, NO2/NO3 TKN, Total N	ICE / H2SO4	(1) 500 ml poly	N/A	"
220323 0831A	" " (Dup)	" "	(1) " "	N/A	" "

Landfill Trip Blank

Sample #	Analysis	Preservative	Container	Lot #	Lab
220321 1334A	VOA & MTBE + 1,2,4-Trichlorobenzene 8260LF	ICE/HCl	(2) 40 ml vial	61109	"

Continued from page N/A

Robert Burrows
Signed

3-23-22
3-21-22
Date

Read and Understood By

Lori W Munck
Signed

3-23-2
Date

PROJECT 700-D-186 Land Fill

Notebook No. D-32 #123 (A)

Continued from page 62

Landfill Trip Blank

Sample #	Analysis	Preservative	Container	Lot #	Lab
220321 1335A	- EDB/DBCP 504.1 LF	ICE/$Na_2S_2O_3$ (SoTh)	(1) 40 mil vial	61109	HEAL

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
220321 1336A	- VOA + MTBE + 1,2,4 Trichlorobenzene 8260LF	ICE/HCl	(4) 40 mil vials	60358	HEAL
——— 1337A	- " " (Dup)	" "	(4) " "	" "	" "
——— 1338A	- EDB/DBCP 504 LF	ICE/$Na_2S_2O_3$ (SoTh)	(2) " "	227633	" "
——— 1339A	- " " (Dup)	" "	(2) " "	" "	" "
	SVOA, Atrazine, PAHs, PCBs, BEHP,	~~ICE~~ RB	~~(1) 1L Amber~~ RB	N/A	" "
——— 1340A	- Pentachlorophenol				
——— ~~1341A~~ RB	- 8270LF, 8310LF 8082LF	ICE	(1) 1L amber	N/A	HEAL
——— 1342A	- Phenols 9067_W	ICE/H_2SO_4	(1) " "	" "	" "
——— 1343A	- Cyanide 335.4	ICE/NaOH	(1) 500 ml amber	" "	" "
——— 1344A	- metals 200.7/200.8 245.1	ICE/HNO_3	(1) 250 ml poly	" "	" "
——— 1345A	- Rad Cm: Ra 226/228 903.1/904.0	ICE/HNO_3	(1) 1L poly	" "	" "
——— 1346A	- Total organic Carbon (TOC) 9060W	ICE/HCl	(2) 40 mil Amber vials	59072	" "

* Landfill short hold samples being sampled today 3-23-22 and parameters.

Parameter Time	Temp (°C)	Cond (µS/cm)	DO	ORP	pH	Turb (NTUs)	DTW (ft)
1) 220323 0817A	20.0	0.050	3.76	252.767	-10.055	0.40	N/A
2) ——— 0819A	20.3	" "	3.82	258.867	7.14	0.27	" "
3) ——— 0820A	18.94	" "	3.96	259.377	7.12 ~~[illegible]~~ RB	0.08	" "

Total IDW - 3 gal

Continued from page 62

Robert Burrows

Signed

3-23-22
3-21-22

Date

Read and Understood By

Signed

3-23-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-21-22

Page 1 of 1

Sample Location: 700-D-186

Pertinent Notes (if any)

Land Fill

TASK Memo - 11059

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Bromacil by NDMA/DMN/ 607	Perchlorate by 6850					Charge Number
										X GMO
2203211327A	3	A	X							↓
—— 1328A (D)	3	↓	X							
—— 1329A (FB)	3		X							
—— 1330A	1			X						
—— 1332A	1	↓			X					↓

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	3-21-22 /			3-22-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-21-22

Page 1 of ____

Sample Location: 700-0-186

Pertinent Notes (if any)

Land Fill

Task Memo - 11059

Sample Number	# of Containers	Sample Matrix*	VOA+MTBE+124 8260 LF Trichlorobenzol	EDB/DBCP 504.1 LF	Atrazine, PAHs 508A PCBs BEHP					Charge Number X PCC
220321 1334A (TB)	2	A	X							↓
— 1335A (TB)	1	↓		X						↓
— 1336A	4	↓	X							↓
— 1337A (Dup)	4	↓	X							↓
— 1338A	2	↓		X						↓
— 1339A (Dup)	2	↓		X						↓
— 1340A	4	↓			4					↓

Sample Location: 700-D-186

Pertinent Notes (if any)

Land Fill

Task Memo - 11059

Sample Number	# of Containers	Sample Matrix*	Phenols 9067 W	Cyanide 335.4	200.7/200.8 metals 245.1	Radcom: Ra 226/228 903.1/904.0	TOC 9060W			Charge Number X PCC
220321 1342A	1	A	X							↓
— 1343A	1	↓		X						↓
— 1344A	1	↓			X					↓
— 1345A	1	↓				X				↓
— 1346A	2	↓					X			↓

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Robert Bunnova	3-21-22/		3-22-22 /0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-22

Page 1 of 2

Sample Location: 700-0-186

Pertinent Notes (if any) TASK memo - 11059 Short Hold samples Sample Number	# of Containers	Sample Matrix*	Cl, F, SO4, Total phosphate, pH, nitrate (NO3 as N) nitrite (NO2 as N)	Ammonia, NO2/NO3 TKN, Total N						xPCC Charge Number
2203230829A	1	A	X							↓
0830A	1	↓		X						
0831A (Dup)	1			X						

Sample Location: 700-A-253

Pertinent Notes (if any) TASK memo Short Hold samples Sample Number	# of Containers	Sample Matrix*	Cl, F, SO4 Total phosphate, pH, nitrate, (NO3 as N) nitrite (NO2 as N)	Ammonia, NO2/NO3 TKN, Total N						xPCC Charge Number
2203230912A	1	A	X							↓
0913A	1	A		X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	3/23/22/0919			3-23-22 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT 700-H-350 ENV.0020

Notebook No. D64 #129(Y)
Continued from page

Marcus Avalos & Tony Torrez present. The weather is Rainy & cool. This zone will be sampled using 5 cleaned & Triple rinsed sample Tubes. Probe # 1539 in use. Gen in use.

30 min E.B's canboy 6-3

Sample#	Analysis	Preserv	Lot #	Cont	Lab
220321 1400Y	8260	Ice/Hcl	2621	(3) 40ml vials	A/s ~~SRI~~

Initial		Final
	220321 1510Y	220322 1518Y
pH	7.46	7.53
Temp	18.2°c	17.8°c
Cond	902	915
Turb	1.58	1.25
pHpre	7.05/10.06	7.03/10.01
pHpost	7.05/10.08	7.03/10.03
DTW	261.91	N/A Probe got stuck to side wall

Meter ID's

pH/cond	11
Turb #	20
" std	6.62
" Rdg	6.51
" Lot #	200445
" Exp.	3-31-22

Samples

Sample#	Analysis	Preserv	Lot#	Cont	Lab
220322 0830Y	8260	Ice/Hcl	2621	(3) 40ml vials	A/s
0831Y	Cl, F, SO4, NO3, ASN, TDS, AK, Phosphate, pH, NO2, ASW	Ice	N/A ~~010030H~~	1L HDPE	~~A/s~~ Heal
0832Y	" (FB)	Ice	N/A	500ml poly	Heal
0833Y	Ammonia, NO2/NO3 TKN Total N	Ice/H2SO4	N/A	500ml/poly	"
0834Y	" (FB)	"	"	"	"
0900Y	607	Ice	010030H	(1) 1L Amber	SRI
0920Y	Perchlorates	Ice	N/A	(1) 125ml/poly	A/s
0921Y	8260LF	Ice/Hcl	"	(4) 40ml vials	Heal
0922Y	" (TB)	"	"	(2) " "	"
0923Y	" (FB)	"	"	(4) "	"
0924Y	EDB/DBCP	Ice/$Na_2S_2O_3$	"	(2) 40ml vials	"
0925Y	" (TB)	"	"	(1) "	"
0926Y	" (FB)	"	"	(2) "	"
0927Y	SVOA, Atrazine, PAH's, Pentachlorophenol/PCB's/BEHP	Ice	"	(4) 1L Amber	"
0928Y	" (FB)	"	"	"	"
1340Y	~~SVOA~~ " Phenols	Ice/H2SO4	"	(1) 1L Amber	"
1341	" (FB	"	"	"	"

Continued from page 17

Read and Understood By

T. [illegible] Signed 3-22-22 Date

Lori Munck Signed 3-23-22 Date

Notebook No. DG4#122(y) 17
Continued from page 16

PROJECT 700-A-JJO EN00020

SAMPLES CONT.

SAMPLE#		ANALYSIS	PRESERV	CONT	LAB
220322	1405y	CYANIDE	ICE/NaOH	(1) 250ml poly	HEAL
—	1406y	" (FB)	"	"	"
—	1407y	METALS	ICE/HNO3	"	"
—	1408y	" (FB	"	"	"
—	1409y	" (Dup)	"	"	"
—	1430y	RAD Cm RA-226/228	"	(2) 1LT Poly	"
—	1431y	" (FB)	"	"	"
—	1515y	TOC	ICE/HCl	(2) 40ml vials	"
—	1516y	" (FB)	"	"	"

RUN 1) 54.79	2) 54.81	3) 54.85	4) 54.85	5) 54.81	
64.59	64.69	64.69	64.69	64.71	
64.52	64.33	64.24	64.39	64.17	
54.77	54.83	54.84	54.84	54.82	
6) 54.79	7) 54.76	8) 54.77	9) 54.79	10) 54.78	11) 54.75
64.70	64.68	64.69	64.70	64.73	64.67
64.24	64.49	64.58	64.49	64.32	64.23
54.79	54.79	54.76	54.75	54.73	54.73
12) 54.71					
64.67					
64.27					
54.71					

Continued from page

Read and Understood By

Signed 3.22.22 Date

Signed 3-23-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-21-22

Page 1 of 1

Sample Location: 700-H-350

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
Pertinent Notes (if any)			8260							XGMD
2203211400Y (EB)	3	A	X							

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
Pertinent Notes (if any)										

Relinquished by:	Date / Time:		Accepted by:	Date / Time
T. Dg	3-21-22 / 1530		[illegible]	3-22-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-22

Page 1 of 1

Sample Location: 700-H-350

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement Cl, F, SO_4 NO_3 AS N pH NO_2 AS N TDS ALK	Ammonia, NO_2, NO_3 TKN, Total N						XGMD Charge Number
220322 0831Y	1	A	X							
—— 0832Y (FB)	1	A	X	~~X~~						
—— 0833Y	1	A		X						
—— 0834Y (FB)	1	A		X						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	3-22-21/0915			3-22-22/1000

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-22

Page 1 of 1

Sample Location: 700-H-350

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260	607	PERCHLORATE	8260F				Charge Number XGMA
2203220830Y	3	A	X							
— 0900Y	1			X						
— 0920Y	1				X					
— 0921Y	4					X				XPCC
— 0922Y (TB)	2					X				"
— 0923Y (FB)	4					X				"

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	EDB/DBCP	SVOA, ATRAZINE, PAH's PENTACHLOROPHENOL PCB's BEHP	PHENOLS					Charge Number XPCC
2203220924Y	2	A	X							
— 0925Y (TB)	2		X							
— 0926Y (FB)	2		X							
— 0927Y	4			X						
— 0928Y (FB)	4			X						
—										
—										

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-22-22/1110			3-23-22 /0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-22

Page 1 of 1

Sample Location: 700-H-350

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Phenols	Cyanide	Metals				Charge Number XPCC ~~X6..~~
220322 1340y	1	4	X						
— 1341y (FB)	1		X						
— 1405y	1			X					
— 1406y	1			X					
— 1407	1				X				
— 1408 (~~Dup~~ FB)	1				X				
— 1409 (Dup)	1				X				

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Rad 226/228	TOC					Charge Number
— 1430y	2	A	X						
— 1431y (FB)	2	4	X						
— 1515y	2	A		X					
— 1516y	2	A		X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	~~FS~~ T. /1535			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

OJECT 700·H·535

Notebook No. 064 #129 (Y)
Continued from page

arcus Avalos & Tony Torrez present. Weather is cloudy & cool. This zone will be ampled using 5 steam cleaned, triple rinsed stainless steel sample tubes. Probe H 1539 urface checks performed prior to use. Gen in use.

30· Min Equipment Blanks carboy G1

ample #	Analysis	Preserve	Container	lot	lab
220323 0830y	8260	Ice/Hcl	(3) 40ml vials	2621	ALS
—— 0831y	607	Ice	(1) 1L Amber	0100301H	SRI

itial Parameters	Final
ime - ~~@~~220323 0915y	220323 1325y
H - 7.50	7.65
emp - 19.0°c	19.8°c
ond - 1239 us/cm	1222 us/cm
urb - 1.15	1.06 NTU's
pre - 7.03/10.01	7.08/10.03 (16.0°c)
post - 7.05/10.03	7.10/10.04
TW - N/A - probe sticks to casing.	IDW - 1/2 gal.

Meter ID
PH/Cond - ~~23~~ 11
Turb # ~~#~~ 20
" SD - 6.62
" SDG - 6.49
" LOT - 200445
" Exp - 3/31/22

* Bob Tufts & Craig Del Ferraro ~~completed~~ continued this event @ 1230 hrs.

Landfill Samples

mple #	Analysis	Preserve	Container	lot	lab
220323 ~~0940y~~ 1001y	VOA, MTBE, 1,2,4 TCB ~~(TB)~~ 8260	HCl/Ice	(3) 40ml vials	N/A	Heal
—— ~~0941y~~ 1002y	VOA, MTBE, 1,2,4 TCB (TB) 8260	"	(2) "	"	"
—— 1003y	SVOA, ATR, PCP, PAH, PCB, BEHP, 8270/8310/8082	Ice	(4) 1L Amber	"	"

WSTF Samples

ample #	Analysis	Preserve	Container	lot	lab
220323 0940y	8260	Ice/Hcl	(3) 40ml vials	2621	ALS
—— 0941y	607	ICE	(1) 1L Amber	0100301H	SRI
—— 1000y	Perchlorate	ICE	(1) 125ml poly	N/A	ALS
~~——~~	~~8260LF~~	~~Ice/Hcl~~	~~(3) 40ml vials~~		~~Heat~~
~~——~~	~~" (TB)~~	~~"~~	~~(2) "~~		~~"~~
~~——~~	~~Atrazine PAH's PCB BEHP~~ SVOA, Pentachlorophenol	ICE	(4) 1L Amber		~~"~~

Run 1) 135.18	2) 135.11	3) 135.08	4) 135.05	5) 135.01	6) 134.95
144.56	144.54	144.53	144.53	144.52	144.54
144.43	144.41	144.41	144.51	144.54	144.50
135.16	135.11	135.09	135.04	134.99	134.90

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

3/23/22
Date

Signed

3-24-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-22

Page ______ of ______

Sample Location: 700-H-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Perchlorate	VOA MTBE 1,2,3 TCP 8260				Charge Number XGMD
220323 0830y (EB)	3	A	X							
— 0831y (EB)	1			X						
— 0940y	3		X							
— 0941y	1			X						
— 1000y	1				X					
— 1001y	3					X				XPCC
— 1002y (TB)	2					X				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	SVOA, ATN, PCP, PAH PCB, BEHP							Charge Number XPCC
— 1003y	4	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-D	3-23-22 / 1100			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3\23\22

Page 2 of 2

Sample Location: 700-H-535

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement SVOA/Atrazine PAHs/PCBs/BEHP							Charge Number
2203231003Y	2~~4~~	A	✓							XPCC

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3\23\22 1525hrs.			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

PROJECT 700-H-670 WJI ENV-0020

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & breezy. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe#1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
2203231410Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS

Initial Parameters

Time - 2203231450Y
PH - 7.74
Temp - 21.9°C
Cond - 1078 us/cm
Turb - 0.66 NTU's
pH pre - 7.09/10.05 (17.1°C)
pH post - 7.12/10.06
DTW - 262.22 ft.
Atmos - 12.47 psia

Final

Time - 2203241000Y
PH - 7.63
Temp - 21.1°C
Cond - 1070 us/cm
Turb - 0.74 NTU's
pH pre - 7.10/10.13 (13.0°C)
pH post - 7.11/10.14
DTW - 262.47 ft.
Atmos - 12.44 psia
IDW - 1/2 gal.

Meter ID

pH/Cond - 11
Turb - 20
" std - 6.62
" rdg - 6.49
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203240825Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 0826Y	607/Bromacil	ice	(1) 1L Amber	010030 1H	SRI
——— 0827Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203240850Y	(TB) VOA+MTBE-Trichlorobenzene (TB)	ice/HCL	(2) 40ml vials	60358	HEAL
——— 0851Y	" " "	"	(3) 40ml vials	"	"
——— 0852Y CD	SVOA/Atrazine/Pentchphnl. PAHs/PCBs/BEHP	ice	(4) 1L Ambers	N/A	"

Runs					
1) 193.47	2) 193.39	3) 193.30	4) 193.29	5) 193.22	6) 193.16
202.76	202.77	202.76	202.74	202.76	202.75
202.75	202.77	202.78	202.72	202.73	202.76
193.46	139.37	193.33	193.27	193.21	193.13

Continued from page

Craig Del Ferraro
Signed

3/24/22
Date

Read and Understood By

Signed

3-24-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3\23\22

Page 1 of 2

Sample Location: 700-H-670

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement 8260							Charge Number
2203231410Y (EB)	3	A	✓							XGMD

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerro	3/23/22 1525hrs.			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/24/22

Page 2 of 2

Sample Location: 700-H-670

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Perchlorate	VOA/MTBE trichlorobenzene	SVOA/Atrazine PAHs/PCBs/DEHP			Charge Number
2203240825Y	3	A	✓							XGMD
—— 0826Y	1	A		✓						"
—— 0827Y	1	A			✓					"
—— 0850Y (TB)	2	A				✓				XPCC
—— 0851Y	3	A				✓				"
—— 0852Y	4	A					✓			"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/24/22 1030hrs.			3-24-22 / 1030

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT 700-J-200 WJI ENV-0053

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cold, windy, & rainy. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 flow cell & water analyzer. Carboy G5 in use.

Calibrations

DO - calibrated in saturated air @ 638 mm/Hg.

Conductivity - calibrated using 1413us/cm std. solution.

PH - calibrated using Oakton buffers (7-10).

Turbidity meter #21 std - 9.79 rdg - 9.90 lot - 200445 Exp - 3/31/22

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2203210800C	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS

Parameters (time)	temp (°c)	cond (ms/cm)	ORP	DO	PH	Turb (NTU's)	DTW (ft)
1) 220321 1300C	21.41	1.140	126	2.60	6.75	5.40	116.55
2) —— 1303C	21.49	1.133	127	2.37	6.79	5.11	116.55
3) —— 1306C	21.53	1.130	129	2.22	6.84	4.76	116.55

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220321 1310C	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
—— 1311C	" (FB)	"	"	"	"
—— 1312C	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
—— 1313C	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220321 1314C	VOA/MTBE/Trichlorobenzene (TB)	ice/HCL	(2) 40ml vials	N/A	HEAL
—— 1315C	"	"	(4) "	60358	"
—— 1316C	" (Dupl.)	"	" "	"	"
—— 1317C	EDB/DBCP/504.1 (TB)	ice/SoTh	(1) 40ml vials	227633	"
—— 1318C	"	"	(2) "	"	"
—— 1319C	SVOA/PAHs/PCBs/BEHP	ice	(4) 1L Ambers	N/A	"
—— 1320C	Phenols/9067	ice/H_2SO_4	(1) 1L Amber	"	"

Continued ~~from~~ on page 36

Read and Understood By

Craig Del Ferraro 3/21/22

Signed Date

3-23-21

Signed Date

PROJECT 700-J-200 WJI ENV-0053

Notebook No. D32 #124(c)
Continued from page 35

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220321 1321c	Cyanide by 335.4	ice/NaOH	(1) 200ml br. poly	N/A	HEAL
—— 1322c	Metals/200.7/200.8/245.1	ice/HNO_3	(1) 250ml poly	u	u
—— 1323c	Ra-226/228/903.1/904.0	u	(2) 1L Poly's	u	u
—— 1324c	TOC by 9060	ice/HCL	(2) 40ml vials	60282	u
2203230820C	Cl, F, SO_4, total phosphate, PH, Nitrate/Nitrite, TDS, Alk.	ice	(1) 1L Poly	N/A	HEAL
—— 0821C	u (Dupl.)	u	u	u	u
—— 0822C	Ammonia/NO_2/NO_3/TKN total N	ice/H_2SO_4	(1) 500ml poly	N/A	u

Initial DTW – 116.36 ft. Total gallons purged – 1 gal.

Bob Tufts & Craig Del Ferraro present on 3/23. Weather is cloudy & cool. This low flow event will be a continuation from samples collected on 3/21. This well will be purged again as normal with new sets of parameters collected prior to sampling.

Parameters (time)	temp (°c)	cond (ms/cm)	ORP	DO	PH	Turb (NTU's)	DTW (ft.)
1) 2203230810C	20.35	1.152	119	3.01	6.95	4.44	116.46
2) —— 0813C	20.42	1.147	119	2.87	6.99	4.13	116.46
3) —— 0816C	20.44	1.150	121	2.61	7.03	4.09	116.46

Calibrations

DO – calibrated in saturated air @ 641 mm/Hg.
Conductivity – calibrated using 1413 us/cm std. solution.
PH – calibrated using Oakton buffers (7–10).
Turbidity meter #21 std – 9.79 rdg – 9.88 lot – 200445 Exp – 3/31/22

Initial DTW – 116.39 ft. Total gallons purged – 1

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

3/23/22
Date

Signed

3-23-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/21/22

Page 1 of 2

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Perchlorate	MTBE Trichlorobenzene				Charge Number
2203210800C (TB)	3	A	✓							XGMD
——— 1310C	3	A	✓							〃
——— 1311C (FB)	3	A	✓							〃
——— 1312C	1	A		✓						〃
——— 1313C	1	A			✓					〃
——— 1314C (TB)	2	A				✓				XPCC
——— 1315C	4	A				✓				〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	MTBE Trichlorobenzene	EDB/DBCP	SVOA/PAHs PCBs/BEHP	Phenols	Cyanide	Metals		Charge Number
2203211316C (Dupl.)	4	A	✓							XPCC
——— 1317C (TB)	1	A		✓						〃
——— 1318C	2	A		✓						〃
——— 1319C	4	A			✓					〃
——— 1320C	1	A				✓				〃
——— 1321C	1	A					✓			〃
——— 1322C	1	A						✓		〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerraro	3/21/22 1430hrs.			3-22-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3\21\22

Page 2 of 2

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Ra-226/228	TOC						Charge Number
2203211323C	2	A	✓							XPCC
1324C	2	A		✓						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fermo	3/21/22 1430hrs			3-22-22 / 0920

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3\23\22 Page 1 of 1

Sample Location: 700-J-200

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Cl, F, SO4, TDS Alk. total/phos.	Ammonia/NO2 NO3/TKN	Analytical Requirement					Charge Number
2203230820C	1	A	✓							XPCC
——— 0821C (Dupl.)	1	A	✓							"
——— 0822C	1	A		✓						"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3\23\22 0900hrs.			3-23-22 / 0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (05/2016)

ROJECT B650-~~EW~~F-1

Notebook No. PFTS #10
Continued from page N/A.

Frank Gallegos & Tim Moore present. Samples will be taken from a dedicated sampling port in bldg 650, sample port will be purged for one minute prior to taking them. Carboy PF

Parameters	METER ID	Buffers	LOT#	EXP
Time - 2203180541	ph/cond - Plumefront	7 -	4002691 -	8/22
ph - 8.08	Turb - Plumefront	/ 0 -	4001005 -	6/22
Temp - 24.2°c	" STD - 9.57 NTU			
cond - 1074 us/cm	" RDG - 9.56 NTU			
Turb - 0.11 NTU	" LOT# - N/A			
ph pre - 7.00-10.01 (19.4°c)	" EXP - N/A			
ph POST - ~~N/A~~ 7.02/10.04				

Samples

Sample#	Analysis	Pres	LOT#	LAB	CONT.
2203180546	VOA by 8260(LL)	ICE & HCl	2621	ALS	(3) 40ml vials
——— 0547	" (FB)	"	"	"	"
——— 0548	NDMA/DMN/B6 by 607	ICE	0100301H	SWRI	(1) LT amber
——— 0549	LLNDMA	"	"	"	"
——— 0550	" (FB)	"	"	"	"

Trip BLANKS

Sample #	Analysis	Preserve	Container	LoT	Lab
2203180450	VOA by 8260LL	Ice/HCL	(3) 40 ml vials	2621	ALS
2203180451	LowLevelNDMA	Ice	(1) 1 LT amb	0100301H	SWRI

Continued from page N/A

Signed

18 MAR 2022
Date

Read and Understood By

Signed

3-18-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-18-22

Page 1 of 1

Sample Location: 3650-EFF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 (LL)	NDMA/DMN/ BRO by 607	LC FDMA				Charge Number
									X GMD
—220318 0546	3	A	X						..
—— 0547 (FB)	3	A	X						..
—— 0548	1	A		x					..
—— 0549	1	A			x				..
—— 0550 (FB)	1	A			x				..
—— 0450 (TB)	3	A	X						..
—— 0451 (TB)	1	A			X				..

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-18-22 (0800)			3-18-22 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Frank Gallegos & Tim Moore present. Samples will be taken from a dedicated sampling port located in bldg 650. Prior to sampling sampling port will be purged for one minute before samples are taken. Carboy PF

Parameters		METER ID	Buffers	LOT#	EXP
Time	2203180556	Ph/cond-Plumeflow	7 -	4002691 -	8/22
Ph	7.27	Turb-Plumeflow	10 -	4009005 -	6/22
Temp	24.5°c	" STD 9.87 NTU			
Cond	1085 us/cm	" RDG 9.59 NTU			
Turb	0.29 NTU	" LOT# - N/A			
Ph Pre	7.00-10.00 (21.0°c)	" Exp - N/A			
Ph Post	-7.02/10.04				

Samples

Sample#	Analysis	Pres	Lot#	LAB	CONT
2203180600	VOA by 8260	ICE & HCl	2621	ALS	(3) 40mL Vial
— 0601	" (Dup)	"	"	"	"
— 0602	" (FB)	"	"	"	"
— 0603	NDMA/DMN/B10 by 607	ICE	010030AH	SWRI	(1) L amber

Continued from page N/A

Read and Understood By

Signed 18 Mar 2022 Date

Signed 3-18-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-18-22

Page 1 of 1

Sample Location: 3650-INF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN/ B10 by 607						Charge Number X GMD
22031806 00	3	A	X							"
— 0601 (Dup)	3	A	X							"
— 0602 (FB)	3	A	X							"
— 0603	1	A		X						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	3-18-22 (0800)		3-18-22 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT B 655 - EFF - 2

Continued from page N/A

Frank Gallegos & Tim Moore present. Samples will Be taken from a dedicated sampling port IN bldg 655. sampling port will Be purged for a minuted prior To sampling. Carboy PF

Parameters	METERID	Buffers	LOT#	EXP
Time 220318 0712	ph/cond	Planetront 7 -	4002691 -	8/22
ph - 8.06	Turb	Planetront 10 -	4 001005 -	6/22
Temp - 21.9°C	" STD 9.57 NTU			
Cond - 1118 us/cm	" RDG - 9.60 NTU			
Turb - 0.27	" LOT# - N/A			
Ph pre - 7.10/10.00 (24.0°C)	" Exp - N/A			
Ph Post - 7.08/10.00				

Samples

Sample#	Analysis	Pres	LOT#	LAB	CONT
220318 0713	VOA VG8260C	ICE & HCl	2621	ALS	(3) 40ml vial
— 0714	" (FB)	"	"	"	"
— 0715	NDMA/DMN by 607	ICE	0100301H	SWRI	(1) Lt amber
— 0716	LLNDMA	"	"	"	"
— 0717	" (FB)	"	"	"	"

Continued from page N/A

Signed 3-18-22

Read and Understood By

Signed 3-18-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-18-22

Page 1 of 1

Sample Location: B655-EFF-2

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260(LL)	NDMA/DMN Bio by 607	LCNDMA					X GMD Charge Number
2203180713	3	A	X							. ,
— 0714 (FB)	3	A	X							. ,
— 0715	1	A		X						. ,
— 0716	1	A			X					. ,
— 0717 (FB)	1	A			X					. ,

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-18-22 (0800)			3-18-22 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

B655 - INF-2

Notebook No. [illegible]
Continued from page N/A

Frank Gallegos & Tim Moore present. Samples be taken from a dedicated sampling port. Prior to sampling, sampling port will be purged for one minute cowboy "PF"

Parameters	Meter ID	Buffers	LOT#	Exp
Time 220318 0740	Ph/cond - Plnefront 7 -		4002691	8/22
Ph - 7.10	Turb - Plnefront/0 -		4001005	6/22
Temp - 24.2°c	" STD - 9.57 NTU			
Cond - 1122 us/cm	" RDG - 9.60 NTU			
Turb - 0.62 NTUs	LOT# - N/A			
Ph pre - 7.00/10.02 (21.8°c)	Exp - N/A			
Ph Post - 7.02/10.000				

Samples

Sample#	Analysis	Pres	LOT#	LAB	CONT
220318 0741	VOA by 8260	ICE & HCL	UGU	ALS	(3) 40ml Vial
——— 0742	" (FB)	"	"	"	"
——— 0743	NDMA/DMN/R1004607	ICE	0100301HSWR1		(1) L+ amber
——— 0744	" (Dup)	"	"	"	"

Continued from page N/

Signed 3-18-22
Date

Read and Understood By 3-18-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-18-22 Page 1 of 1

Sample Location: 3655-INF-2

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 82600 ~~[illegible]~~	NDMA/DMN/ Bio by 607					Charge Number X GMD
220318 0741	3	A	X						"
—— 0742(FB)	3	A	X						"
—— 0743	1	A		X					"
—— 0744 (Dup)	1	A		X					"

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	3-18-22 (0800)		3-18-22 / 0940

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT BLM-5-527 WJI ENV-0053

Notebook No. D32 #124(c)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This well will be purg. using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G3 in use.

Calibrations

DO - calibrated in saturated air @ 640 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #6 std - 2.73 rdg - 2.68 lot - 200445 Exp - 3/31/22

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 220315 1345C	21.40	0.967	6.30	120	7.59	0.36	510.21
2) ——— 1348C	21.52	0.971	6.12	121	7.62	0.30	510.21
3) ——— 1351C	21.58	0.966	5.88	123	7.63	0.22	510.21

Sample	Analysis	Samples Preservative	Container	Lot	Lab
220315 1355C	VOA by 8260	ice / HCL	(3) 40ml vials	2621	ALS
——— 1356C	" (Dupl.)	"	"	"	"
——— 1357C	" (FB)	"	"	"	"
——— 1358C	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——— 1359C	" (Dupl.)	"	"	"	"

Initial DTW - 510.13 ft.

Total gallons purged - 2

Continued from page

Craig Del Ferraro
Signed

3/15/22
Date

Read and Understood By

Signed

3-16-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3\15\22

Page 1 of 1

Sample Location: BLM-5-527

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607						Charge Number
220315 1355C	3	A	✓							XGMD
——1356C (Dupl.)	3	A	✓							〃
——1357C (FB)	3	A	✓							〃
——1358C	1	A		✓						〃
——1359C (Dupl.)	1	A		✓						〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Ferro	3/15/22 1520hrs.		3-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. 032 # 123(A)

Continued from page

PROJECT BIM·7·509 WJI ENV·0053

Marcus Avalos & Tony Torrez present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a QED MP·20 flow cell & water analyzer. Carboy G·5

Calibrations
DO· Cal in saturated air @ 641 mm/Hg.
Conductivity· Cal using 1413 µS/cm STD.
PH· Cal using Oakton Buffers (4,7,10)
Turb Meter· #7 STD· 52.0 NTU RDG· 48.8 NTU Lot· 200445 Exp· 3/31/22

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	ORP	PH	Turb(NTU)	DTW(ft)
1) 2203030920A	19.26	0.989	4.31	152	7.56	0.61	N/A
2) ——— 0922A	19.21	0.994	4.27	151	7.55	0.49	"
3) ——— 0924A	19.27	0.983	4.24	150	7.53	0.55	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203030930A	VOA by 8260LL	HCl/Ice	(3) 40ml vials	2596	ASL
——— 0931A	" (FB)	"	"	"	"
——— 0932A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
——— 0933A	Low Level NDMA	"	"	"	"
——— 0934A	" (FB)	"	"	"	"
——— 0935A	Total Metals	HNO3/Ice	(2) 125ml poly	211212	ASL
——— 0936A	" (Dup)	"	"	"	"

Total Gallons Purged· 2 gal

Continued from page

Read and Understood By

Signed 3/3/22 Date

Signed 3-3-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/22

Page 1 of 1

Sample Location: B\M·7·509

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	607/Ro	LC NDMA	T. Metals				Charge Number
2203030930A	3	A	X							XGMD
0931A (FB)	3		X							
0932A	1			X						
0933A	1				X					
0934A (FB)	1				X					
0935A	2					X				
0936A (Dup)	2					X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/3/22 @ 1000			3-3-22 /1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

Notebook No. D32 #123 (A)

PROJECT BIM.9.419 WSI ENV.0053

Continued from page

Marcus Avalos & Tony Torrez present. Weather is cloudy & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using a QED MP 20 flow cell & water analyzer. Carboy G-3

Calibrations

DO - Cal in saturated air @ 641 mm/Hg.

Conductivity - Cal using 1413 us/cm STD solution.

PH - Cal using Oakton Buffers (4,7,10)

Turb Meter #7 STD - 520 NTU RDG - 49.2 NTU lot - 200445 Exp. ~~3/28/21~~ 3/31/22 MA

Parameters (time)	Temp (°C)	Cond ( )	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) 220301 0940 A	20.47	0.922	7.56	211	7.38	2.56	378.90'
2) —— 0942 A	20.48	0.923	7.61	210	7.30	3.19	"
3) —— 0944 A	20.50	0.926	7.44	210	7.31	2.63	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220301 0950 A	VOA by 8260	HCl / Ice	(3) 40 ml vials	2596	Als
—— 0951 A	" (FB)	"		"	"
—— 0952 A	607 / Bromacil	Ice	(1) 1L Amber	0100301H	SRI

Initial DTW - 378.50'

IPW - 2 gal

Continued from page

Read and Understood By

Signed 3/1/22 Date

Lori W Munck

Signed 3-2-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/22

Page 1 of 1

Sample Location: BLM. 9. 419

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	TOC/BOD						Charge Number
2203010950A	3	A	X							XGMD
— 0951A (FB)	3	|	X							|
— 0952A	1	↓		X						—

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/1/22 @ 1100			3-2-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT BIM·21·400 WJI ENV·0053

Notebook No. 032 # 143(A)

Continued from page

Marcus Avalos & Tony Torrez present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a QED MP.20 flow cell & water analyzer. Carboy G.5

alibrations
DO. Cal in saturated air @ 641 mm/Hg.
onductivity. Cal using 1413 us/cm STD.
H- Cal using Oakton Buffers (4,7,10)
Turb Meter) #7 STD- 52.0 NTU RDG- 49.7 NTU Lot- 200445 Exp. 3/31/22

arameters (time)	Temp (°C)	Cond (ms/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
) 2203021435 A	20.97	1.110	6.06	181	7.42	1.10	340.40
) ——— 1437 A	20.95	1.114	6.11	187	7.40	0.98	=
) ——— 1439 A	20.99	1.117	6.34	185	7.43	0.59	=

Sample #	Analysis	Samples Preserve	Container	lot	lab
2203021445 A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2596	ALS
——— 1446 A	= (Dup)	=	=	=	=
——— 1447 A	= (FB)	=	=	=	=
——— 1448 A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
——— 1449 A	Total Metals	HNO3/Ice	(2) 125 ml poly	211212	ALS
——— 1450 A	Anions/Alk	Ice/Zero HS	=	-	=
——— 1451 A	TDS by SM2540 C	Ice	(1) =	=	=
——— 1452 A	Perchlorate by 6850	Ice/ZHS	=	~	=
——— 1453 A	NO2/NO3 353.2	H2SO4/Ice	(1) 250 ml poly	=	=

nitial DTW. 339.80'

otal Gallons Purged. 1 L

* Minimum Purging, Modified Sample Event.

Continued from page

Read and Understood By

Signed 3/2/22 Date

Signed 3-3-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/22

Page ______ of ______

Sample Location: BLM-21-400

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	T. Metals	Anions/Alk	TDS			Charge Number
2203021445A	3	A	X							YGMD
1446A (Dup)	3		X							
1447A (FB)	3		X							
1448A	1			X						
1449A	2				X					
1450A	2					X				
1451A	1						X			

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
2203021452A	1	A	X							YGMD
1453A	1			X						

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	3/2/22 @ 1540		3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

Continued from page

PROJECT BLM-42-569 WJI ENV-0053

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. this well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Initial packer pressure reading was ~21 psi. Crew added more pressure priorto sampling — pressure at start of event was ~28 psi. Carboy G3 in use.

*final packer pressure holding @ 28 psi.

Calibrations

DO - calibrated in saturated air @ 641 mm/Hg.

Cond - calibrated using 1413 us/cm std. solution.

PH - calibrated using Oakton buffers (7-10).

Turbidity meter #21 std - 9.79 rdg - 9.88 lot - 200445 Exp - 3/31/22

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
220314 0750C	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 0751C	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 220314 0935C	20.41	0.571	2.28	125	7.19	1.98	see
2) ——— 0938C	20.48	0.565	2.22	126	7.21	1.86	bottom
3) ——— 0941C	20.43	0.567	2.18	128	7.22	1.57	of page.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220314 0945C	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 0946C	*" (MS)*	"	"	"	"
——— 0947C	" (FB)	"	"	"	"
——— 0948C	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 0949C	" (FB)	"	"	"	"

Initial DTW (transducer reading)

- 49.15 ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro 3/14/22 3-15-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/14/22

Page 1 of 1

Sample Location: BLM-42-569

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA						Charge Number
2203140750C (TB)	3	A	✓							XGMD
—— 0761C (TB)	1	A		✓						〃
—— 0945C	3	A	✓							〃
—— 0946C (MS)	3	A	✓							〃
—— 0947C (FB)	3	A	✓							〃
—— 0948C	1	A		✓						〃
—— 0949C (FB)	1	A		✓						〃

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/14/22 1100hrs.			3-15-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT BLM-42-709 WJI ENV-0053

Notebook No. D32 #124(c)
Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This well will be urged using a dedicated bladder pump. Samples will be collected using a teflon discharge ose. Water quality parameters will be monitored using a QED MP-20 Flow cell nd water analyzer. Carboy G3 in use. Initial packer pressure prior to ampling zone 569 was 21 psi. Crew added more pressure to the packer with eadings near ~28psi. that pressure reading continues to remain stable during ne onset of zone 709.

* Final packer pressure holding @ 28psi.

Calibrations

DO - calibrated in saturated air @ 641mm/Hg.
ond - calibrated using 1413 std solution (us/cm).
H - calibrated using Oakton buffers (7-10).
urbidity meter #21 std - 9.79 rdg - 9.88 lot - 200445 Exp - 3/31/22

arameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
220314 1400C	20.70	0.598	3.09	117	7.54	2.27	see bottom of page
——— 1403C	20.82	0.613	2.91	116	7.56	2.10	
——— 1406C	20.95	0.619	2.72	115	7.56	1.94	

Samples

ample	Analysis	Preservative	Container	Lot	Lab
220314 1410C	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 1411C	u (FB)	u	u	u	u
——— 1412C	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1413C	u (FB)	u	u	u	u
——— 1414C	SVOA by 8270D	u	(2) 1L Ambers	101920-1DK	ALS

nitial DTW (transducer reading)

— 49.18ft.

Total gallons purged — 2.5

Continued from page

Craig Del Ferraro
Signed

3/14/22
Date

Read and Understood By

Signed

3-16-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/14/22

Page 1 of 1

Sample Location: BLM-42-709

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	8270					Charge Number
2203141410C	3	A	✓							XGMD
—— 1411C (FB)	3	A	✓							"
—— 1412C	1	A		✓						"
—— 1413C (FB)	1	A		✓						"
—— 1414C	2	A			✓					"

Sample Location:

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	3/14/22 1530hrs.			3-15-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT BW-1-268 ENV.0053

Notebook No. D32 #124 (c)
Continued from page

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL. THIS WELL WILL BE MODIFIED SAMPLED WITH A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. CARBOY 6.3 KANDY & AL TOOK OUR DEPTH PROBE

INITIAL	FINAL
220310 0930 C	220310 0940 C
pH 7.28	7.22
TEMP 18.5 C	18.7
COND 1328 uS/cm	1324
TURB 0.65 NTU's	0.58 NTU's
pH PRE 7.10/10.05	7.09/10.03
pH POST 7.10/10.03	7.08/10.05

METER ID's
pH/COND # 12
TURB # 21
STD = 9.79
RDG = 9.65
LOT # 200445
EXP 3-31-22

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT.	LAB
220310 0931C	8260	ICE/HCl	2621	(3) 40ml VOAs	ALS
— 0932C(	" (FB)	"	"	"	"
— 0933C	" (DUP)	"	"	"	"
— 0934C	6007	ICE	200416	(1) 1L AMBER	SLI
— 0935C	TOTAL METALS	ICE/HNO$_3$	210910	(2) 125ml poly	ALS

Continued from page

Read and Understood By

Signed 3-10-22 Date

Signed 3-14-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-10-22

Page 1 of 1

Sample Location: BW-1-268

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260	COD	TOTAL METALS				Charge Number X6mD
220310 0931A	3	A	X						
— 0932A (FB)	3	A	X						
— 0933A (Dup)	3	A	X						
— 0934A	1	A		X					
— 0935A	1	A			X				

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/10/22 / 1100			3-14-22 / 0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT BW·6·355 WJI ENV·0053

Continued from page

Marcus Avalos & Dan Halvorsen. Weather is breezy & warm. This well will be purged & sampled using a dedicated, bladder pump. Samples will be collected using a ~~dedicated~~ new teflon discharge tube. Water quality parameters will be monitored using a In·Situ Aqua Troll 500. Carboy Gr·1

Calibrations
DO· Cal in 100% saturated air @ 638 mm/Hg.
PH· Cal using Oakton Buffers (4,7,10)
Conductivity· Cal using 1413 uS/cm STD.
Turb Meter· #7 STD - 52.0 NTU RDG - 50.1 NTU LOT - 200445 Exp· 3/31/22

Parameters (time)	Temp (°C)	Cond (uS/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) 2203141417 A	21.48	1220.857	1.56	225	7.87	0.65	247.60
2) —— 1420 A	21.56	1216.068	1.51	224	7.87	0.75	=
3) —— 1423 A	21.51	1212.862	1.46	223	7.87	0.64	=

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203141430A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2596	Als
—— 1431A	= (FB)	=	=	=	=
—— 1432 A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
—— 1433 A	= (MS)	=	=	=	=

Initial DTW - 245.10

Total Gallons Purged · 2.5 gal

Continued from page

3/14/22

Read and Understood By

3-15-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/14/22 Page 1 of 1

Sample Location: BW·6·355

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	67/80						Charge Number
2203141430 A	3	A	X							XGMD
—— 1431 A (FB)	3		X							
—— 1432 A	1			X						
—— 1433 A (MS)	1			X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/14/22 @ 1530			3-15-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT PL-2-504 WJI ENV-0053

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & cold. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy G3 in use.

Calibrations

DO - calibrated in saturated air @ 640 mm/Hg.

Conductivity - calibrated using 1413 us/cm std. solution.

PH - calibrated using Oakton buffers (7-10).

Turbidity meter #6 std - 2.73 rdg - 2.68 lot - 200445 Exp - 3/31/22

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 2203150920C	19.38	0.970	5.98	118	7.77	0.50	477.98
2) ———— 0923C	19.46	0.971	5.74	119	7.77	0.39	477.98
3) ———— 0926C	19.53	0.978	5.57	119	7.75	0.35	477.98

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203150930C	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
———— 0931C	" (FB)	"	"	"	"
———— 0932C	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI.
———— 0933C	Anions/Alk.	"	(2) 125ml poly's	N/A	ALS
———— 0934C	TDS by SM2540C	"	(1) 125ml poly	"	"
———— 0935C	Perchlorate by 6850	"	"	"	"
———— 0936C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Initial DTW - 477.87ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro 3/15/22 3-16-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/22 Page 1 of 1

Sample Location: PL-2-504

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260	607	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3		
2203150930C	3	A	✓							XGMD
——— 0931C (FB)	3	A	✓							"
——— 0932C	1	A		✓						"
——— 0933C	2	A			✓					"
——— 0934C	1	A				✓				"
——— 0935C	1	A					✓			"
——— 0936C	1	A						✓		"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/15/22 1120 hrs.			3-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT P1.4.464 WJI ENV.0053

Notebook No. D32 # 123(A)

Continued from page

Marcus Avalos & Dan Halvorsen present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using a In-Situ Aqua Troll 500. Carboy G-1

Calibrations

DO- Cal in 100% saturated air @ ~~100%~~ NA 638 mm/Hg.

PH- Cal using Oakton Buffers (4,7,10)

Conductivity- Cal using 1413 uS/cm STD.

Turb Meter- #7 STD- 52.0 NTU RDG- 50.8 NTU Lot- 200445 Exp- 3/31/22

Parameters (time)	Temp(°C)	Cond(uS/cm)	DO	ORP	PH	Turb(NTU)	DTW(ft)
1) 2203150940A	19.07	1257	4.78	277	7.25	1.10	450.30'
2) — 0943A	19.09	1256	4.74	275	7.26	0.51	=
3) — 0946A	19.17	1258	4.75	272	7.27	0.85	=

Trip Blanks Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203150745A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2596	Als
— 0746A	Low Level NDMA	Ice	(1) 1L Amber	0100301H	SRI

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203150950A	VOA by 8260	HCl/Ice	(3) 40 ml vials	2596	Als
— 0951A	= (FB)	=	=	=	=
— 0952A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
— 0953A	Low Level NDMA	=	=	=	=
— 0954A	= (FB)	=	=	=	=
— 0955A	Total Metals	HNO3/Ice	(2) 125 ml poly	211212	Als
— 0956A	Anions/Alk	Ice/Zero HS	=	=	=
— 0957A	TDS by SM2540C	Ice	(1) =	=	=
— 0958A	Perchlorate 6850	Ice / 1/3 HS	=	=	=
— 0959A	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly	210920	=

Initial DTW - 450.20'

Total Gallons Purged- 1.5 gal

Continued from page

Signed

3/15/22

Date

Read and Understood By

3-16-22

Signed

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/22

Page 1 of 1

Sample Location: Pl.4.464

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607/830	LL NDMA				Charge Number
2203150745 A (TB)	3	A	X						XGMD
— 0746 A (TB)	1				X				
— 0950 A	3		X						
— 0951 A (FB)	3		X						
— 0952 A	1			X					
— 0953 A	1				X				
— 0954 A (FB)	1				X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	T. Metals	Anions/Alk	TDS	Perchlorate	NO2 NO3		Charge Number
2203150955 A	2	A	X						XGMD
— 0956 A	2			X					
— 0957 A	1				X				
— 0958 A	1					X			
— 0959 A	1						X		

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/15/22 @ 1100			3-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT PL-8-455 WJI ENV-0020

Notebook No. D64 #129 (y)

Continued from page ______

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2203100730y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——0731y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
2203100910y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——0911y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters

Time - 2203100950y
PH - 7.93
Temp - 20.1°c
Cond - 1033us/cm
Turb - 1.27 NTU's
pH pre - 7.16/10.12 (13.8°c)
pH post - 7.17/10.11
DTW - 439.53ft.
Atmos - 12.51 psia

Final

Time - 2203101439y
PH - 7.80
Temp - 20.8°c
Cond - 1016 us/cm
Turb - 1.36 NTU's
pHpre - 7.05/10.02 (23.6°c)
pHpost - 7.06/10.02
DTW - 439.60ft.
Atmos - 12.53 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 11
Turb - 20
〃 std - 6.62
〃 rdg - 6.74
〃 lot - 200445
〃 Exp - 3/31/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103681	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203101015y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——1016y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——1055y	Low Level NDMA	〃	〃	〃	〃
——1350y	1,4 Dioxane by 8270D	〃	(1) 250ml amber	90121-06	ALS
——1351y	Total Metals	ice/HNO3	(2) 125ml poly's	21-09-10	〃
——1435y	Anions/Alk.	ice	〃	N/A	〃
——1436y	TDS by SM2540C	〃	(1) 125ml poly	〃	〃

Continued ~~from~~ on page 15

Craig Del Ferraro 3/10/22
Signed Date

Read and Understood By

3-14-22
Signed Date

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220310 1437Y	Perchlorate by 6850	ice	(1) ~~25~~ 125ml poly	N/A	ALS
——— 1438Y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	21-09-20	"

Runs	1) 22.93	2) 22.88	3) 22.89	4) 22.88	5) 22.84	6) 22.79
	22.89	22.81	22.79	22.74	22.77	22.84
	22.88	22.79	22.80	22.78	22.76	22.83
	22.92	22.94	22.91	22.90	22.86	22.76

Continued from page

Read and Understood By

Craig Del Ferro 3/10/22

3-14-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/22

Page 1 of 1

Sample Location: PL-8-455

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LLNDMA				Charge Number
2203100730Y (TB)	3	A	✓						XGMD
——— 0731Y (TB)	1	A			✓				"
——— 0910Y (EB)	3	A	✓						"
——— 0911Y (EB)	1	A			✓				"
——— 1015Y	3	A	✓						"
——— 1016Y	1	A		✓					"
——— 1055Y	1	A			✓				"

Sample Location: PL-8-455

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Dioxane	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3		Charge Number
2203101350Y	1	A	✓							XGMD
——— 1351Y	2	A		✓						"
——— 1435Y	2	A			✓					"
——— 1436Y	1	A				✓				"
——— 1437Y	1	A					✓			"
——— 1438Y	1	A						✓		"

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig	3/10/22 1525 hrs.		3-14-22 / 0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

WSTF 381C (05/2016)

Notebook No. D64 #129 (Y)
Continued from page

OJECT PL-8-605   WJI ENV-0020

b Tufts & Craig Del Ferraro present. Weather is clear & cold. This zone will be mpled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. use. Probe #1539. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

mple	Analysis	Preservative	Container	Lot	Lab
2203080825Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——0826Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G1

ample	Analysis	Preservative	Container	Lot	Lab
2203080945Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——0946Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

nitial Parameters
ime - 2203081020Y
H - 7.92
emp - 21.0°c
ond - 978 us/cm
urb - 4.43 NTU's
Hpre - 7.17/10.13 (13.3°c)
Hpost - 7.19/10.12
DTW - 439.02 ft.
Hmos - 12.53 psia

Final
Time - 2203081330Y
PH - 7.98
Temp - 21.3°c
Cond - 989 us/cm
Turb - 2.73 NTU's
pHpre - 7.11/10.07 (17.2°c)
pHpost - 7.13/10.07
DTW - 439.14 ft.
Atmos - 12.51 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 11
Turb - 20
" Std - 6.62
" rdg - 6.72
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	2108665	2/23
10	4103981	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203081050Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——1051Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——1305Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	90121-06	ALS
——1306Y	Total Metals	ice/HNO3	(2) 125ml poly's	21-09-10	"
——1307Y	Anions/Alk.	ice	"	N/A	"
——1308Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——1309Y	Perchlorate by 6850	"	"	"	"
——1310Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Continued ~~from~~ on page 11

Craig Del Ferraro
Signed

3/8/22
Date

Read and Understood By

Signed

3-9-22
Date

PROJECT PL-8-605 WJI ENV-0020

Notebook No. D64#129(y)

Continued from page 10

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
2203080900y	Low Level NDMA (BC)	ice	(1) 1L Amber	22MM137A	SPI

Runs				
	1) 89.18	2) 89.06	3) 89.04	4) 89.01
	87.84	87.85	87.86	87.84
	87.80	87.85	87.86	87.85
	89.12	89.11	89.03	89.03

Continued from page

Read and Understood By

Craig Del Ferro 3/8/22 3-9-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/22 Page 1 of 1

Sample Location: PL-8-605

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Dioxane					Charge Number
2203080825y (TB)	3	A	✓							XGMD
——0826y (TB)	1	A		✓						"
——0945y (EB)	3	A	✓							"
——0946y (EB)	1	A		✓						"
——1050y	3	A	✓							"
——1051y	1	A		✓						"
——1305y	1	A			✓					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3	LL NDMA		Charge Number
2203081306y	2	A	✓							XGmD
——1307y	2	A		✓						"
——1308y	1	A			✓					"
——1309y	1	A				✓				"
——1310y	1	A					✓			"
——0900y (BC)								✓		"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/8/22 1520hrs.			3-9-22 /0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT PL-8-780 WJI ENV-0020

Notebook No. D64 #129(Y)
Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
220308 1415Y	8260 LL (VOA)	ice/HCL	(3) 40ml vials	2621	ALS
——— 1416Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters
Time - 2203081450Y
PH - 7.82
Temp - 22.4°c
Cond - 953 us/cm
Turb - 1.39 NTU's
pH pre - 7.08/10.10 (19.0°c)
pH post - 7.09/10.07
DTW - 439.14 ft.
Atmos - 12.54 psia

Final
Time - 2203091000Y
PH - 7.90
Temp - 21.4°c
Cond - 946 us/cm
Turb - 1.46 NTU's
pH pre - 7.15/10.09 (16.0°c)
pH post - 7.13/10.08
DTW - 439.38 ft.
Atmos - 12.50 psia
IDW - ½ gal.

Meter ID
pH/cond - 11
Turb - 20
" Std - 6.62
" rdg - 6.72
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220309 0915Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0916Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 0935Y	" (Dupl.)	"	"	"	"
——— 0936Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

Runs	1)	2)	3)	4)
	165.15	165.09	165.04	164.99
	163.70	163.74	163.75	163.77
	163.66	163.73	163.75	163.74
	165.15	165.09	165.02	165.01

Continued from page

Craig Del Ferraro
Signed

3/9/22
Date

Read and Understood By

3-10-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/22

Page 1 of 2

Sample Location: PL-8-780

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement 8260 LL	LL NDMA					Charge Number
2203081415Y (EB)	3	A	✓						XGMD
——— 1416Y (EB)	1	A		✓					〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fermo	3/8/22 1520hrs.			3-9-22 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/9/22

Page 2 of 2

Sample Location: PL-8-780

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals					Charge Number
2203090915Y B	3	A	✓							XGMD
——— 0916Y	1	A		✓						"
——— 0935Y (Dupl.)	1	A		✓						"
——— 0936Y	2	A			✓					"

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig	3/9/22 1100hrs.			3-10-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

Notebook No. D64 #129(Y)

PROJECT PL-8-965 WJI ENV-0020

Continued from page ________

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #1539. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy 61

Sample	Analysis	Preservative	Container	Lot	Lab
220309 1040Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 1041Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters	Final	Meter ID
Time - 220309 1400Y	Time - 220309 1504Y	pH/cond - 11
PH - 8.01	PH - 7.93	Turb - 20
Temp - 23.0°C	Temp - 22.8°C	" std - 6.62
Cond - 830 us/cm	Cond - 836 us/cm	" rdg - 6.69
Turb - 2.71 NTU's	Turb - 2.01 NTU's	" lot - 200445
pH pre - 7.06 / 10.08 (22.1°C)	pH pre - 7.04 / 10.06 (22.6°C)	" Exp - 3/31/22
pH post - 7.04 / 10.09	pH post - 7.05 / 10.04	
DTW - 439.38 ft.	DTW - 439.53 ft.	Buffers Lot Exp
Atmos - 12.46 psia	Atmos - 12.48 psia	7 2108G56 2/23
	IDW - 1/2 gal.	10 4103G81 9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220309 1430Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——— 1431Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1432Y	Total Metals	ice / HNO_3	(2) 125ml poly's	21-09-10	ALS
——— 1500Y	Anions / Alk.	ice	"	N/A	"
——— 1501Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1502Y	Perchlorate by 6850	"	"	"	"
——— 1503Y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	21-09-20	"

Runs	1)	2)	3)
	245.32	245.17	245.10
	244.18	244.15	244.14
	244.16	244.13	244.16
	245.34	245.18	245.08

Continued from page

Read and Understood By

Craig Del Ferraro 3/9/22

3-10-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/9/22

Page 1 of 1

Sample Location: PL-8-965

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals	Anions/Alk	TDS			Charge Number
2203091040Y (EB)	3	A	✓							XGMD
—— 1041Y (EB)	1	A		✓						〃
—— 1430Y	3	A	✓							〃
—— 1431Y	1	A		✓						〃
—— 1432Y	2	A			✓					〃
—— 1500Y	2	A				✓				〃
—— 1501Y	1	A					✓			〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
2203091502Y	1	A	✓							XGMD
—— 1503Y	1	A		✓						〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerro	3/9/22 1530hrs.			3-10-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

B

ROJECT PL-11-470 Flute ENV-0020

Notebook No. D-32 #122 B

Continued from page N/A

Dan. Halvorsen & Robert Barrows present: Weather is cloudy & cool. This zone will be purged and sampled using a flute system. Samples will be collected using a dedicated Teflon discharge hose. Purge pressure set @ 227 psi; sample ressure set @ 205 psi. Bubbler set @ 3 psi and stable @ 7 psi. minimum of 4 allons will be purged prior to sampling or until parameters are stable. Carboy -3 is in use.

arameters prior to sampling

H -	8.61	8.39
mp -	19.4	22.01
ond -	1056	1029
urb -	0.53	0.64

meter ID

PH/Cond - 21#

Turb - 12#

" " Std. - 9.79 (ntu's)

" " Rdg - 9.59 (ntu's)

" " Lot - 200445

" " Exp - 3-31-22

nitial Parameters

ime - 220302 1335 B

H - 7.78

mp - 21.6 (oC)

ond - 1049 (us/cm)

urb - 3.68 (ntu's)

H pre - 7.05/10.03 (28.5 °C)

H Post - 7.07/10.05

Final Parameters

Time - 220302 1412 B

PH - 7.57

Temp - 20.7 (oC)

Cond - 1119 (us/cm)

Turb - 0.61 (ntu's)

PH pre - 7.03/10.04 (°28.6)

PH Post - 7.04/10.05

Samples

ample #	Analysis	Preservative	Container	Lot #	Lab
220302 1402 B	VOA by 8260 LL	HCl/ICE	(3) 40 ml vials	# 2621	ALS
—— 1403 B	" " (FB)	" "	(3) " "	" "	" "
—— 1404 B	Low Level NDMA	ICE	(1) 1L Amber	103501	SRI
—— 1405 B	" " (FB)	" "	(1) " "	" "	" "
—— 1408 B	1,4-Dioxane by 8270D	" "	(1) 250 ml Amber	90121-06	ALS
—— 1409 B	" " (D)	" "	(1) " "	" "	" "

*Total purged -

Note * Had problems with bubbler couldn't get pressure reading. Took to ST-6 tried there and was working. Brought back to PL-11 and it started working. Morning used up on trouble shooting problem on 3-1-22

Continued from page N/A

Read and Understood By

Robert Barrows
Signed

3-2-22
Date

Signed

3-3-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-22

Page 1 of 1

Sample Location: PL-11-RB470

Pertinent Notes (if any)

TASK Memo - 11019

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 LL	Low Level NDMA	1,4 Dioxane by 8270D					Charge Number
										X Gmd
220302 1402 B	3	A	X							
1403 B (FB)	3		X							
1404 B	1			X						
1405 B (FB)	1			X						
1408 B	1				X					
1409 B (Dup)	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	3-2-22 / 3:15			3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ________________

PROJECT PL-11-530 Flute ENV-0020

Continued from page N/A

Dan Halverson & Robert Burrows present. Weather is cloudy & Cool. This zone will be purged and sampled using a flute system. Samples will be collected using a dedicated Teflon discharge Hose. Purge Pressure set @ 227 psi, Sample pressure set @ 205 psi. Bubbler set @ 3 psi and stable @ 7 psi. Minimum of 4 gallons will be purged prior to sampling or until parameters are stable. Carboy B-3 in use.

Parameter prior to sampling

pH –	7.80	7.82
Temp –	20.08	21.06
Cond –	1090	10.24
Turb –	1.40	0.90

Meter ID

pH/Cond – 21#
Turb – 12#
" " Std. – 9.79 (ntu's)
" " Rdg – 9.59 (ntu's)
" " Lot – 200445
" " Exp – 3-31-22

Initial Parameters

Time – 2203021425B
pH – 8.62
Temp – 21.6 (°c)
Cond – 1101 (us/cm)
Turb – 1.42 (ntu's)
pH Pre – 7.04/10.01 (°c 30.7)
pH Post – 7.03/10.02

Final Parameters

Time – 2203021432B
pH – 8.00
Temp – 22.5 (°c)
Cond – 1119 (us/cm)
Turb – 1.44 (ntu's)
pH Pre – 7.07/9.99 (30.2 °c)
pH Post – 7.06/10.00

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
2203021426B	VOA by 8260LL	HCl/Ice	(3) 40 ml vials	#2621	ALS
— 1427B	" " (FB)	" "	(3) " "	" "	" "
— 1428B	Low Level NDMA	Ice	(1) 1L Amber	103501	SRE
— 1429B	" " (EB)	" "	(1) " "	" "	" "
— 1430B	1,4 Dioxane by 8270D	" "	(1) 250 ml Amber	90121-06	ALS

Continued from page N/A

Read and Understood By

Robert Burrows
Signed

3-2-22
Date

Signed

3-3-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-22

Page 1 of 1

Sample Location: PL-11-530

Pertinent Notes (if any): TASK memo-11020

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	VOA by 8260LL	Low level NDMA by 8270D	1,4 Dioxane					Charge Number X GMWD
2203021426B	3	A	X							↓
1427 B (FB)	3	↓	X							↓
1428B	1	↓		X						↓
1429B (FB)	1	↓		X						↓
1430 B	1	↓			X					↓

Sample Location:

Pertinent Notes (if any):

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Robert Burrows	3-2-22 / 3:15		3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT PL-11-710

Notebook No. D32#122 (B)

Continued from page

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER CLEAR & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 227psi & SAMPLE PRESSURE SET @ 205psi. BUBBLER SET @ 8psi & STABLE @ 7psi. MIN OF 4 GALLONS PURGED PRIOR TO SAMPLING OR TIL PARAM'S STABLE. CARBOY 6.3

PARAMETERS PRESAMPLING.

pH	7.52	7.48
TEMP	18.5°c	19.9°c
COND	1137	1135
TURB	0.67	0.25 NTU's

METER ID'S

pH/cond 21

TURB 12

" STD 9.79

" RDG 9.65

" LOT# 200445

" EXP. 3-31-22

	INITIAL	FINAL
	2203078 1405 B	220307 1411 B
pH	7.55	7.51
TEMP	20.9	20.8
COND	1135	1139
TURB	0.34 NTU's	0.36
pH pre	7.05/10.01 (200)	7.05/10.03
Ph post	7.06/10.02	7.04/10.02

Samples

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
220307 1406 B	8260M	ICE, HCl	2621	(3) 40ml VIALS	ALS ~~SRL~~
—— 1407 B	" (FB)	"	"	"	"
—— 1408 B	LLNDMA	ICE	103507	(1) 1LT AMBER	SRL
—— 1409 B	" (FB)	"	"	"	"
—— 1410 B	SVOA SIM	"	90121-06	(1) 250ml AMBER	ALS

Continued from page

Read and Understood By

Signed 3-7-22 Date

Signed 3-9-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-7-22

Page 1 of 1

Sample Location: PL-11-710

Pertinent Notes (if any)

Charge Number: X6mD

Sample Number	# of Containers	Sample Matrix*	8260CC	L NDMA	504 Sim				Charge Number
2203071406B	3	A	X						
— 1407B (FB)	3		X						
— 1408B	1			X					
— 1409B (FB)	1			X					
— 1410B	1				X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	3-7-22 / 1530		3-9-22 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (05/2016)

PROJECT P1-11-820

Notebook No. D32#122(B)

Continued from page ____

DAN HALVORSEN & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. This WELL will BE PURGED & SAMPLED USING A FLUTE SYSTEM. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 227 psi & SAMPLE PRESSURE @ 205 psi. BUBBLER SET @ 3PSI & STABLE @ 7PSI. MIN. OF 4 gallons PURGED OR UNTIL PARAM'S STABILIZE. CARBOY 6-3

PARAMETER PRESAMPLING

pH	7.53	7.57
Temp	18.8°c	19.2°c
COND	1006 uS/cm	1006 uS/cm
Turb	0.57 NTU's	0.50

METER ID's

pH/COND # 21

Turb # 12

STD = 9.79

Rdg = 9.65

Lot# = 200445

Exp = 3-31-22

INITIAL	FINAL
220307 1420B	220307 1425B
pH 7.63	7.59
Temp 20.8°c	20.8
COND 1.006	1.006
Turb 0.51	0.53
pH pre 7.10/10.06	7.05/10.01
pH post 7.08/10.07	7.06/10.02

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
220307 1421B	8260LL	ICE/HCl	2621	(3) 40mL vials	ALS
—— 1422B	" (FB)	"	"	"	"
—— 1423B	UNDMA	ICE	103501	(1) 1LT Amber	SRS
—— 1424B	" (FB)	"	"	"	"

Continued from page

3-7-22

Signed **Date**

Read and Understood By

3-9-22

Signed **Date**

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-7-22

Page 1 of 1

Sample Location: PL-11, 820

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA					Charge Number
									X6MD
220307 1421B	3	A							
— 1422B (FB)	3	|							
— 1423B	1	|							
— 1424B (FB)	1	⊥							

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-7-22/1430			3-9-22 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT PC-11-980

Notebook No. D32#122 (B)

Continued from page

Dan Halvorsen & Tony Torrez present. The weather is clear & cool. This well will be purged & sampled using a FLUTe system. Samples collected from dedicated Teflon discharge tube. Purge pressure set @ 227 & sample pressure set @ 205 psi. Bubbler set @ 3psi & Stable @ 7psi. Min of 4 gallons purged or until param's stable. Carboy 6-3

Parameters pre sample

pH	7.69	7.78
Temp	18.8°c	18.9°c
Cond	975	986
Turb	0.70	0.40

Meter ID's
pH/cond # 21
Turb # 12
Std = 9.79
Rdg = 9.65
Lot # = 200445
Exp = 3/31/22

	Initial	Final
	220307 1430B	220307 1435B
pH	7.83	7.85
Temp	19.0	20.9
Cond	980	983
Turb	0.56	0.51
pH pre	7.05/10.03	7.06/10.04
pH post	7.06/10.04	7.05/10.03

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
220307 1431B	8260LL	Cool/HCl	2621	(3) 40ml vials	ALS
— 1432B	" (FB)	"	"	"	"
— 1433B	LLNDMA	Ice	103501	(1) 1L amber	SRI
— 1434B	" (FB)	"	"	"	"

Continued from page

Read and Understood By

Signed 3-7-22 Date

Signed 3-9-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-7-22

Page 1 of 1

Sample Location: PL-11-980

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	LLNDMA					Charge Number
									XGMD
220307 1431B	3	A	X						
—— 1432B (FB)	3		X						
—— 1433B	1			X					
—— 1434B (FB)	1			X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-7-22/1530			3-9-22 /0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

ROJECT ST-4-481 WJI ENV-0053

Notebook No. D32 #123(A)

Continued from page ___

arcus Avalos & Robert Burrows present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflond ischarge hose. Water quality parameters will be monitored using a QED MP-20 flow cell water analyzer. Carboy Co-5

alibrations

O: Cal in saturated air @ 640 mm/Hg.

onductivity: Cal using 1413 us/cm std solution.

H: Cal using Oakton Buffers (4,7,10)

Turb Meter - #7 STD - 52.0 NTU RDG - 48.7 NTU Lot - 200445 Exp - 3/31/22

Trip Blanks

ample #	Analysis	Preserve	Container	lot	lab
2203070730A	VOA by 8260LL	HCl/Ice	(3) 40ml vials	2596	ALS
2203070731A	Low Level NDMA	Ice	(1) 1L Amber	010030HH	SGI

arameters (time)	Temp (°C)	Cond (ms/cm)	D.O	ORP	pH	Turb (NTU)	DTW (ft)
) 2203070940A	19.72	0.977	5.51	148	7.15	0.52 NTU	459.38
) —— 0942A	19.75	0.981	5.70	148	7.11	0.48 NTU	-
) —— 0944A	19.80	0.984	5.50	147	7.20	0.59	-

Samples

ample #	Analysis	Preserve	Container	lot	lab
2203070950A	VOA by 8260LL	HCl/Ice	(3) 40ml vials	2596	ALS
—— 0951A	" (FB)	"	"	"	"
—— 0952A	Low Level NDMA	Ice	(1) 1L Amber	010030HH	SGI
—— 0953A	" (FB)	"	"	"	"
—— 0954A	Total Metals	HNO3/Ice	(2) 125ml poly	211212	ALS
—— 0955A	" (Dup)	"	"	"	"

Initial DTW - 458.85'

Total Gallons Purged - 2 gal

Continued from page

Read and Understood By

Signed 3/7/22 Date

Signed 3-9-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ST-4-481

Page 1 of 1

Sample Location: 3/7/22

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260 LL	LL NDMA	T. Metals					
2203070730A (TB)	3	A	X							XGMD
← 0731A (TB)	1			X						
← 0950 A	3		X							
← 0951A (FB)	3		X							
← 0952 A	1			X						
← 0953 A (FB)	1			X						
← 0954 A	2				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			T. Metals							
2203070955A (Dup)	2	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/7/22 @ 1100			3-9-22 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT ST·4·690 WSI ENV·0053

Notebook No. 032 #(23(A)

Continued from page

Marcus Avalos & Robert Burrows present. Weather is clear & warm. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a QED MP·20 flow cell & water analyzer. Carboy Co. 5

Calibrations
DO · Cal in saturated air @ 640 mm/Hg.
Conductivity · Cal using 1413 uS/cm STD.
PH - Cal using Oakton Buffers (4,7,10)
Turb Meter · #7   STD - 52.0 NTU   RDG - 48.7 NTU   Lot - 200445   Exp. 3/31/22

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	ORP	pH	Turb(NTU)	DTW(ft)
1) 220307 1355 A	19.91	0.785	4.78	102	8.65	2.30	458.00'
2) —— 1357 A	19.85	0.787	4.86	101	8.64	2.18	=
3) —— 1359 A	19.88	0.789	4.98	99	8.63	2.04	=

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220307 1400 A	VOA by 8260LL	HCl/Ice	(3) 40ml vials	2546	ALS
—— 1401 A	: (FB)	:	:	:	:
—— 1402 A	607/Bromacil	Ice	(1) 1L Amber	J100301H	SCI
—— 1403 A	Low Level NDMA	=	=	=	=
—— 1404 A	= (MS)	=	=	:	:
—— 1405 A	= (MSD)	=	=	:	:
—— 1406 A	= (FB)	=	=	:	:
—— 1407 A	Total Metals	HNO3/Ice	(2) 125 ml poly	211212	ALS

Initial DTW · 457.75'

Total Gallons Purged - 2 1/2 gal

Continued from page

Read and Understood By

Signed   3/7/22 **Date**

Signed   3-9-22 **Date**

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/7/22 Page 1 of 1

Sample Location: ST.4.690

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	607/8ro	LL NDMA					Charge Number
2203071400A	3	A	X							XGMD
— 1401A (FB)	3		X							
— 1402A	1			X						
— 1403A	1				X					
— 1404A (MS)	1				X					
— 1405A (MSD)	1				X					
— 1406A (FB)	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	T. Metals							Charge Number
2203071407A	2	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/7/22 @ 1530			3-9-22 / 0950

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (05/2016)

RESAMPLE

PROJECT ST-6-528

Notebook No. D32 #122 (8)

Continued from page

TONY TORRES PRESENT, THE WEATHER IS CLEAR & COOL. THIS WELL WILL BE PURGED & SAMPLED WITH A FLUTE SYSTEM. PURGE PRESSURE SET @ 228 & SAMPLE PRESSURE @ 207 psi. BUBBLER SET @ 3 psi STABLE @ 7 psi. 4 gallons PURGED PRIOR TO SAMPLING. 15 mins OF RECOVERY TIME

	INITIAL	FINAL
	220315 ~~144~~ 1430B	220315 1446B
pH	7.60	7.70
Temp	18.7	18.9 °c
Cond	1086	1099
Turb	0.75	0.95
pHpre	7.05/10.03	7.03/10.03
phpost	7.05/10.05	703/10.05

METER ID'S
pH/COND #12
Turb # 21
" Std = 9.79
" Rdg = 9.65
" Lot# = 200445
" Exp = 3-31-22

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
220315 1445B	1(ND)MA	Ice/Hd	103501	(1) 1L Amber	SRI

Continued from page

3.15.22
Signed **Date**

Read and Understood By

Lori W Munch 3-16-22
Signed **Date**

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-15-22

Page 1 of 1

Sample Location: ST-6-528

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	LCNDMA							XGMD Charge Number
220315 1445B	1	A	X							

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	3-15-22 / 1530			3-16-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

RE Sample

PROJECT ST-6568

Notebook No. D32#122(B) 79

Continued from page

Tony Tocker present. The weather is clear + cool. This zone will be purged + sampled with a Flute system. Purge pressure set @ 228psi + sample pressure set @ 20%. Bubbler set @ 3psi + ~~stable~~ @ 7psi. 4 gallons purge prior to samples. 15 min between purges

	INITIAL	Final
	220315 1450B	220315 1452B
pH	7.78	7.85
Temp	18.7	19.5
Cond	1086	1091
Turb	0.75	0.68
pH pre	7.01/10.01	7.02/10.01
pH post	7.01/10.03	7.01/10.01

METER ID

pH/Cond 12

Turb # 21

" std = 9.79

" rdg = 9.65

LOT # = 200445

" Exp = 3-31-22

SAMPLES

SAMPLE#	Analysis	Preserv	LOT #	Cont	G+B
220315 1451B	1L NDMA	ICE ~~H~~	103561	1L ICT AMBER	5R±

Continued from page

3.15.22

Read and Understood By

Lori W Munch

3-16-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-15-22 RESAMPLE Page 1 of 1

Sample Location: ST. 6. 568

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement LCNDMA							XG7D Charge Number
220315 1451B	1	A	X							

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T.	3.15.22/1530		3-16-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT ST-6-678

Notebook No. D32#122(B) 75

Continued from page

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL THIS ZONE WILL BE PURGED & SAMPLED WITH A FLUTE SYSTEM. SAMPLES COLLECTED USING A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 228 & SAMPLE PRESSURE SET @ 207. A MIN OF 4 GALLONS PURGED OR UNTIL PARAM'S STABILIZE. 15 MIN RECOVERY. BUBBLER SET @ 3 PSI & STABLE @ 7 PSI. CARBOY 6-3

PARAM'S PRE SAMPLE

pH	7.99	7.90
Temp	19.6°c	19.8°c
COND	1046	1048
Turb	0.40	0.44

METER ID'S

pH/COND # 12

Turb # 21

STd = 9.79

Rdg = 9.68

LOT # = 200445

Exp. = 3-31-22

INITIAL		FINAL
2203091400B		2203091406B
pH	7.96	7.94
Temp	20.8	20.4
COND	1044	1046
Turb	0.42	0.38
pH pre	7.01/10.03	7.03/10.04
pH post	7.04/10.03	7.03/10.03

SAMPLES

SAMPLE #	ANALYSIS	PRESERV.	LOT #	CONT	LAB
220309 1401B	8260LL	ICE / HCl	26021	(3) 40ml VIALS	ALS
— 1402B	" (FB)	"	"	"	"
— 1403B	LLNDMA	ICE	103561	(1) 1LT AMBER	SRF
— 1404B	" (FB)	"	"	"	"
— 1405B	SVOA SIM	"	90121-06	(1) 250ml AMBER	ALS

Continued from page

Read and Understood By

T.

Signed

3-8-22

Date

Signed

3-10-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-22

Page 1 of 1

Sample Location: ST-6-678

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	LLNDMA	5004-Sim					X63D Charge Number
220309 1401B	3	A	X							
— 1402B (FB)	3	│	X							
— 1403B	1	│		X						
— 1404B (FB)	1	│		X						
— 1405B	1	—			X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-9-22/1530			3-10-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT ST. 6. ~~[illegible]~~ TT 824

Notebook No. D32 # 122(B)

Continued from page

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. PURGE PRESSURE SET @ 228 & SAMPLE PRESSURE SET @ 207 PSI. BUBBLER SET @ 3 PSI & STABLE @ 7 PSI. A MIN OF 4 GALLONS PURGED OR UNTIL PARAM'S STABILIZE. 15 MIN RECOVERY. ~~Gal~~ 6.3

	PARAM'S	PRESAMPLE
pH	7.92	7.93
Temp	19.1	20.4
COND	938	929
Turb	0.25	0.38

METER ID'S
pH / COND # 12
Turb # 21
STD = 9.79
Rdg = 9.68
LOT # = 200445
Exp = 3.31.22

	INITIAL	FINAL
	2203091420B	2203091430B
pH	7.95	7.91
Temp	20.5	20.8
COND	937	930
Turb	0.21	0.25
pH PRE	7.01 / 10.03	7.01 / 10.01
pH POST	7.01 / 10.01	7.03 / 10.03

SAMPLES

SAMPLE #		ANALYSIS	PRESERV	LOT #	CONT	Lab
220309	1421B	826 dil	ICE / HCl	2621	(3) 40ml VOA	ACS.
—	1422B	" (FB)	"	"	"	"
—	1423B	UNDMA	ICE	103501	(1) 1L AMBER	SRE
—	1424B	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. [illegible]

3-9-22

Lore [illegible]

3-10-22

Signed

Date

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-22

Page 1 of 1

Sample Location: ST-6.824

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							XGMD Charge Number
—220309 1421B	3	A								
— —— 1422B (FB)	3									
— —— 1423B	1									
— —— 1424B (FB)	1									

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
				3-10-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

Notebook No. D32#122(B)

PROJECT ST-6-970

Continued from page ______

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE IS GOING TO BE SAMPLED WITH A FLUTE SYSTEM. PURGE PRESSURE SET @ 228 psi & SAMPLE PRESSURE SET @ 207 psi. BUBBLER SET @ 3 psi & STABLE @ 7 psi. A MIN. OF 4 gallons PURGED OR UNTIL PARAM'S STABILIZE. 15 min OF RECOVERY BETWEEN PURGES. CARBOY 6-3.

PARAM'S PRESAMPLE.

pH	8.04	8.08
TEMP	18.7°c	18.7
COND	1030	1026
TURB	0.90	0.75

METER ID'S

pH/COND # 12

TURB # 21

STd 9.79

Rdg 9.68

LOT # 200445

EXP. 3-31-22

	INITIAL	FINAL
	220309 1440B	220309 1445B
pH	7.99	8.05
TEMP	20.1°c	19.6
COND	1027	1033
TURB	0.85	0.89
pHpre	7.01/10.01	7.01/10.03
pHpost	7.01/10.03	7.02/10.03

SAMPLES

SAMPLE #		ANALYSIS	PRESERV	LOT #	CONT	LAB
220309	1441B	8260LL	ICE/HCl	2621	(3) 40ml VIALS	ALS
—	1442B	" (FB)	"	"	"	"
—	1443B	LLNDMA	ICE	103501	(1) 1LT Amber	SRJ
—	1444B	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T.

3-9-22

Signed

Date

3-10-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-22

Page 1 of 1

Sample Location: St.6.970

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	Gamma						Charge Number
										T6MA
220309 1441B	3	A	X							
—— 1442B (FB)	3	A	X							
—— 1443B	1	A		X						
—— 1444B (FB)	1	A		X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-D	3-9-22/1530			3-10-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

Notebook No. D32 # 123 (A)

PROJECT WW · 1 · 451 WSI ENV · 0053

Continued from page

Marcus Avalos & Tony Torrez present. Weather is clear & cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a QED MP·20 flow cell & water analyzer. Carboy G.5

Calibrations

DO · Cal in saturated air @ 641 mm/Hg.

Conductivity · Cal using 1413 uS/cm STD solution.

PH · Cal using Oakton Buffers (4,7,10)

Turb Meter #7 STD - 52.0 NTU RDG = 49.7 NTU Lot · 200445 Exp - 3/31/22

Parameters (time)	Temp (°C)	Cond (mS/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) 2203020945A	20.04	1.011	7.46	170	7.26	0.47	422.80'
2) —— 0947A	20.06	1.003	7.55	170	7.20	0.72	=
3) —— 0949A	20.02	1.007	7.21	170	7.28	0.54	=

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220302 1000A	VOA by 8260LL	HCl / Ice	(3) 40ml vials	2596	ALS
—— 1001A	= (FB)	=	=	=	=
—— 1002A	607/Bromacil	Ice	(1) 1L Amber	0100301H	SRI
—— 1003A	= (FB)	=	=	=	=
—— 1004A	Low Level NDMA	=	=	=	=
—— 1005A	= (FB)	=	=	=	=
—— 1006A	Total Metals	HNO3 / Ice	(2) 125ml poly	211212	ALS
—— 1007A	Anions / Alk	Ice / Zero HS	=	=	=
—— 1008A	TDS by SM2540C	Ice	(1) =	=	=
—— 1009A	Perchlorate 6850	Ice / ½ HS	=	=	=
—— 1010A	NO2, NO3 353.2	H2SO4 / Ice	(1) 250ml poly		=

Initial DTW · 422.80'

Total Gallons Purged · 2 gal

Continued from page

Read and Understood By

Signed 3/2/22 Date

Signed 3-3-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/22

Page 1 of 1

Sample Location: WW. 1. 452

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	607/Bro	LL NDMA	T. Metals				Charge Number
2203021000A	3	A	X							XGMD
1001A (FB)	3		X							
1002A	1			X						
1003A (FB)	1			X						
1004A	1				X					
1005A (FB)	1				X					
1006A	2					X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Anions/Alk	TDS	Perchlorate	NO2 NO3				Charge Number
2203021007A	2	A	X							XGMD
1008A	1			X						
1009A	1				X					
1010A	1					X				

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/2/22 @ 1100			3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT WW·2·489 WJI ENV·0053

Continued from page

Marcus Avalos & Robert Burrows present. Weather is breezy & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a In-Situ Aqua Troll 500. Carboy Cal: 2

Calibrations
DO - Cal in 100% Saturated air
pH - Cal using Oakton Buffers (4, 7, 10)
Conductivity - Cal using a 1413 uS/cm STD
Turb Meter - # 7 STD - 52.0 NTU RDG - 47.4 NTU Lot - 200445 Exp - 3/31/22

Parameters (time)	Temp (°C)	Cond (µS/cm)	DO	ORP	pH	Turb (NTU)
1) 2203101419 A	20.47	852.256	4.482	208	8.18	3.02
2) — 1420 A	20.55	855.164	4.419	207	8.18	3.27
3) — 1421 A	20.39	849.844	4.354	207	8.17	3.75

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203101425 A	VOA by 8260LL	HCl/Ice	(3) 40ml vials	2596	ALS
— 1426 A	= (FB)	=	=	=	=
— 1427 A	Low Level NDMA	Ice	(1) 1L Amber	0100301H	SRI
— 1428 A	= (FB)	=	=	=	=
— 1429 A	Total Metals	HNO_3/Ice	(2) 125 ml poly	211212	ALS
— 1430 A	NO_2, NO_3 353.2	H_2SO_4/Ice	(1) 250 ml poly	210920	=

* Packer - 30 psi

Total Gallons Purged - 1.75 gal

Continued from page

Signed 3/10/22 Date

Read and Understood By

Signed 3-14-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/22

Page 1 of 1

Sample Location: WW-2-489

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260LL	LL NDMA	T. Metals	NO2.NO3				Charge Number
2203101425A	3	A	X							XGND
—— 1426 A (FB)	3		X							
—— 1427 A	1			X						
—— 1428 A (FB)	1			X						
—— 1429 A	2				X					
—— 1430 A	1					X				

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time
	3/10/22 @ 1510			3-14-22 / 0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

WSTF 381C (05/2016)

PROJECT WW · 2 · 664 WJJ ENV · 0053

Notebook No. 032 # 123(A)

Continued from page

Marcus Avalos & Robert Burrows present. Weather is clear & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge hose. Water quality parameters will be monitored using a Aqua Troll 500 from In-Situ. Carboy G-2

Calibrations
DO - Cal in 100% saturated air
PH - Cal using Oakton Buffers (4,7,10)
Conductivity - Cal using a 1413 us/cm STD.
Turb Meter - #7 STD - 52.0NTU RDG - 47.4NTU Lot - 200445 Exp - 3/31/22

Parameters (time)	Temp (°C)	Cond (us/cm)	DO	ORP	PH	Turb
1) 2203100938A	19.49	836.788	5.89	225	7.94	1.46
2) —— 0942 A	19.31	833.890	5.85	224	8.03	1.19
3) —— 0946 A	19.15	834.981	5.78	224	8.03	1.31

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2203100950A	VOA by 8260LL	HCl / Ice	(3) 40 ml vials	2596	ALS
—— 0951 A	= (FB)	=	=	=	=
—— 0952 A	Low Level NDMA	Ice	(1) 1L Amber	0100301H	SRI
—— 0953A	= (FB)	=	=	=	=
—— 0954A	Total Metals	HNO3 / Ice	(2) 125 ml poly	211212	ALS
—— 0955A	NO2, NO3 353.2	H2SO4 / Ice	(1) 250 ml poly	210920	=

* Packer was @ 0 psi when we arrived. We inflated to 30 psi.

* No Depth Can be taken

FOW - 2 gal

Continued from page

Read and Understood By

Signed 3/10/22 Date

Signed 3-14-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/22 Page 1 of 1

Sample Location: WW-2-664

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	LLNDMA	T. Metals	NO_2, NO_3				Charge Number
2203100950 A	3	A	X							XGMD
— 0951 A (FB)	3		X							
— 0952 A	1			X						
— 0953 A (FB)	1			X						
— 0954 A	2				X					
— 0955 A	1					X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3/10/22 @ 1100			3-14-22/0910

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT WW-3-469 WJI ENV-0020

Notebook No. D64 #129(Y)

Continued from page

ob Tufts & Craig Del Ferraro present. Weather is clear & warm. This zone will be sampled sing 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213. Surface ecks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
2203021300Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
—— 1301Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

nitial Parameters	Final	Meter ID
ime - 2203021325Y	Time - 2203021413Y	pH/Cond - 11
H - 7.68	PH - 7.61	Turb - 20
emp - 23.9°C	Temp - 24.0°C	" std - 6.62
ond - 1144 us/cm	Cond - 1137 us/cm	" rdg - 6.65
rb - 1.30 NTU's	Turb - 1.13 NTU's	" lot - 200445
pre - 7.04/10.01 (23.0°C)	pH pre - 7.02/6.98 (27.5°C)	" Exp - 3/31/22
post - 7.04/10.02	pH post - 7.04/6.99	
TW - 410.58 ft.	DTW - 410.70 ft.	
tmos - 12.39 psia	Atmos - 12.41 psia	
	IDW - 1/2 gal.	

Buffers	Lot	Exp
7	2108656	2/23
10	4103681	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203021410Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
—— 1411Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
—— 1412Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

uns	1)	2)
	40.83	40.68
	38.69	38.71
	38.71	38.69
	40.50	40.65

Continued from page

Craig Del Ferraro
Signed

3/2/22
Date

Read and Understood By

Signed

3-3-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/22

Page 1 of 1

Sample Location: WW-3-469

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals				Charge Number
2203021300Y (EB)	3	A	✓						XGMD
——— 1301Y (EB)	1	A		✓					″
——— 1410Y	3	A	✓						″
——— 1411Y	1	A		✓					″
——— 1412Y	2	A			✓				″

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFermo	3/2/22 1500hrs.			3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

ROJECT WW-3-569 WJI ENV-0020

Notebook No. D64 #129 (Y)
Continued from page

ob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This zone will e sampled using 2 steam cleaned & triple rinsed, stainless steel sample tubes en. in use. Probe #2213. Surface checks performed on probe prior to sampling. *Samples were very aerated*

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2203010745Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0746Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G1

ample	Analysis	Preservative	Container	Lot	Lab
2203010835Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0836Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

nitial Parameters
ime - 2203010950Y
H - 8.65
mp - 18.2°c
ond - 1124us/cm
rb - 1.54 NTU's
pre - 7.12/10.10 (16.1°c)
post - 7.14/10.09
TW - 409.92 ft.
tmos - 12.50 psia

Final
Time - 2203011102Y
PH - 8.54
Temp - 18.6°c
Cond - 1117 us/cm
Turb - 1.29 NTU's
pH pre - 7.09/10.06 (17.5°c)
pH post - 7.10/10.06
DTW - 410.34 ft.
Atmos - 12.49 psia
IDW - 1.5 gals.

Meter ID
pH/Cond - 11
Turb - 20
" Std - 6.62
" rdg - 6.60
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	0108G56	2/23
10	4103G81	9/22

Took in casing water during 1st run — triple rinsed all bottles.

Samples

ample	Analysis	Preservative	Container	Lot	Lab
2203011025Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1026Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1027Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS
——— 1028Y	Anions/Alk.	ice	"	N/A	"
——— 1029Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1100Y	Perchlorate by 6850	"	"	"	"
——— 1101Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

ns 1) ~~86.11~~ co ~~89.04~~ co 1) ~~90.14~~ ~~88.87~~ 1) 83.01 81.81 81.84 82.98 2) 83.73 81.99 82.00 83.49 3) 83.71 81.94 81.96 83.55

Continued from page

Read and Understood By

raig Del Ferraro 3/1/22
Signed Date

Lori W 3-2-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/22 Page 1 of 1

Sample Location: WW-3-569

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals				Charge Number
2203010745Y (TB)	3	A	✓						XGMD
——0746Y (TB)	1	A		✓					"
——0835Y (EB)	3	A	✓						"
——0836Y (EB)	1	A		✓					"
——1025Y	3	A	✓						"
——1026Y	1	A		✓					"
——1027Y	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
2203011028Y	2	A	✓						XGMD
——1029Y	1	A		✓					"
——1100Y	1	A			✓				"
——1101Y	1	A				✓			"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/1/22 1120 hrs.			3-2-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (05/2016)

PROJECT WW-3-710 WJI ENV-0020

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2203020740Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0741Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
2203020830Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0831Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 0832Y	Total Metals	ice/HNO$_3$	(2) 125ml poly's	21-09-10	ALS

Initial Parameters

Time - 2203020915Y
PH - 8.31
Temp - 20.9°C
Cond - 1016 us/cm
Turb - 0.62 NTU's
pH pre - 7.13/10.10 (14.9°C)
pH post - 7.15/10.08
DTW - 410.34Ft.
Atmos - 12.43psia

Final

Time - 2203021006Y
PH - 8.43
Temp - 21.1°C
Cond - 1030us/cm
Turb - 0.56 NTU's
pH pre - 7.08/10.06 (16.3°C)
pH post - 7.10/10.07
DTW - 410.58Ft.
Atmos - 12.40psia
IDW - 1/2 gal.

Meter ID

pH/Cond - 11
Turb - 20
" std - 6.62
" rdg - 6.65
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203020940Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0941Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 0942Y	" (Dupl.)	"	"	"	"
——— 1005Y	Total Metals	ice/HNO$_3$	(2) 125ml poly's	21-09-10	ALS

Runs	1) 145.07	2) 144.79	3) 144.70
	142.74	142.69	142.70
	142.68	142.69	142.68
	145.00	144.56	144.53

Continued from page

Read and Understood By

Craig Del Ferraro
Signed
3/2/22
Date

Signed
3-3-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3|2|22 Page 1 of 1

Sample Location: WW-3-710

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals					Charge Number
2203020740Y (TB)	3	A	✓							XGMD
——— 0741Y (TB)	1	A		✓						〃
——— 0830Y (EB)	3	A	✓							〃
——— 0831Y (EB)	1	A		✓						〃
——— 0832Y (EB)	2	A			✓					〃
——— 0940Y	3	A	✓							〃
——— 0941Y	1	A		✓						〃

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	LL NDMA	Total Metals						Charge Number
2203020942Y (Dupl.)	1	A	✓							XGMD
——— 1005Y	2	A		✓						〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/2/22 1115hrs.			3-3-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT WW-3-978 WJI ENV-0020

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using $00 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G1

Sample	Analysis	Preservative	Container	Lot	Lab
2203030830Y	VOA by 8260LL	ice / HCL	(3) 40ml vials	2621	ALS
——0831Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters

Time - 2203030910Y
PH - 8.13
Temp - 20.1°c
Cond - 1067us/cm
Turb - 0.85NTU's
pH pre - 7.14/10.11(14.4°c)
pH post - 7.16/10.10
DTW - 410.70ft.
Atmos - 12.40 psia

Final

Time - 2203030948Y
PH - 7.99
Temp - 20.4°c
Cond - 1055us/cm
Turb - 0.80NTU's
pH pre - 7.15/10.07(15.0°c)
pH post - 7.14/10.09
DTW - 410.93ft.
Atmos - 12.44psia
IDW - 1/2 gal.

Meter ID

pH/cond - 11
Turb - 20
" std - 6.62
" rdg - 6.69
" lot - 200445
" Exp - 3/31/22

Buffers	Lot	Exp
7	2108956	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2203030945Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2621	ALS
——0946Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——0947Y	Total Metals	ice / HNO3	(2) 125ml poly's	21-09-10	ALS

Runs

1)	2)
260.62	259.91
260.64	259.87
259.41	258.66
259.39	258.61

Continued from page

Craig Del Ferraro 3/3/22
Signed Date

Read and Understood By

3-3-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/22 Page 1 of 1

Sample Location: WW-3-978

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals				Charge Number
2203030830Y (EB)	3	A	✓						XGMD
——— 0831Y (EB)	1	A		✓					〃
——— 0945Y	3	A	✓						〃
——— 0946Y	1	A		✓					〃
——— 0947Y	2	A			✓				〃

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/3/22 1015hrs.			3-3-22 / 1015

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT 200-B-240 ENV-0053

Notebook No. D-32# 123 (A)

Continued from page N/A

Bob Tufts & Robert Burrows present. Weather is Cloudy and Cool. This well will be purged and sampled using a dedicated bladder pump. Samples will be Collected using a New Teflon discharge Hose. Water Quality parameters will be monitored using a QED-MP-20 Flow Cell and water Analyzer. Carboy-G-1 in use. * Purged Long time to keep from drawdown Couldn't get Depth.

Calibrations

DO - Cal in saturated air @ 640 mm/Hg. DTW - 194.50 ft

Conductivity - Cal in 1413 us/cm std. solution.

pH - Cal using Oakton Buffers (4,7,10).

Turb meter - 7#, std. - 47.3 (ntu's), Rdg - 48.2 (ntu's), Lot# - 200415, Exp - 4-30-22

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
2204191002A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1003A	" " (FB)	" "	(3) " "	" "	" "
—— 1004A	" " (Dup)	" "	(3) " "	" "	" "
—— 1005A	Herbicides by 8151A	ICE	(1) 1L Amber	000550	" "
—— 1006A	Dioxins/Furans by 8290	" "	(1) " "	0100301H	SRI
—— 1008A	Pesticides by 8081B	" "	(1) " "	000550	ALS
—— 1010A	Nitro/Oxo/Bromacil by 607	" "	(1) " "	0100301H.	SRI
—— 1013A	SVOA by 8270D	" "	(2) " "	000550	ALS
—— 1015A	PCB's by 8082A	" "	(1) " "	000550	" "
—— 1016A	Phenolics by 9066	H2SO4/ICE	(1) 250 ml amber	911901	" "
—— 1017A	Total metals	HNO3/ICE	(2) 125 ml poly	211212	" "
—— 1018A	Anions/Alk	ICE/Zero HS.	(2) " "	N/A	" "
—— 1019A	TDS by SM2540C	ICE	(1) " "	N/A	" "
—— 1020A	Perchlorate by 6850	ICE/1/3 HS.	(1) " "	N/A	" "
—— 1021A	NO2, NO3, by 353.2	H2SO4/ICE	(1) 250 ml poly	211115	" "
—— 1022A	Cyanide by 9012B	NaOH/ICE	(1). 125 ml poly	214719	" "
—— 1023A	Sulfide by 9030	Zinc Acetate NaOH/Zero HS	(1) 250 ml poly	120417ZAAW	" "

Parameters (Time)	Temp(°C)	Cond(us/cm)	DO	ORP	pH	Turb(ntu's)	DTW(ft)
1.) 2204190950 A	21.56	1.095	10.30	134	6.68	1.07	N/A
2) —— 0955 A	21.73	1.097	7.01	120	6.97	1.09	N/A
3) —— 1000 A	21.73	1.092	6.38	112	7.13	0.93	N/A

IDW - 19A1

Continued from page N/A

Read and Understood By

Robert Burrows 4-19-22

Signed Date

4-20-22

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 1 of 2

Sample Location: 200-B-240

Pertinent Notes (if any): TASK Memo-11083

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Herbicides by 8151A	Dioxins/Furans by 8290	Pesticides by 8081B	nonHalomd/607 by Bromacil			Charge Number
										XGmD
220419 1002A	3	A	X							↓
——— 1003A (FB)	3	↓	X							↓
——— 1004A (Dup)	3	↓	X							↓
——— 1005A	1	↓		X						↓
——— 1006A	1	↓			X					↓
——— 1008A	1	↓				X				↓
——— 1010A	1	↓					X			↓

Sample Location: 200-B-240

Pertinent Notes (if any): TASK Memo-11083

Sample Number	# of Containers	Sample Matrix*	SVOA by 8270D	PCB's by 8082A	Phenolics by 9066	Total metals	Anions/Alk	TDS by SM2540C	Perchlorate by 6850	Charge Number
										XGmD
220419 1013A	2	A	X							↓
——— 1015A	1	↓		X						↓
——— 1016A	1	↓			X					↓
——— 1017A	2	↓				X				↓
——— 1018A	2	↓					X			↓
——— 1019A	1	↓						X		↓
——— 1020A	1	↓							X	↓

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burns	4-19-22/11:10			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 2 of 2

Sample Location: 200-B-240

Pertinent Notes (if any)

TASK memo - 11083

Sample Number	# of Containers	Sample Matrix*	No2, No3 by 353.2	Cyanide by 9012B	Sulfide by 9030				Charge Number Y6mD
2204191021A	1	A	X						↓
— 1022A	1	A		X					
— 1023A	1	A			X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	4-19-22/ 11:10			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32 # 124 C 41

PROJECT 400 - FV-131 ENV-0053

Continued from page

Dan Halworsen & Al Montes present. Weather is clear and cool. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected from a dedicated Tygon hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy G 3 in use.

Calibrations:

DO Sensor: In 100% saturated air Initial DTW = 130.30 ft.

PH Sensor = using a 3 pt. (4,7,10) In-Situ Buffer Final " = 130.86 ft.

Conductivity = using an In-Situ STD. solution

urbidity = using an In-Situ STD.

Parameters (time)	Temp	Cond	DO	PH	ORP	TURB	DTW (ft)
2204180943 C	20.74	1327	2.47	7.29	305	0.11	130.86
——— 0945 C	20.68	1323	2.45	7.38	305	0.12	130.86
——— 0947 C	20.61	1322	2.43	7.29	305	0.11	130.86

SAMPLES

Samples	Analysis	Preserv	Container	Lot	Lab
2204180950 C	VOA by 8260	Ice/HCl	(3) 40 ml Vial	2621	ALS
——— 0951 C	" " (FD)	"	"	"	"

IDW = 1/2 gal.

Continued from page

4-18-2022

Read and Understood By

4-19-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-18-2022

Page 1 of 1

Sample Location: 400-FV-131

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC							Charge Number X6MO
2204180950C	3	A	X							
——— 0951C FB	3	A	X							

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-~~22~~18-2022 1045			4-19-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT 400-HV-147 ENV-0053

Notebook No. D32 #124C
Continued from page

Dan Halvorsen & Al Montes present. Weather is clear, hot and windy. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a dedicated Tygon hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy G3 in use.

Calibrations:
DO Sensor: In 100% Saturated Air.
PH Sensor: Using In-Situ 4,7,10 Buffers
Conductivity: Using In-Situ STD Solution
Turbidity: Using In-Situ STD.

Initial DTW: 140.35 ft.
Final " : 140.76 ft.

Parameters (Time)	Temp	Cond	DO	PH	ORP	TurB.	DTW (ft)
220418 1405 c	24.51	2069	2.78	7.36	267	71.0	140.76
——— 1407 c	24.49	2065	2.61	7.35	267	69.9	140.76
——— 1408 c	24.56	2048	2.47	7.35	267	69.8	140.76

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	LAB
220418 1415 c	VOC by 8260	≤4 HCl	(3) 40 ml Vial	2621	GLS
——— 1416 c	" " (FB)	"	"	"	"

IDW: 1/2 gal

Continued from page

Read and Understood By

4-18-2022

Signed

Date

4-19-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.18.22

Page 1 of 1

Sample Location: 400·HU·147

Analytical Requirement

Pertinent Notes (if any)

Charge Number: XGMD

Sample Number	# of Containers	Sample Matrix*	VOA 8260							Charge Number
2204181415C	3	A	×							
—— 1416C (FB)	3	A	×							

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.18.22			4-19-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

WSTF 381C (05/2016)

PROJECT 600-G-138/PTWP/ENV-0013

Notebook No. D-32#123 (A)

Continued from page N/A

Bob Tuft & Robert Burrows present. Weather is Cloudy & Cool. This well will be purged dry using the Bennett pump. After the well Recovers, samples will be collected using a PFAS bailer. Carboy G-1 in use.

Total depth - 148.40 ft.
Initial DTW - 145.0 ft.
Start purge - 0659 hr.
stop purge - 0705 hr.
Total gallons purged - 4.5 gals.
Final DTW - 146.20 ft.

Meter ID
PH/Cond - 60#
Turb - 7#
" " std - 47.3 (ntu's)
" " rdg - 615 (ntu's)
" " lot# - 200445
" " Exp - 4/30/22

Buffer	Lot	Exp.
7	2108656	2/23
10	4103G81	8/22

Initial Parameters
Time - 220420~~1030A~~ CD 1025A
PH - 7.73
Temp - 18.2 (°C)
Cond - 2.26 (ms)
Turb - 0.59 (ntu's)
PH pre - 6.82/9.75 (18.01 °C)
PH post - 6.81/9.65
DTW - 145.0 ft.

Final Parameters
Time - 2204201050A
PH - 7.58
Temp - 18.8 (°C)
Cond - 2.26 (ms)
Turb - 1.49 NTU's
PH pre - 6.84/9.75 (18.6 °C)
PH post - 6.81/9.85
DTW - 146.0 ft.

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
220420 1030A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
——— 1031A	" " (Dup)	" "	(3) " "	" "	" "
——— 1032A	" " (FB)	" "	(3) " "	" "	" "
——— 1033A	NDMA/DMN/Bromacil by 607	ICE	(1) 1L Amber	0100301H	SRI
——— 1034A	" " (FB)	" "	(1) " "	" "	" "
——— 1045A	Chloride by 300.0	N/A	(1) 125 ml poly	N/A	ALS
——— 1046A	NO_2, NO_3 by 353.2	H_2SO_4/ICE	(1) 250 ml poly	211115	" "

* Also Craig Del Ferraro Helped on Sampling.

Continued from page N/A

Read and Understood By

Robert Burrows
Signed

4-20-22
Date

Signed

4-20-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-20-22

Page 1 of 1

Sample Location: 600-G-138

Pertinent Notes (if any): Task memo - 11114

Charge Number: XGMD

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Bromacil NDMA/DMN / 607	Chloride by 300.0	NO2, NO3, 353.2				Charge Number
220420 1030A	3	A	X							
—— 1031A (Dup)	3		X							
—— 1032A (FB)	3		X							
—— 1033A	1			X						
—— 1034A (FB)	1			X						
—— 1045A	1				X					
—— 1046A	1					X				

Sample Location:

Pertinent Notes (if any):

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	4-20-22 / 11:05			4-20-22 / 1100

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT B650-EFF-1

Notebook No. PFTS #10

Continued from page N/A

Frank Gallegos & Tim Moore present. Samples will be taken from a sampling port dedicated in bldg 650. Prior to sampling sampling port will be purged for one minute. Calboy "Plumefront"

Parameters	Meter ID	Buffers	Lot#	Exp
Time 2204150603	Ph/cond-Plumefront	7	- 4002691	8/22
Ph 7.81	Turb-Plumefront	10	- 4001005	6/22
Temp 25.0°c	" STD 9.75 NTU			
cond 1096 us/cm	" RDG 9.76 NTU			
Turb 0.28 NTU	" Lot#			
Ph pre 6.99-10.01 (18.2c)	" Exp 4/30/22			
Ph POST - 7.00/10.00				

Samples

Sample#	Analysis	Pres	Lot#	LAB	CONT.
2204150608	VOA by 8260 (4)	ICE & HCl	2621	ALS	(3) 40ml Vial
— 0609	" (FB)	"	"	"	"
— 0610	NDMA/DMN/vo by 607	ICE	0100301H	SWL	(1) 1L amber
— 0611	LL NDMA	"	"	"	"
— 0612	" (FB)	"	"	"	"

Continued from page N/A

Read and Understood By

Signed

Date 15 Apr 2022

Signed

Date 4-15-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-22 Page 1 of 1

Sample Location: B650-EFF-1

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	J04 by 8260 (LL)	NDMA/DMN/ D10 by 1607	LL NDMA					Charge Number Y6MΔ
ZE04150608	3	A	X							"
—— 0609 (FB)	3	A	X							"
—— 0610	1	A		X						"
—— 0611	1	A			X					"
—— 0612 (FB)	1	A			X					"

Sample Location:

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-15-22 (0830)			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. PFTS #10

PROJECT B650 - INF - 1

Continued from page N/A

Frank Gallegos & Tim Moore present. Samples will Be taken from a dedicated sampling port. Prior to sampling the sampling port will Be purged for one minute. Carboy " Plume front

Parameters	METER ID	Buffers	Lot#	Exp
Time - 2204150730	Ph/cond - Plumefront	7 -	4002691	8/22
Ph - 7.15	Turb - Plumefront	10	4 001005	6/22
Temp - 20.8°C	" STD			
cond - 1042 uS/cm	" RDG			
Turb - 0.22 NTUS	" LOT#			
PhPre - 6.98/10.00 (12.6)	" Exp			
Phpost - 7.00/10.00				

Samples

Sample#	Analysis	preserve	Lot#	LAB	CONT
2204150731	VOAs/8260	ICE & HCl	2621	ALS	(3) 40mL Vial
——0732	" (Dup)	"	"	"	"
——0733	" (FB)	"	"	"	"
——0734	ND MA/DMN/Bioby 607	ICE	0100301Hs	WRI	(1) Lt amber

Continued from page N/A

Read and Understood By

Signed **Date** 4-15-22

Signed **Date** 4-15-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-22 Page 1 of 1

Sample Location: B650-INF-1

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN by 625/607					Charge Number
									XGMD
220415 0731	3	A	X						〃
—— 0732 (Dup)	3	A	X						〃
—— 0733 (FB)	3	A	X						〃
—— 0734	1	A		X					〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-15-22 (0830)			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No.
Continued from page

ECT B655-EFF-2

Frank Gallegos & Tim Moore present. Samples [illegible] Be taken from a dedicated sampling port. Prior to sampling the port will Be purged for one minute col by "Plume front"

Parameters	METER ID	Buffers	LOT#	EXP
Time - 2204150530	Ph/cond - Plume front	7	4002694	8/22
Ph 7.95	Turb - Plume front	10	2001005	6/22
Temp 22.0°C	" STD - 9.75 NTU			
Cond 1109 us/cm	" RDG - 9.75 NTU			
Turb 0.20 NTU	" LOT# -			
Ph pre 7.00·10.00 (18.6°C)	" EXP - 4/30/22			
Ph post				

Samples

Sample#	Analysis	Pres.	Lot#	LAB	Cont.
2204150535	VOA by 8260 (L)	ICE & HCl	2621	ALS	(3) 40ml vial
— 0536	" (FB)	"	"	"	"
— 0537	NDMA/DMN/Bro by 607	ICE	01003091	WRL	(1) 1L amber
— 0538	LL NDMA	"	"	"	"
— 0539	" (FB)	"	"	"	"

Continued from page N/A

Read and Understood By

4/15-~~22~~ 22

4-15-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-22 EFF

Page 1 of 1

Sample Location: 3655-HE-2

Sample Number	# of Containers	Sample Matrix*	VOA's / 8260 (LL)	NDMA/DMA (DMn) Bio by 607	LC NDMA					Charge Number
Pertinent Notes (if any)										X 6MD
2204150535	3	A	X							"
— 0536 (FB)	3	A	X							"
— 0537	1	A		X						"
— 0538	1	A			X					"
— 0539 (FB)	1	A			X					"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
Pertinent Notes (if any)										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	4-15-22 (0830)		4-19-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

PROJECT B655-INF-2

Notebook No. PFTS#10

Continued from page N/A

Frank Gallegos & T. Moore present. Samples will Be taken from a dedicated sampling point prior to sampling port will Be purged for one minute. Carboy "Plume front"

Parameters		Meter ID	Buffers	LOT#	Exp
Time:	2204150541	Ph/cond - Plumefloat	7 -	4008691	6/22
Ph	7.06	Turb - Plumefloat	10 -	4 001005	6/22
Temp	23.2°c	" STD 9.75NTU			
Cond	1111 us/cm	" RDG			
Turb	0.18 NTU	" LOT#			
Phpre	7.01-10.00(20.6°c)	" Exp			
Phpost					

Samples

Sample#	Analysis	Pres.	LOT#	LAB	CONT
220415 0545	VOA by 8260	ICE HCl	2621	ALS	(3) 40ml vial
— 0546	" (TB)	"	"	"	"
— 0547	NDMA/DAN/Diox/607	ICE	0100301H	SWRI	(1) 1L amber

Continued from page N/A

Signed 15 Apr 2022 Date

Read and Understood By

Lori Munch Signed 4-15-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-22

Page 1 of 1

Sample Location: B655-INF-2

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA by 8260B	NDMA by 8070/607						X 6MD Charge Number
220415 0545	3	A	X							〃
— 0546 (FB)	3	A	X							〃
— 0547	1	A		X						〃

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-15-22 (0830)			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

Notebook No. 032 # 124 (c)

Continued from page ________

PROJECT BIM · 10 · 517

Marcus Aunlos & Bob Tufts present. Weather is breezy + warm. This well will be purged & sampled with a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy G-5

Calibrations

DO · Cal in 100% saturated air @ 636 mm/Hg.

Conductivity · Cal using 1413 us/cm STD.

PH · Cal using 4, 7, 10 Oakton Buffers.

Turb Meter ? #7 STD - 47.3 NTU RDG · 43.8 NTU Lot - 200445 Exp - 4/30/22

Parameters (time)	Temp (°C)	Cond (us/cm)	DO	ORP	PH	Turb (NTU)	DTW (ft)
1) 2204141350c	20.65	990	4.96	297	7.34	0.53	490.98
2) —— 1352c	20.72	992	4.99	300	7.34	0.58	〃
3) —— 1354c	20.55	989	5.02	302	7.35	0.67	〃

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2204141400c	VOA by 8260LL	HCl/Ice	(3) 40 ml vials	2621	Als
—— 1401c	〃 (FB)	〃	〃	〃	〃
—— 1402c	Low Level NDMA	Ice	(1) 1L Amber	010301H	SRI
—— 1403c	〃 (FB)	〃	〃	〃	〃

Initial DTW - 490.95'

Total Gallons Purged - 2 gal

Continued from page

Signed 4/14/22 Date

Read and Understood By

Signed 4-15-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/22

Page 1 of 1

Sample Location: BIM·10·517

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA						Charge Number
2204141400C	3	A	X							XGMO
1401C (FB)	3		X							
1402C	1			X						
1403C (FB)	1			X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4/14/22 @ 1500		Jon W Munch	4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

Notebook No. D-32#,123(A) 71

PROJECT BLM-14-327 ENV-0053

Continued from page N/A

Bob Tufts & Robert Burrows present. Weather is Warm & Windy. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a New Teflon discharge Hose. Water quality parameters will be monitored using a QED MP-20 Flow Cell + Water analyzer. Carboy - G-5 in use.

Calibrations

DO - Cal in saturated air @ 640 mm/Hg.

Conductivity - Cal using 1413 us/cm std. Solution.

pH - Cal using Oakton Buffers (4,7,10).

Turb meter - #7, Std. - 47.3(ntus), Rdg - 44.7(ntus), Lot# - 20044S, Exp - 7/30/22

Blind Controls

Sample #	Analysis	Preservative	Container	Lot #	Lab
220418 1423A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1424A	NDMA/DMN/Bromacil by 607	ICE	(1) 1L Amber	0100301 #	SRI
—— 1426A	Total Metals	HNO3/ICE	(2) 125 ml poly		ALS

Parameters (Time)	Temp (°C)	Cond (us/cm)	DO	ORP	pH	Turb (ntus)	DTW (ft)
1) 220418 1335 A	21.84	1.194	5.72	97	6.68	1.02	N/A
2) —— 1340 A	22.67	1.185	6.05	95	6.84	1.19	N/A
3) —— 1345 A	26.39	0.282	6.08	85	7.12	0.89	N/A

Samples

Sample #	Analysis	Preservative	Container	Lot #	Lab
220418 1346A	VOA by 8260	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1347A	" " (FB)	" "	(3) " "	" "	" "
—— 1348A	NDMA/DMN/Bromacil by 607	ICE	(1) 1L Amber	0100301 #	SRI
—— 1349A	Total Metals	HNO3/ICE	(2) 125 ml poly	211212	ALS
—— 1350A	Anions/Alk	ICE/Zero HS.	(2) " "	N/A	" "
—— 1351A	TDS by SM 2540C	ICE	(1) " "	N/A	" "
—— 1352A	Perchlorate by 6850	ICE/ 1/3 HS.	(1) " "	N/A	" "
—— 1353A	NO2, NO3 by 353.2	H2SO4/ICE	(1) " "	211115	" "

VOA's - 22mm139A / Total Metals - 22mm139C / 607 - 22mm139B

* Put on long purge due to not getting a Depth.

IOW - 1 1/2 gals.

Continued from page N/A

Read and Understood By

Robert Burrows 4-18-22

4-18-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-18-22

Page 1 of 1

Sample Location: BLM-14-327

Pertinent Notes (if any): TASK Memo-11110

Sample Number	# of Containers	Sample Matrix*	VOA by 8260	Bromacil/ NDMA/DMN/607	Total metals	Anions/Alk	TDS by SM 2540C			Charge Number XGMD
220418 1346A	3	A	X							↓
— 1347A (FB)	3	↓	X							↓
— 1348A	1	↓		X						↓
— 1349A	2	↓			X					↓
— 1350A	2	↓				X				↓
— 1351A	1	↓					X			↓
— 1423A (BC)	3	↓	X							↓

Sample Location: BLM-14-327

Pertinent Notes (if any): TASK Memo-11110

Sample Number	# of Containers	Sample Matrix*	Perchlorate 6850	NO2, NO3 by 353.2	Bromacil/ NDMA/DMN/607	Total Metals				Charge Number XGMD
220418 1352A	1	A	X							↓
— 1353A	1	↓		X						↓
— 1424A (BC)	1	↓			X					↓
— 1425A (BC)	2	↓				X				↓

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	4/18/22 - 14:40			4-19-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT BLM-39-385 WJI ENV-0020

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4955. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G.3

Sample	Analysis	Preservative	Container	Lot	Lab
2204061415Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 1416Y	~~Low Level NDMA~~ CD 607/Bromacil	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters
Time - 2204061500Y
PH - 8.16
Temp - 24.0°C
Cond - 985 us/cm
Turb - 1.75 NTU's
pH pre - 7.02/10.06 (26.4°C)
pH post - 7.04/10.06
DTW - 369.23 ft.
Atmos - 12.59 psia

Final
Time - 2204070918Y
PH - 7.96
Temp - 22.9°C
Cond - 971 us/cm
Turb - 1.35 NTU's
pH pre - 7.10/10.08 (18.0°C)
pH post - 7.12/10.07
DTW - 369.32 ft.
Atmos - 12.61 psia
IDW - 0

Meter ID
pH/cond - 61
Turb - 6
" std - 2.93
" rdg - 2.88
" lot - 200445
" Exp - 4/30/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204070810Y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 0811Y	607/Bromacil	ice	(1) 1L Amber	0100301H	SFI
——— 0845Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-12-12	ALS
——— 0846Y	Anions/Alk.	ice	"	N/A	"
——— 0915Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0916Y	Perchlorate by 6850	"	"	"	"
——— 0917Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Runs	1)	2)	3)	4)
	23.64	23.73	23.76	23.74
	25.50	25.60	25.71	25.62
	25.48	25.58	25.69	25.60
	23.65	23.74	23.73	23.73

Craig Del Ferraro 4/7/22
Signed Date

Read and Understood By
Signed Date 4-7-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4\6\22 Page 1 of 2

Sample Location: BLM-39-385

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			8260	607						
2204061415Y (EB)	3	A	✓							XGMD
1416Y (EB)	1	A		✓						"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerro	4/6/22 1525hrs.		Jon W Munch	4-7-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/7/22 Page 2 of 2

Sample Location: BLM-39-385

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk	TDS	Perchlorate	NO_2/NO_3	Charge Number
2204070810Y	3	A	✓							XGMD
——— 0811Y	1	A		✓						"
——— 0845Y	2	A			✓					"
——— 0846Y	2	A				✓				"
——— 0915Y	1	A					✓			"
——— 0916Y	1	A						✓		"
——— 0917Y	1	A							✓	"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/7/22 1110hrs.			4-11-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

ROJECT BLM-39-560 WJI ENV-0020

Notebook No. D64#129(y)

Continued from page

an Halvorsen & Craig Del Ferraro present. Weather is clear & warm. his zone will be sampled using 5 steam cleaned & triple rinsed, tainless steel sample tubes. Gen. in use. Probe #4955. Surface checks erformed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
2204190825y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 0826y	Total Metals	ice/HNO3	(2) 125ml poly's	21-12-12	"

nitial Parameters
ime - 2204190905y
H - 8.23
emp - 22.1°c
ond - 681 us/cm
urb - 1.09 NTU's
Hpre - 7.08/10.03 (19.6°c)
Hpost - 7.05/10.03
TW - 369.26 ft.
tmos - 12.51 psia

Final
Time - 2204191026y
PH - 8.21
Temp - 22.0°c
Cond - 672 us/cm
Turb - 0.85 NTU's
pHpre - 7.05/10.02 (21.4°c)
pHpost - 7.08/10.01
DTW - 369.43 ft.
Atmos - 12.48 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 61
Turb - 8
" std - 61.8
" rdg - 60.0
" lot - 200445
" Exp - 4/30/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204190930y	VOA by 8260	ice/HCL	(3) 40ml vials	2621	ALS
——— 0931y	" (Dupl.)	"	"	"	"
——— 0932y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——— 0955y	" (Dupl.)	"	"	"	"
——— 1025y	Total Metals	ice/HNO3	(2) 125ml poly's	21-12-12	ALS

*Samples were very aerated.

uns	1)	2)	3)	4)
	99.54	99.48	99.46	99.38
	100.44	100.39	100.37	100.29
	100.47	100.40	100.34	100.31
	99.54	99.46	99.43	99.34

Continued from page

Read and Understood By

Craig Del Ferraro 4/19/22 4-19-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/19/22

Page 1 of 1

Sample Location: BLM-39-560

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals				Charge Number
2204190825Y (EB)	3	A	✓						XGMD
——— 0826Y (EB)	2	A			✓				"
——— 0930Y	3	A	✓						"
——— 0931Y (Dupl.)	3	A	✓						"
——— 0932Y	1	A		✓					"
——— 0955Y (Dupl.)	1	A		✓					"
——— 1025Y	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFerro	4/19/22 1115hrs.			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32#/~~24~~(C) 37

PROJECT BLM-40-517 ENV.0053

Continued from page

MARCUS AVALOS & TONY TORREZ PRESENT THE WEATHER IS C[illegible] & COOL. This well will be purged & sampled with a dedicated Teflon bladder pump. Samples collected from a Teflon discharge Tube. Water Quality Param's collected from a Insitu water sampler.

CALIBRATIONS

DO SENSOR CAL'D IN 635 mm/Hg SATURATED AIR
COND CAL'D IN 1413 µs/cm STANDARD
pH CAL'D IN 4, 7, 10 buffers
TURB METER # 21 STD = 9.64 Rdg 9.59 LOT# 200445 Exp 4/30/22

~~Time~~ π

PARAM'S

#	TIME	TEMP (°C)	COND (µs/cm)	ORP	pH	TURB	DO	DTW*
1)	220404 1000C	19.93	809	285	7.65	0.81	4.08	N/A
2)	— 1002C	20.10	808	286	7.65	0.93	4.04	N/A
3	— 1004C	20.01	809	287	7.64	0.72	4.01	N/A

TRIP BLANKS

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT#	LAB
220404 0700C	8260	ICE/HCl	2621	(3) 40ml vials	ALS
— 0701C	LLNDMA	ICE	010301H	(1) 1L amber	SRI

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT.	LAB
220404 1010C	8260LL	ICE/HCl	2621	(3) 40ml vials	ALS
— 1011C	" (FB)	"	"	"	"
— 1012C	607	ICE	010301H	(1) 1L AMBER	SRI
— 1013C	(MS)	"	"	"	"
— 1014C	LLNDMA	"	"	"	"
— 1015C	(FB)	"	"	"	"
— 1016C	TOTAL METAL'S	ICE/HNO3	210910	(2) 125ml poly	ALS

* Depth probe wasn't long enough to get a Depth.

Continued from page

Read and Understood By

T. | 4.4.22 | | 4-6-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ~~Blm 40.512~~ TJ 4-4.22

Page 1 of 1

Sample Location: Blm·40.517

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	607	CLNDMA					XGmD Charge Number
220404 0700C (TB)	3	A	X							
— 0701C (TB)	1				X					
— 1010C	3		X							
— 1011C (FB)	3		X							
— 1012C	1			X						
— 1013C (MS)	1			X						
— 1014C	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	CLNDMA	TOTAL METALS						Charge Number
— 1015C	1	A	X							
— 1016C	2	A		X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	4.4.22 / 1100			4-6-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

WSTF 381C (05/2016)

PROJECT Blm·40-~~595~~ 595 Env.0053

Notebook No. D32 #124 (c)

Continued from page

Marcus Avalos & Tony Torrez present. The weather overcast & warm. This well will be purged & sampled with a dedicated Teflon bladder pump. Water Quality Param's collected from a Insitu water Analyzer

CALIBRATIONS

DO. sensor cal'd in 635 mmHg

Cond sensor cal'd in 1413 µs/cm standard.

pH sensor cal'd in 4, 7, 10 Buffers.

Turb meter # 21 std 9.64 Rdg 9.59 Lot # 200445 Exp. 4.30.22

Param's

Sample #	TEMP ~~Analysis~~	Cond (uS/cm)	ORP	pH	Turb	DO	*DTW
220404/1420C	21.64	549	292	7.31	0.77	4.99	N/A
—— 1422C	21.33	551	292	7.32	0.69	4.93	N/A
—— 1424C	21.15	556	292	7.33	0.83	4.90	N/A

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
220404/1430c	8260LL	ICE, HCl	2621	(3) 40ml vials	ALS
—— 1431c	" (FB)	"	"	"	"
—— 1432c	LLNDMA	ICE	010301H	(1) 1L Amber	SRI
—— 1433c	" (FB)	"	"	"	

* Depth probe couldn't get a depth.

Continued from page

Signed 4.4.22
Date

Read and Understood By

Signed 4-6-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: Blm-40-995

Page 1 of 1

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260CC	CCNDMA						Charge Number
										XGMD
220404 1430c	3	A	X							
— 1431c (FB)	3	|	X							
— 1432c	1	|		X						
— 1433c (FB)	1	|		X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-4-22/1530			4-5-22/0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______

OJECT BLM · 40 · 688

Notebook No. D32 # 124 (c)

Continued from page ________

arcus Aviles & Bob Tufts present. Weather is breezy & warm. This well will be purged sampled with a dedicated bladder pump. Samples will be collected using a new teflon scharge tube. Water quality parameters will be monitored using an In-Situ Aqua Troll 00. Easbay Co. 5

alibrations

O- Cal in 100% saturated air @ 636 mm/Hg.

nductivity- Cal using 1413 uS/cm STD.

H- Cal using 4,7,10 Oakton Buffers.

Turb Meter # 7 STD- 47.3 NTU RDG- 44.2 NTU Lot- 100445 Exp- 4/30/22

rameters (time)	Temp(°C)	Cond (uS/cm)	DO	ORP	pH	Turb (NTU)	DTW (ft)
220415 0900C	20.55	737	1.63	250	7.44	0.21	N/A
—— 0902C	20.43	736	1.71	253	7.43	0.19	:
—— 0904C	20.49	737	1.53	253	7.46	0.23	:

Samples

ample #	Analysis	Preserve	Container	lot	lab
220415 0910C	VOA by 8260LL	HCl/Ice	(3) 40 ml vials	2621	ATS
—— 0911C	: (FB)	:	:	:	:
—— 0912C	Low Level NDMA	Ice	(1) 1L Amber	A0301H	SRI
—— 0913C	: (MS)	:	:	:	:
—— 0914C	: (MSD)	:	:	:	:
—— 0915C	: (FB)	:	:	:	:

nitial DTW - N/A

otal Gallons Purged - 2 gal

Continued from page

Read and Understood By

Signed 4/15/22 Date

Signed 4-15-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/15/22

Page 1 of 1

Sample Location: BIM·40·688

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA						Charge Number
Pertinent Notes (if any)										
220415091 0C	3	A	X							XGMD
— 0911C (FB)	3	|	X							|
— 0912C	1	|		X						|
— 0913C (MS)	1	|		X						|
— 0914C (MSD)	1	|		X						|
— 0915C (FB)	1	|		X						|

Sample Location:

Sample Number	# of Containers	Sample Matrix*								Charge Number
Pertinent Notes (if any)										

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4/15/22 @ 1100			4-18-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

4

ROJECT BLM·41·420 WJI·ENU·0053

Notebook No. D32#R4C

Continued from page UA

l MONTES & MATT GARCIA PRESENT. WEATHER IS HOT & PARTLY CLOUDY. THIS WELL ILL BE PURGED W/ A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN ROM A NEW TEFLON TUBE. PARAMETERS WILL BE MONITORED USING INSITU AQUA R-LL 500. CARBOY G.5

ALIBRATIONS

O = IN 100% SAT. AIR

H = IN 4,7,10 BUFFERS

ND: IN STD Solution

RB: IN STD

INITIAL DTW - 353.79 (FT)

IDW - 2gal

RAMETERS	TEMP	COND	DO	PH	ORP	TURB	DTW(FT)
20419 1410C	33.36°C	1024	2.76	7.17	266.45	1.26	353.60
—— 1415C	33.38°C	1025	2.75	7.17	268.44	1.27	353.60
—— 1420C	33.40°C	1030	2.74	7.17	267.39	1.33	353.60

SAMPLES

AMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
20419 1430C	LL VOA 8260	ICE·HCL	3·40ML VIALS	2621	ALS
—— 1432C	'' FB	''	''	''	''
—— 1434C	LL NDMA	ICE	1LT AMBER	010301-1	SRI
—— 1440C	'' (DUP)	''	''	''	''
—— 1442C	'' (FB)	''	''	''	''

Continued from page NA

Signed 4·19·22 Date

Read and Understood By

Signed 4-20-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4·19·22

Page 1 of 1

Sample Location: BLM.41.420

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA LL8260	LL NDMA					XGMD Charge Number
220419 1430c	3	A	×						
→ 1432c (FB)	3	A	×						
→ 1434c	1	A		×					
→ 1440c (Dup)	1	A		×					
→ 1442c (FB)	1	A		×					

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4·19·22 3:30			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT BLM.41.670 ENU.0057

Continued from page NA

AL MONTES & MATT GARCIA PRESENT. WEATHER IS OVERCAST & WARM. THIS WELL WILL BE SAMPLED W/ A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A NEW TEFLON TUBE. PARAMETERS WILL BE MONITORED USING INSITU AQUA TROLL 500

CALIBRATIONS

DO SENSOR - IN 100% SAT. AIR

CARBOY: G-5

DTW - 393.89 FT

PH SENSOR - 4,7,10 BUFFERS

COND - INSITU STD SOLUTION

IDW - 2 gal

TURB - INSITU STD

PARAMETERS	TEMP	COND	DO	PH	ORP	TURB	DTW
2204190940C	24.6°C	1705 uS/cm	2.55	7.55	218.5	32.36 NTU	394.00 FT
——0945C	24.7°C	1735 "	2.40	8.01	218.5	32.41 "	394.00 FT
——0950C	24.7°C	1785 "	2.39	7.69	218.5	32.42 "	394.00 FT

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
2204190955C	VOA 8260 LL	ICE. HCL	3. 40ML VIALS	26421	ALS
——0956C	" " (FB)	ICE. HCL	"	"	"
——0959C	LL NDMA	ICE	1LT AMBER	010301H	SRL
——1110C	" (BC)	"	"	22MM140A	"
——1001C	" (DUP)	"	"	"	"
——1005C	" (FB)	"	"	"	"

Continued from page NA

Signed 4.19.22 Date

Read and Understood By

Signed 4-20-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.19.22

Page 1 of 1

Sample Location: BLM.41.670

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement VOA 8260 LL	LL NDMA						XGMD Charge Number
2204190955c	3	A	X							
—— 0956c (FB)	3	A	X							
—— 0959c	1	A		X						
—— 1110c (BC)	1	A		X						
—— 1001c (DUP)	1	A		X						
—— 1005c (FB)	1	A		X						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.19.22			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ________________

ROJECT BW·3·180 WJI·ENV·0053

Continued from page NA

Al MONTEJO & MATT GARCIA PRESENT. WEATHER IS WARM & SUNNY. THIS WELL WILL BE PURGED W/ A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A NEW TEFLON TUBE. PARAMETERS WILL BE MONITORED USING AN INSITU AQUA TROLL 500.

CARBOY G-5

CALIBRATIONS

DO = IN 100% SAT. AIR
PH = IN 4,7,10 BUFFERS
COND = INSITU STD. Sol.
TURB = " STD

INITIAL DTW - 170.05 FT
IDW - 1.5 gal

PARAMETERS	TEMP(°C)	COND	DO	PH	ORP	TURB(NTU)	DTW
2204~~19~~20 0935C	21.45	2208 uS/cm		7.75	121.76	13.70	170.90
——— 0940C	21.50	2212 uS/cm		7.75	121.8	12.90	"
——— 0945C	21.62	2270 uS/cm		7.75	121.9	12.80	"

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
2204200950C	VOA 8260	ICE·HCL	3-40mL VIALS	2621	ALS
——— 0951C	VOA 8260 (DUP)	"	"	"	"
——— 0952C	VOA 8260 (FB)	"	"	"	"
——— 0715C	VOA 8260 (TB)	"	"	"	"
——— 0959C	NDMA DWN BRO 607	ICE	1LT AMBER	010341H	SRL
——— 1005C	TOTAL METALS	ICE·HNO3	2·125mL Poly	210910	ALS
——— 1006C	" " (FB)	"	"	"	"

Continued from page NA

Signed 4·20·22

Read and Understood By

Signed 4-21-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.20.22

Page 1 of 1

Sample Location: BW·3·180

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement VOA 8260	NDMA 607	TOTAL METALS				Charge Number
2204200950c	3	A	×						
— 0951c DUP	3	A	×						
— 0952c FB	3	A	X						
— 0715c TB	3	A	X						
— 0959c	1	A		×					
— 1005c	2	A			X				
— 1006c FB	2	A			X				

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.20.22 1110			4-20-22 / 1100

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

ROJECT JER-1-483

Notebook No. D32 #122 (B)
Continued from page

Marcus Avalos & Tony Torrez present. Weather is breezy & warm. This zone will be urged & sampled using a Flute system. Purge pressure set @ 248 psi & sample pressure et @ 227 psi. Bubbler set @ 3 psi & stable @ 5 psi. At least 4 gallons will be purged prior to sampling. 15 min recovery time. Carboy G-5

Initial Parameters		Final
Time -	220405 1430B	220405 1450B
PH -	7.05	7.23
Temp -	19.8°c	20.1°c
ond -	1063 us/cm	1034 us/cm
Turb -	0.69 NTU	0.55 NTU
Hpre -	7.01/10.02/(29.2°c)	7.06/10.03
Hpost -	7.03/10.03	7.04/10.01
		IDW - 5 ga

Meter ID

PH/Cond - #60
Turb - #7
: STD - 47.3 NTU
= RDG - 46.0 NTU
= LOT - 200445
= Exp - 4/30/22

Samples

Sample #	Analysis	Preserve	Container	Lot	lab
220405 1440B	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	2621	Als
——— 1441B	= (FB)	:	:	:	:
——— 1442B	Low Level NDMA	Ice	(1) 1L Amber	103501	SRI
——— 1443B	= (FB)	:	:	:	:
——— 1444B	1,4-Dioxane 8270D	:	(1) 250 ml Amber	901210G	Als

Parameters prior to sampling		
Temp -	19.4°c	20.2
PH -	7.90	7.78
ond -	1073 us/cm	1022 us/cm
Turb -	0.48	0.62

Continued from page

Read and Understood By

Signed 4/5/22 Date

Signed 4-6-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/22

Page 1 of 1

Sample Location: JER.1.483

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260LL	LL NDMA	1,4-Dioxane				Charge Number
2204051440B	3	A	X						XGMD
—— 1441B (FB)	3		X						
—— 1442B	1			X					
—— 1443B (FB)	1			X					
—— 1444B	1				X				

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4/5/22 @ 1545			4-6-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

WSTF 381C (05/2016)

PROJECT JER.1.563

Continued from page ________

Marcus Avalos & Tony Torrez present. Weather is breezy & warm. This zone will be purged & sampled using a Flute system. Purge pressure set @ 248 psi & sample pressure set @ 227 psi. Bubbler set @ 3 psi & stable @ 5 psi. At least 4 gallons will be purged prior to sampling. 15 min recovery time. Carboy 4-5

Initial Parameters		Final	Meter ID	
Time	220405 1455 13	220405 1508 13	pH/Cond	#66
pH	7.74	7.85	Turb	#7
Temp	18.9°C	19.4°C	" STD	47.3 NTU
Cond	1080 uS/cm	1075 uS/cm	" RDG	46.0 NTU
Turb	0.50 NTU's	0.64	" LOT	200445
pH pre	7.01/10.02 (29.2°C)	7.06/10.03	" Exp	4/30/22
pH post	7.03/10.03	7.04/10.01		
		IDW - 5 gal		

Samples

Sample #	Analysis	Preserve	Container	lot	lab
220405 1500 13	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	2621	ALS
——— 1501 13	" (FB)	"	"	"	"
——— 1502 13	Low Level NDMA	Ice	(1) 1L Amber	903501	SRI
——— 1503 13	" (FB)	"	"	"	"
——— 1504 13	1,4-Dioxane 8270D	"	(1) 250 ml Amber	901206	ALS

Parameters prior to sampling

Temp	18.4°C	19.4°C
pH	7.85	7.94
Cond	1114 uS/cm	1093 uS/cm
Turb	1.11 NTU	0.78 NTU

Continued from page

4/5/22

Read and Understood By

4-6-22

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/22

Page 1 of 1

Sample Location: JER·1·563

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	LL NDMA	1,4-Dioxane				Charge Number
220405 1500B	3	A	X						XGMD
—— 1501B (FB)	3	↓	X						↓
—— 1502B	1	↓		X					↓
—— 1503B (FB)	1	↓		X					↓
—— 1504B	1	↓			X				↓

Analytical Requirement

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*							Charge Number

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4/5/22 @ 1545			4-6-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT JER-1-683

Notebook No. P32 # 122 (B)

Continued from page

Marcus Avalos & Tony Torrez present. Weather is breezy & warm. This zone will be purged d sampled using a Flute system. Purge pressure set @ 248 psi & sample pressure set @ 227 psi. Bubbler set @ 5 psi & stable w 5 psi. At least 4 gallons will be purged prior to sampling. 15 min recovery time. Carboy G5

Initial Parameters		Final
Time	2204051513B	2204051528B
H	7.89	7.74
Temp	19.2°c	19.1°c
ond	1055 µS/cm	1063 µS/cm
Turb	0.55 NTU	0.54 NTU
H pre	7.01 / 10.02 (24.2°c)	7.01/10.02
H post	7.03 / 10.03	7.03/10.01
		IDW - 5 gal

Meter ID

PH/Cond	#60
Turb	#7
" STD	47.3 NTU
" 20G	46.0 NTU
" LOT	200465
" Exp	4/30/22

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2204051520B	VOA by 8260 U	HCl/Ice	(3) 40ml vials	2621	Als
——1521B	" (FB)	"	"	"	"
——1522B	Low Level NDMA	Ice	(1) 1L Amber	103501	5122
——1523B	" (FB)	"	"	"	"
——1524B	1,4-Dioxane 8270	"	(1) 250ml Amber	9012106	Als

Parameters Prior to Sampling

emp	18.7°c	18.3°c
H	7.69	7.77
ond	1070 µS/cm	1067 µS/cm
Turb	0.44 NTU	0.69 NTU

Continued from page

Signed 4/5/22
Date

Read and Understood By

Lori W Munck 4-6-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/22 Page 1 of 1

Sample Location: JER·1·683

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	8260LL	LL NDMA	1,4-Dioxane					Charge Number
2204051520B	3	A	X							VGMD
——— 1521B (FB)	3		X							
——— 1522B	1			X						
——— 1523B (FB)	1			X						
——— 1524B	1				X					

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
MD G	4/5/22 @1545			

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

Notebook No. D32 #122(B) 83

PROJECT JER-2-504

Continued from page

Marcus Avalos & Tony Torrez present. The weather is clear & cool. This well will be purged & sampled using a flute sampling system. Purge pressure set @ 26.5 & sample pressure set @ 24.4 psi. A min of 4 gallons purged prior to sampling. 15 min recovery between cycles. Bubbler set @ 3 psi & stable @ 7 psi. Carboy 6.5

Param's pre sampling.

pH	8.20	8.18
Temp	19.1	19.9
Cond	937	955
Turb	0.65	0.64

Meter ID's
pH/Cond # 60
Turb # 7
STD = 47.3 NTU's
Rdg = 45.7 NTU's
Lot# 200445
Exp: 4-30-22

Initial	Final
220406 1410B	220406 1417B
pH 8.12	8.15
Temp 20.1	20.2 °c
Cond 948 µs/cm	951 µs/cm
Turb 0.61	0.64
pH pre 7.01/10.03	7.02/10.03
pH post 7.01/10.02	7.02/10.03

Samples (Trip Blanks)

Sample #	Analysis	Presev	Lot #	Cont	Lab
220406 0700B	8260LL	Ice/HCl	2621	(3) 40ml vials	ALS
— 0701B	1LNOMA	Ice	103501	(1) 1LT amber	SRI

Samples

Sample #	Analysis	Presev	Lot #	Cont	Lab
220406 1411B	8260LL	Ice/HCl	2621	(3) 40ml vials	ALS
— 1412B	" (FB)	"	"	"	"
— 1413B	1LNOMA	Ice	103501	(1) 1LT Amber	SRI
— 1414B	" (FB)	"	"	"	"
— 1415B	SVOA Sim	"	901216	(1) 250ml Amber	ALS
— 1416B	" ~~(FB)~~ (Dup)	"	"	"	"

Continued from page

Read and Understood By

Signed 4.6.22 Date

Signed 4-7-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-22

Page 1 of 1

Sample Location: JER-2-504

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260LL	LLNDMA	504A Sim				Charge Number
									X6MD
2204060700B	3	A	X						
— 0701B	1	|		X					
— 1411B	3	|	X						
— 1412B (FB)	3	|	X						
— 1413B	1	|		X					
— 1414B (FB)	1	|		X					
— 1415B	1	|			X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	504A Sim							Charge Number
— 1416B	1	A								

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-	4·6·22/1535			4-7-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT JER-2-584

Notebook No. D32#122(B)

Continued from page ______

MARCUS AVALOS & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. PURGE PRESSURE SET @ 265 & SAMPLE PRESSURE SET @ 244. A MIN OF 4 GALLONS PURGED PRIOR TO SAMPL. 15 MINS OF RECOVERY BETWEEN CYCLES. BUBBLER SET @ 3psi & STABLE @ 7 CARBOY G-5

	PARAM'S PRE SAMPLING	
pH	7.86	7.80
TEMP	18.5	18.9°c
COND	1005	996
TURB	0.51	0.53
~~pH pre #~~		
~~pH post #~~		

METER ID'S

pH/COND # 60

TURB # 7

" STD = 47.3

" RDG = 45.7

" LOT# : 200445

" EXP = 4-30-22

	INITIAL	FINAL
	220406 1430B	220406 1436B
pH	7.88	7.94
TEMP	19.4°c	19.5°c
COND	990 µs/cm	993 µs/cm
TURB	0.55	0.50
pH pre	7.03/10.02	7.03/10.02
pH post	7.03/10.03	7.05/10.02

SAMPLES

SAMPLE #		ANALYSIS	PRESERV	LOT #	CONT	LAB
220406	1431B	8260LL	ICE/HCL	2621	(3) 40ml vials	ALS
———	1432B	" (FB)	"	"	"	"
———	1433B	LLNDMA	ICE	103501	(1) 1LT Amber	SRE
———	1434B	" (FB)	"	"	"	"
———	1435B	SVOA Sim	"	901 2106	(1) 250ml Amber	ALS

Continued from page

Read and Understood By

Signed 4-6-22 Date

Signed 4-7-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.6.22

Page 1 of 1

Sample Location: JER.2-584

Sample Number	# of Containers	Sample Matrix*	8260LL	CLNDMA	SVOA SIM				Charge Number
Pertinent Notes (if any)									XGMD
220406 1431B	3	A	X						
—— 1432B (FB)	3	|	X						
—— 1433B	1	|		X					
—— 1434B (FB)	1	|		X					
—— 1435B	1	|			X				

Sample Location:

Sample Number	# of Containers	Sample Matrix*								Charge Number
Pertinent Notes (if any)										

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	4-6-22/1535		4-7-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

Notebook No. D32 #122 (B) 85

PROJECT JER-2-684

Continued from page

MARCUS AVALOS & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. PURGE PRESSURE SET @ 265 & SAMPLE PRESSURE @ 244 psi. 15 MINS OF RECOVERY BETWEEN CYCLES. CARBOY 6.5.

PARAM'S PRE SAMPLING

pH	8.02	7.90
TEMP	17.4°c	18.0°c
COND	~~0.31 NTU~~ 1017 µs/cm	1005 µs/cm
TURB	0.31	0.63

METER ID'S

pH/COND #60
TURB #7
" STD = 47.3
" RDG = 45.7
" LOT# 200445
" EXP: 4.30.22

	INITIAL	FINAL
	220406 1450B	220406 1456B
pH	7.94	7.99
TEMP	18.3°c	18.5°c
COND	1010 µs/cm	1008
TURB	0.49	0.58
pH PRE	7.03/10.03	7.03/10.03
pH POST	7.03/10.02	7.03/10.03

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
220406 1451B	8260LL	ICE, HCl	2621	(3) 40mL VIALS	A/S
— 1452B	" (FB)	"	"	"	"
— 1453B	LLNDMA	ICE	103561	(1) 1L AMBER	SRI
— 1454B	" (FB)	"	"	"	"
— 1455B	SVOA SIM	"	9012106	(1) 250ml AMBER	A/S

Continued from page

Read and Understood By

Signed 4.6.22 Date

Signed 4.7.22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-22

Page 1 of 1

Sample Location: JER-2-684

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	CCNDMA	SVOA Sim					Charge Number
220406 1451B	3	A	X							X6MA
1452B (FB)	3		X							
1453B	1			X						
1454B (FB)	1			X						
1455B	1				X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4-6-22/1535		Jon W Munch	4-7-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT JP-1-424 WJI ENV-0053

Notebook No. D32 #123 (A)

Continued from page

Marcus Avalos, Bob Tufts, & Craig Del Ferraro present. Weather is clear and cool. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy G1 in use.

Calibrations

DO - calibrated in saturated air @ 640 mm/Hg.

Conductivity - calibrated using 1413 us/cm std. solution.

PH - calibrated using Oakton buffers (4, 7, 10).

Turbidity meter # 21 std - 9.64 rdg - 9.68 lot - 200445 Exp - 4/30/22

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2204010745A	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0746A	LL NDMA	ice	(1) 1L Amber	0100301H	SRI

Parameters (time)	temp (°c)	cond (µs/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
2204010915A	20.20	975.43	4.19	283	7.44	1.25	413.60
——— 0918A	20.43	971.10	4.10	282	7.42	0.75	413.60
——— 0921A	20.58	978.54	4.01	280	7.42	0.64	413.60

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204010925A	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0926A	* " (MS) *	"	"	"	"
——— 0927A	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 0928A	" (FB)	"	"	"	"
——— 0929A	VOA by 8260 LL (FB)	ice/HCL	(3) 40ml vials	2621	ALS
——— 0930A	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	"
——— 0931A	" (Dupl.)	"	"	"	"
——— 0932A	Anions/Alk.	ice	"	N/A	"
——— 0933A	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0934A	Perchlorate by 6850	"	"	"	"
——— 0935A	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Initial DTW - 413.34 ft. Total gallons purged - 1.5

Continued from page

Craig Del Ferraro 4/1/22
Signed Date

Read and Understood By

4.4.22
Signed

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/22

Page 1 of 1

Sample Location: JP-1-424

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals					Charge Number
220401~~0925A~~ co 0745A (TB)	3	A	✓							XGMD
——— 0746A (TB)	1	A		✓						"
——— 0925A	3	A	✓							"
——— 0926A (MS)	3	A	✓							"
——— 0927A	1	A		✓						"
——— 0928A (FB)	1	A		✓						"
——— 0929A (FB)	3	A	✓							"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
2204010930A	2	A	✓							XGMD
——— 0931A (Dupl.)	2	A	✓							"
——— 0932A	2	A		✓						"
——— 0933A	1	A			✓					"
——— 0934A	1	A				✓				"
——— 0935A	1	A					✓			"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTerno	4/1/22 1125hrs.			4-4-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ________

WSTF 381C (05/2016)

PROJECT JP-2-447 WJI ENV-0053

Notebook No. D32 #123(A)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy G1 in use.

Calibrations

DO - calibrated in saturated air @640mm/Hg.
Conductivity - calibrated using 1413us/cm std. solution.
PH - calibrated using Oakton buffers (4, 7, 10).
Turbidity meter #21 std - 9.64 rdg - 9.68 lot - 200445 Exp - 4/30/22

Parameters (time)	temp (°c)	cond (us/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 220401 1045A	21.31	1009.95	4.82	254	7.25	1.78	414.52
2) ——— 1048A	21.27	1005.81	4.67	255	7.28	2.04	414.52
3) ——— 1051A	21.34	1012.76	4.62	255	7.29	1.69	414.52

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220401 1055A	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1056A	" (FB)	"	"	"	"
——— 1057A	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1058A	" (FB)	"	"	"	"
——— 1059A	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS
——— 1100A	" (MS)	"	"	"	"

Initial DTW - 414.29 Ft.   Total gallons purged - 1.5

Continued from page

Craig Del Ferraro   4/1/22
Signed   Date

Read and Understood By

4-4-22
Signed   Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/22

Page 1 of 1

Sample Location: JP-2-447

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals				Charge Number
2204011055A	3	A	✓						XGMD
—— 1056A (FB)	3	A	✓						"
—— 1057A	1	A		✓					"
—— 1058A (FB)	1	A		✓					"
—— 1059A	2	A			✓				"
—— 1100A (MS)	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/1/22 1125 hrs.			4-4-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

WSTF 381C (05/2016)

PROJECT SP-3-509 ENV-0053

Continued from page ______

Dan Halvorsen & Matt Garcia present. Weather is Clear and Cool. This Well will be purged and Sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using an In-Situ Aqua-Troll 500. Carboy 6 1/2 in use.

Calibrations:

Do Sensor = In 100% Saturated Air

PH Sensor = Using In-Situ Buffers (4,7,10)

Conductivity = Using In-Situ

Turbidity = Using In-Situ

Parameters (Time)	TEMP	COND	DO	PH	ORP	TURB	DTW (ft
2204140940A	20.70	0.055	7.05	7.41	204	0.59	N/A
——— 0942A	20.68	0.054	6.99	7.31	201	0.54	"
——— 0944A	20.69	0.055	6.88		204	0.59	"

Trip Blanks

Sample #	Analysis	Preserve	Container	LOT	LAB
2204140700A	VOCs 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
——— 0701A	NDMA LL	Ice	(1) 1L Amber	103501	SR

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
2204140952A	VOCs 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
——— 0953A	" " ~~NDMA LL~~ FB	Ice/HCl	" " ~~(1) 1L Amber~~	" ~~103501~~	ALS ~~SR~~
——— 0954A	NDMA LL	Ice	(1) 1L Amber	103501	SR
——— 0955A	" " (FB)	"	"	"	"

IDW = 3 gal.

Continued from page

Read and Understood By

4.14.2022

Signed **Date**

Jon W Munck 4-15-22

Signed **Date**

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-2022

Page 1 of 1

Sample Location: 38-3-509

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA LL						Charge Number
										XGMW
2204140700 A TB	3	A	X							
— 0701 A TB	1			X						
— 0952 A	3		X							
— 0953 A FD	3		X							
— 0954 A	1			X						
— 0955 A FB	1			X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-14-2022 1500			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT JP-3-689 ENV-0053

Continued from page

Dan Halvorsen & Matt Garcia present. Weather is Clear and Warm. This Well will be purged and sampled using a dedicated bladder pump. ~~Samples~~ Parameters will be collected using an In-Situ Aqua-Troll 500. Samples will be collected using a new Teflon discharge hose. Carboy G1 in use.

Calibrations:

DO Sensor: In 100% Saturated air.

PH Sensor: Using In-Situ Buffer - 4,7,10

Conductivity: Using In-Situ

Turbidity: Using In-Situ

Parameters (Time)	Temp	Cond (mS/cm)	DO	PH	ORP	Turb.	DTW (ft)
220414 1340 A	23.87	1.019	6.57	8.96	232.	1.41	
——— 1342 A	23.82	1.017	6.52	8.91	229	1.40	
——— 1344 A	23.84	1.009	6.53	8.94	231	1.43	

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	Lab
220414 1348 A	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
——— 1349 A	" " (FB)	"	"	"	"
——— 1350 A	NDMA LL	Ice	(1) 1L Amber	103501	SRI
——— 1351 A	" " (FB)	"	"	"	"

IDW: 3 gal.

Continued from page

Signed 4-14-2022 Date

Read and Understood By

Signed 4-19-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-2022

Page 1 of 1

Sample Location: JP-3-689

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA L						Charge Number XGMY
2204141348 A	3	A	X							
1349 A FB	3		X							
1350 A	1			X						
1351 A FB	1			X						

Sample Location:

Analytical Requirement

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-14-2022 1500			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________________

PFE-2

Notebook No. PFC
Continued from page N/A

Frank Gallegos & Tim Moore present. This well will be purged for one minute to sampling then it will be sampled from a dedicated sampling port. Carboy "Plume front"

Parameters	METER ID	Buffers	LOT#	Exp
Time 2204190912	Ph/Cond-Plumefront	7 -	4002691	8/22
Ph 7.20	Turb-Plumefront	10 -	4001005	6/22
Temp 25.3°C	" STD 9.75NTU			
Cond 1093uS/CM	" RDG 9.77NTU			
Turb 1.60NTU	" LOT# N/A			
Ph Pre 7.00-10.01 (21.7°C)	" EXP 4/30/22			
Ph POST				

Samples

Sample ID	Analysis	Pres.	Lot #	LAB	CONT.
2204190918	VOA by 8260	ICE & HCl	U621	ALS	③ 40mL v.o
— 0919	" (FB)	"	"	"	"
— 0920	NDMA/DMN/Bio by 607	ICE	0100301A	SWRI	(1) (1am

Continued from page N/A

Signed 19 Apr 2022 Date

Read and Understood By

Jon W Munch Signed 4-20-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 1 of 1

Sample Location: PFE-2

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607	LOW LEVEL NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	XGMD
2204190918	3	A	X							"
— 0919 (FB)	3	A	X							"
— 0920	1	A			X					"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number
			PERCHLORATE 6850	NO_2/NO_3 353.2						XGMD

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	4-19-22 (1030)		4.20.22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT PFEMA

Notebook No. PFTS #1

Continued from page N/A

Frank Gallegos & Tim Moore present. This well will be pulsed for one minute before sampling after pulsing samples will be taken from a dedicated sampling port. Carboy "Plumefront"

Parameters	Meter ID	Buffers	LOT#	Exp
Time 2204150800	Ph/Cond - Plumefront	7 -	4002691	8/22
Ph 6.93	Turb - Plumefront	10 -	4001005	6/22
Temp 24.0°C	" STD 9.75 NTU			
Cond 1090 us/cm	" RDG 9.79 NTU			
Turb 1.28 NTU	" LOT#			
Ph pre 7.00-10.00 (18.1°C)	" Exp 4/30/22			
Ph post				

Samples

Sample ID#	Analysis	Pres	LOT#	LAB	CONT
2204150805	VOA by 8260	ICE & HCl		ALS	(3) 40ml (vial)
— 0806	" (FB)	"	"	"	"
— 0807	NDMA/DMN/Br by 607	ICE		SWRI	(1) L + amber

Continued from page N/A

Read and Understood By

Signed

15 Apr 2022 Date

Signed

4-15-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-22

Page 1 of 1

Sample Location: PFE-4A

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOA by 8260	NDMA/DMN/BIO by 607						X GMD Charge Number
2204150805	3	A	X							''
—— 0806 (FB)	3	A	X							''
—— 0807	1	A		X						''

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-15-22 (0830)			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

Notebook No.
Continued from page

onic Gallegos & Tim Moore present
Will Be taken from a dedicated s
port after it is purged for one m
Car bay "Plume front"

Parameters		Meter ID	Buffers	Lot #
Time	220419 0847	Ph/cond-Plumefront	7-	4002691
Ph	7.51	Turb-Plumefront	10-	4001005
Temp	24.7°c	" STD 9.75 NTU		
Cond	1015us/cm	" RDG 9.76 NTU		
Turb	1.88 NTU	" Lot #		
Ph pre	7.00-10.00 (19.9°c)	" Exp 4/30/22		
Ph post				

Samples

Sample #	Analysis	Pres	Lot #	LAB	CONT
220419 0852	VOA by 8260	ICE & HCl	2621	ALS	(3) 40ml Vial
0853	" (Dup)	"	"	"	"
0854	" (FB)	"	"	"	"
0855	NDMA/DMN/Bio by 607	ICE	01003014	SWRL	① Lt amber
0856	" (Dup)		"	"	"

Continued from page N/A

Signed

19 Apr 2022
Date

Read and Understood By

Lori Mumick
Signed

4-20-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 1 of 1

Sample Location: PFE-5

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement VOA 8260	LL-VOA 8260LL	NDMA/DMN/BROMACIL 607	LOW LEVEL NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	XGMD Charge Number
22041900852	3	A	X							"
—— 0853 (Dup)	3	A	X							"
—— 0854 (FB)	3	A	X							"
—— 0855	1	A			X					"
—— 0856 (Dup)	1	A			X					"

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement PERCHLORATE 6850	NO_2/NO_3 353.2						XGMD Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	4-19-22 (1030)		4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT PFE-7

Notebook No. PPETS #10 **59**

Continued from page N/A

Frank Gallegos & Tim Moore present. Samples will be taken from a dedicated sampling port after one minute of purging. Cowboy: Plmefront

Parameters		Meter ID	Buffers	Lot#	Exp
Time	2204190945	Ph/cond-Plmefront 7-4007691			8/22
Ph	7.28	Turb-Plmefront 10-4001005			6/22
Temp	24.9°c	" STD 9.75 NTU			
cond	1074 us/cm	" RDG 9.73 NTU			
Turb	0.26 NTU	" Lot# N/A			
Ph pre	7.00·10.00 (22.1c)	" Exp 4/30/22			
Ph post					

Samples

Sample#	Analysis	~~Pres~~	Lot#	LAB	CONT
2204190950	VOA by 8260	ICE & HCl	2624	ALS	(3) 40mL Vial
— 0951	" (FB)	"	"	"	"
— 0952	NDMA (DMN/Bro by 607)	ICE	0100304H	SWRI	(1) Lt amber
— 0953	LCNDMA	"	"	"	"
— 0954	" (Dup)	"	"	"	"
— 0955	" (FB)	"	"	"	"

Continued from page N/A

Read and Understood By

Tim M

Signed

19 Apr 2022

Date

Jon W Muench

Signed

4-20-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 1 of 1

Sample Location: PFE-7

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607	LOW LEVEL NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	XGMD Charge Number
2204190950	3	A	X							〃
0951 (FB)	3	A	X							〃
0952	1	A			X					〃
0953	1	A				X				〃
0954 (Dup)	1	A				X				〃
0955 (FB)	1	A				X				〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO$_2$/NO$_3$ 353.2						XGMD Charge Number

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	4-19-22 (1030)		4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

Notebook No. D-32#123(A) 73
Continued from page N/A

PROJECT PL-1-486 ENV-0053

Bob Tufts and Robert Burrows present. Weather is cloudy & windy & warm. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using a QED MP-20 Flow Cell and Water Analyzer. Carboy G-1 in use.

Calibrations
DO - Cal in saturated air @ 640 mm/Hg.
Conductivity - Cal in 1413 (us/cm) std. solution.
pH - Cal using Oakton Buffers (4,7,10).
Turb meter - 7#, std. 47.3 (ntu's), Rdg-48.2 (ntu's), Lot#-200415, Exp- 4-30-22

Initial DTW - 485.90 ft
Final DTW - " "

Parameters (Time)	Temp (°C)	Cond (us/cm)	DO	ORP	pH	Turb (ntu's)	DTW (Ft)
1) 220419 1435 A	22.57	0.981	6.65	84	7.75	0.81	N/A *
2) —— 1440 A	22.86	1,010	6.78	83	7.72	1.02	N/A
3) —— 1445 A	22.94	1,022	7.24	83	7.69	1.06	N/A

Samples

Sample #	Analysis	Preservative	Container	Lot#	Lab
220419 1512 A	VOAs by 8260 LL	HCl/ICE	(3) 40 ml vials	2621	ALS
—— 1513 A	" " (FB)	" "	(3) " "	" "	" "
—— 1514 A	Low level NDMA	ICE	(1) 1L Amber	010031A	SRI
—— 1516 A	" " (FB)	" "	(1) " "	" "	" "
—— 1517 A	NDMA/DMN/Bromacil by 607	" "	(1) " "	" "	" "
—— 1518 A	Total metals	HNO3/ICE	(2) 125 ml poly	211212	ALS

IDW - 1½ gal.

* Put on long purge due to not getting a depth.

Continued from page N/A

Read and Understood By

Robert Burrows 4-19-22
Signed Date

Lori Wunch 4-20-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-19-22

Page 1 of 1

Sample Location: PL-1-486

Pertinent Notes (if any): TASK Memo- 11113

Sample Number	# of Containers	Sample Matrix*	VOA by 8260 LL	Lowlevel NDMA	Bromacil Aspon/DMN/607	Total Metals				Charge Number
										X GmD
220419 1512A	3	A	X							↓
— 1513 A (FB)	3	↓	X							↓
— 1514 A	1	↓		X						↓
— 1516 A (FB)	1	↓		X						↓
— 1517 A	1	↓			X					↓
— 1518 A	2	↓				X				↓

Sample Location:

Pertinent Notes (if any):

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Robert Burrows	4-19-22/			4-20-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

Notebook No. D64#129(y)
Continued from page

PROJECT PL-6-545 WJI ENV-0020

Tony Torrez & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Ren. in use. Probe #4955. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
2204140950y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0951y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters		Final		Meter ID	
Time	- 2204141025y	Time	- 2204141440y	pH/Cond	- 61
PH	- 8.37	PH	- 8.30	Turb	- 6
Temp	- 22.3°c	Temp	- 22.8°C	" Std	- 2.93
Cond	- 1015us/cm	Cond	- 1027us/cm	" rdg	- 2.98
Turb	- 0.80NTU's	Turb	- 0.64NTU's	" lot	- 200445
pH pre	- 7.09/10.04 (19.5°c)	pH pre	- 7.01/9.95 (27.0°c)	" Exp	- 4/30/22
pH post	- 7.12/10.04	pH post	- 7.03/9.94		
DTW	- 475.16ft.	DTW	- 475.28ft.		
Atmos	- 12.57psia	Atmos	- 12.51psia		
		IDW	- 1/2 gal.		

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204141300y	VOA by 8260LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1301y	607/Bromacil	ice	(1) 1L Amber	0100301H	SRI
——— 1330y	Low Level NDMA	"	"	"	"
——— 1405y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-12-12	ALS
——— 1406y	Anions/Alk.	ice	"	N/A	"
——— 1407y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1408y	Perchlorate by 6850	"	"	"	"
——— 1409y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-09-20	"

Runs	1) 47.81	2) 47.76	3) 47.75	4) 47.72	5) 47.68
	55.93	55.92	55.92	55.92	55.94
	55.91	55.91	55.93	55.89	55.91
	47.81	47.79	47.76	47.69	47.72

Continued from page

Craig Del Ferraro 4/14/22
Signed Date

Read and Understood By

4-15-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/22

Page 1 of 1

Sample Location: PL-6-545

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions/Alk.			Charge Number
2204140950Y (EB)	3	A	✓							XGMD
——0951Y (EB)	1	A			✓					"
——1300Y	3	A	✓							"
——1301Y	1	A		✓						"
——1330Y	1	A			✓					"
——1405Y	2	A				✓				"
——1406Y	2	A					✓			"

Sample Location: PL-6-545

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
2204141407Y	1	A	✓							XGMD
——1408Y	1	A		✓						"
——1409Y	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/14/22 / 1500 hrs.			4-15-22 / 0930

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

ROJECT PL-6-725 WJI ENV-0020

Notebook No. D64#129 (y)

Continued from page

ony Torrez & Craig Del Ferraro present. Weather is clear, cool, & breezy. This zone vill be sampled using 5 steam cleaned & triple rinsed, stainless steel sample ubes. Gen. in use. Probe # 4955. Surface checks performed on probe prior to sampling.

Trip blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
2204130815y	VOA by 8260LL	ice/HCL	(3)40ml vials	2621	ALS
——0816y	Low Level NDMA	ice	(1)1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
2204130915y	VOA by 8260LL	ice/HCL	(3)40ml vials	2621	ALS
——0916y	Low Level NDMA	ice	(1)1L Amber	0100301H	SRI

Initial Parameters

Time - 2204130955y
PH - 8.53
emp - 19.7'c
ond - 1191us/cm
urb - 1.41NTU's
Hpre - 7.14/10.10 (13.2°c)
Hpost - 7.15/10.12
DTW - 475.00ft.
Atmos - 12.56psia

Final

Time - 2204131414y
PH - 8.60
Temp - 20.3'c
Cond - 1204us/cm
Turb - 1.24NTU's
pH pre - 7.10/10.06 (18.9°c)
pH post - 7.12/10.04
DTW - 475.16ft.
Atmos - 12.53psia
IDW - 1/2 gal.

Meter ID

pH/cond - 61
Turb - 6
" std - 2.93
" rdg - 3.02
" lot - 200445
" Exp - 4/30/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103981	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220413 1020y	VOA by 8260LL	ice/HCL	(3)40ml vials	2621	ALS
—— 1021y	607/Bromacil	ice	(1)1L Amber	0100301H	SRI
—— 1050y	Low Level NDMA	"	"	"	"
—— 1051y	Total Metals	ice/HNO3	(2)125ml poly's	21-12-12	ALS
—— 1410y	Anions/Alk.	ice	"	N/A	"
—— 1411y	TDS by SM2540C	"	(1)125ml poly	"	"
—— 1412y	Perchlorate by 6850	"	"	"	"
—— 1413y	NO2/NO3 by 353.2	ice/H2SO4	(1)250ml poly	21-09-20	"

Continued from page

Runs 1) ~~126.42 134.46~~ 2) ~~126.39 134.47~~ 3) ~~126.35 134.51~~ 4) ~~126.25 134.54~~
134.49 126.40 134.51 126.36 134.51 126.30 134.52 126.33

Read and Understood By

Craig Del Ferraro 4/13/22
Signed Date

4-14-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4\13\22

Page 1 of 1

Sample Location: PL-6-725

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
2204130815Y (TB)	3	A	✓							XGMD
——0816Y (TB)	1	A			✓					〃
——0915Y (EB)	3	A	✓							〃
——0916Y (EB)	1	A			✓					〃
——1020Y	3	A	✓							〃
——1021Y	1	A		✓						〃
——1050Y	1	A			✓					〃

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
2204131051Y	2	A	✓							XGMD
——1410Y	2	A		✓						〃
——1411Y	1	A			✓					〃
——1412Y	1	A				✓				〃
——1413Y	1	A					✓			〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig [illegible]	4/13/22 / 1435 hrs			4-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

PROJECT PL-10-484 WJI ENV-0020

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. this zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Generator in use. Probe #2213. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
2204051300y	VOA by 8260LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1301y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters	Final	Meter ID
Time - 2204051335Y	Time - 2204051446Y	pH/cond - 61
PH - 8.24	PH - 8.34	Turb - 6
Temp - 24.4°c	Temp - 24.8°c	" std - 2.93
Cond - 1069 us/cm	Cond - 1073 us/cm	" rdg - 2.84
Turb - 1.26 NTU's	Turb - 1.13 NTU's	" lot - 200445
pH pre - 7.02/10.06 (23.7°c)	pH pre - 6.96/10.01 (28.0°c)	" Exp - 4/30/22
pH post - 7.03/10.04	pH post - 6.95/10.02	
DTW - 464.95 ft.	DTW - 465.04 ft.	
Atmos - 12.27 psia	Atmos - 12.30 psia	
	IDW - 1 gal.	

Buffers	Lot	Exp
7	2108656	2/23
10	4103681	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204051410y	VOA by 8260LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1411y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1412y	1,4 Dioxane by 8270D	"	(1) 250ml amber	90121-06	ALS
——— 1413y	" (FB)	"	"	"	"
——— 1445y	Total Metals	ice/HNO3	(2) 125ml poly's	21-09-10	"

Runs	1)	2)	3)
	23.44	23.49	23.50
	21.51	21.57	21.59
	21.49	21.58	21.60
	23.48	23.46	23.48

Continued from page

Craig Del Ferraro 4/5/22

Read and Understood By

4-6-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/22

Page 1 of 1

Sample Location: PL-10-484

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Dioxane	Total Metals				Charge Number
2204051300Y (EB)	3	A	✓							XGMD
——— 1301Y (EB)	1	A		✓						"
——— 1410Y	3	A	✓							"
——— 1411Y	1	A		✓						"
——— 1412Y	1	A			✓					"
——— 1413Y (FB)	1	A			✓					"
——— 1445Y	2	A				✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFiumo	4/5/22 1520hrs			4-6-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

ROJECT PL-10-592 WJI ENV-0020

Notebook No. D64 #129(y)

Continued from page

ob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be ampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. obe #2213. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
2204050810y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

30 Min. Equipment Blanks - Carboy G3

ample	Analysis	Preservative	Container	Lot	Lab
2204050900y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0901y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

nitial Parameters
ime - 2204050945y
H - 8.42
mp - 22.9°c
ond - 1084us/cm
rb - 1.24NTU's
H pre - 7.09/10.12 (15.5°c)
t post - 7.11/10.13
TW - 464.81ft.
tmos - 12.26psia

Final
Time - 2204051024y
PH - 8.36
Temp - 23.1°c
Cond - 1071us/cm
Turb - 1.15 NTU's
pH pre - 7.05/10.08 (20.0°c)
pH post - 7.04/10.09
DTW - 464.95ft.
Atmos - 12.24psia
IDW - 1 gal.

Meter ID
pH/Cond - 61
Turb - 6
" std - 2.93
" rdg - 2.84
" lot - 200445
" Exp - 4/30/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

ample	Analysis	Preservative	Container	Lot	Lab
2204051020y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1021y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
———. 1022y	1,4 Dioxane by 8270D	"	(1) 250ml amber	90121-06	ALS
——— 1023y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	"

uns	1)	2)
	70.51	70.37
	68.36	68.27
	68.33	68.24
	70.48	70.35

Continued from page

Craig Del Ferraro
Signed

4/5/22
Date

Read and Understood By

Signed

4-6-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/22 Page 1 of 1

Sample Location: PL-10-592

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Dioxane	Total Metals				Charge Number
220405 0810Y (TB)	1	A		✓						XGMD
——— 0900Y (EB)	3	A	✓							″
——— 0901Y (EB)	1	A		✓						″
——— 1020Y	3	A	✓							″
——— 1021Y	1	A		✓						″
——— 1022Y	1	A			✓					″
——— 1023Y	2	A				✓				″

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/5/22 1120 hrs.			4-6-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: __________

WSTF 381C (05/2016)

PROJECT PL-10-813 WJI ENV-0020

Notebook No. D64 #129(Y)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 2 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe#2213. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
220404 0950Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 0951Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI

Initial Parameters	Final	Meter ID
Time - 2204041045Y	Time - 2204041303Y	pH/Cond - 61
PH - 8.81	PH - 8.73	Turb - 6
Temp - 22.9°c	Temp - 23.1°c	" std - 2.93
Cond - 1007us/cm	Cond - 1019us/cm	" rdg - 2.90
Turb - 0.53NTU's	Turb - 0.45NTU's	" lot - 200445
pH pre - 7.08/10.13(16.0°c)	pHpre - 7.03/10.05(22.6°c)	" Exp - 4/30/22
pHpost - 7.08/10.11	pHpost - 7.02/10.07	
DTW - 464.47ft.	DTW - 464.64ft.	
Atmos - 12.22psia	Atmos - 12.26psia	
	IDW - 1/2 gal.	

Buffers	Lot	Exp
7	2108656	2/23
10	4103681	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
220404 1300Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1302Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 13~~0~~02Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

Runs	1)	2)
	166.53	166.50
	163.16	163.13
	163.17	163.16
	166.53	166.47

Continued from page

Read and Understood By

Craig Del Ferraro 4/4/22

Signed Date

Signed 4-5-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/4/22 Page 1 of 1

Sample Location: PL-10-813

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals					Charge Number
2204040950Y (EB)	3	A	✓							XGMD
—— 0951Y (EB)	1	A		✓						〃
—— 1300Y	3	A	✓							〃
—— 1301Y	1	A		✓						〃
—— 1302Y	2	A			✓					〃

Sample Location:

Pertinent Notes (if any)

			Analytical Requirement							
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fermo	4/4/22 1530 hrs.			4-5-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

PROJECT PL-10-962 WJI ENV-0020

Notebook No. D64#129(Y) 21

Continued from page ______

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2213. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
2204041345Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1346Y	Low Level NDMA	ice	(1) 1L Amber	010030lH	SRI

Initial Parameters
Time - 2204041430Y
PH - 8.57
Temp - 24.3°C
Cond - 1010us/cm
Turb - 0.63 NTU's
pH pre - 7.03/10.05 (26.3°C)
pH post - 6.99/ 10.04
DTW - 464.64ft.
Atmos - 12.22psia

Final
Time - 2204041508Y
PH - 8.67
Temp - 24.0°C
Cond - 1003us/cm
Turb - 0.60 NTU's
pH pre - 6.98/10.02 (27.8°C)
pH post - 6.99/10.04
DTW - 464.81ft.
Atmos - 12.24psia
IDW - 1 gal.

Meter ID
pH/cond - 61
Turb - 6
" std - 2.93
" rdg - 2.90
" lot - 200445
" Exp - 4/30/22

Buffers	Lot	Exp
7	2108G56	2/23
10	4103G81	9/22

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2204041505Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2621	ALS
——— 1506Y	Low Level NDMA	ice	(1) 1L Amber	0100301H	SRI
——— 1507Y	Total Metals	ice/HNO_3	(2) 125ml poly's	21-09-10	ALS

Runs

1)	2)
230.95	230.92
229.99	230.13
229.97	230.15
230.91	230.95

Continued from page

Read and Understood By

Craig Del Ferraro 4/4/22 4-5-22

Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4|4|22

Page ______ of ______

Sample Location: PL-10-962

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Total Metals				Charge Number
2204041345Y (EB)	3	A	✓						XGMD
——1346Y (EB)	1	A		✓					"
——1505Y	3	A	✓						"
——1506Y	1	A		✓					"
——1507Y	2	A			✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	4/4/22 1530hrs.			4-5-22 / 0915

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT ST-7.453

Notebook No. D32#122 (B)

Continued from page ______

Marcus Avalos & Tony Torrez present. The weather is clear & warm. This well will be purged & sampled using a Flute system. Purge pressure set @ 228 psi & sample pressure set @ 207 psi. 15 mins of recovery between cycles. A min of 4 gallons purged prior to sampling. Carboy G5

Param's pre sample

pH	7.90	7.65
Temp	20.9	19.2°
Cond	1069 uS/cm	1055 uS/cm
Turb	1.01 NTU	0.89 NTU

Meter ID's

pH/Cond #60
Turb #7
" Std 47.3 NTU's
" Adj 46.9 NTU's
" Lot# 200445
" Exp 4-30-22

	Initial	Final
	220407 1430B	220407 1435B
pH	7.60	7.88
Temp	18.5°C	18.9°C
Cond	1013 uS/cm	1032 uS/cm
Turb	0.92 NTU	0.67 NTU
pH pre	7.03/10.06 (22.6°)	7.01 10.02
pH post	7.04/10.03	7.02/10.04

Trip Blanks

Sample#	Analysis	Preserv	Lot#	Cont	Lab
220407 0700B	8260LL	Ice/HCl	2621	(3) 40ml vials	ALS
— 0701B	LL NDMA	Ice	103501	(1) 1L amber	SRI

Samples

Sample#	Analysis	Preserv	Lot#	Cont	Lab
220407 1431B	8260LL	Ice/HCl	2621	(3) 40ml vials	ALS
— 1432B	" (FB)	"	"	"	"
— 1433B	LL NDMA	Ice	103501	(1) 1L amber	SRI
— 1434B	" (FB)	"	"	"	

Continued from page

Signed 4-7-22

Read and Understood By

Lori Wunck 4-11-22

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.7.22

Page 1 of 1

Sample Location: ST. 7. 453

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260 LL	LLNDMA					Charge Number XGMD
220407 0700B (TB)	3	A	X						
— 0701B (TB)	1			X					
— 1431B	3		X						
— 1432B (FB)	3		X						
— 1433B	1			X					
— 1434B (FB)	1			X					

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	4.7.22/1530			4-11-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

PROJECT ST-7-544

Notebook No. D32 # 122(13) 87
Continued from page ______

MARCUS AVALOS & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. This ZONE will BE purged & SAMPLED using ~~using~~ A FLUTE SYSTEM. PURGE PRESSURE SET @ 228 psi & PRESSURE SET @ 207 ~~psi~~ SAMPLE PRESSURE. 15 MINS OF RECOVERY BETWEEN Cycles. A MIN OF 4 gallons purged PRIOR TO SAMPLING. CARBOY 6-5

PARAM'S pre SAMPLE

pH	7.77	7.74
TEMP	21.5 c	~~21.~~ 21.3
COND	1044	1051
TURB	1.53	1.41

METER ID'S

pH/COND	60
TURB	7
" STD	47.3 NTUS
" Rdg	46.9 NTU's
" LOT #	200445
" Exp.	4-30-22

	INITIAL	FINAL
	220407 1445B	220407 1450B
pH	7.70	7.68
TEMP	20.9	21.4
COND	1060	1063
TURB	1.26	1.48
pH pre	7.01/10.01	7.01/10.02
pH post	7.01 10.01	7.01/10.01

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
220407 1446B	8260 ll	(4°) HCl	2621	(3) 40ml VIALS	ALS
— 1447B	" (FB)	"	"	"	"
— 1448B	LL NDMA	ICE	103501	(1) 1LT AMBER	SAI
— 1449B	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T.

Signed

4-7-22

Date

Lori Munch

Signed

4-11-22

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-7-22

Page 1 of 1

Sample Location: ST-7-544

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260CC	CC NDMA						Charge Number X6ND
220407 1446B	3	A	X							
— 1447B (FB)	3	|	X							
— 1448B	1	|		X						
— 1449B (FB)	1	|		X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4-7-22 / 1535		Jon W Munch	4-11-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

WSTF 381C (05/2016)

PROJECT ST-7-779 FLUTe ENV-0020

Notebook No. D32 # 122 (B)

Continued from page ________

Dan Halvorsen & Marcus Avalos present. Weather is Clear and Cool. This Well will be purged and sampled using a FLUTe system. Samples will be collected using a dedicated Teflon discharge hose. Purge pressure set at 228 psi and sample pressure at 207 psi. Bubbler set at 3psi and stable at 7psi. minimum of 4 gallons purged prior to sampling with a 15 minute recovery between purges. Carboy G in use.

Pre-Sample Parameters

PH = 7.51	7.56
Temp = 18.5	18.6
Cond = 908	902
Turb = 0.57	0.41
-	

Meter ID

PH/Cond = 60
Turb = 7
" STD = 47.3
" RDG = 47.6
" Lot = 200445
" Exp = 4/22

Initial Parameters	Final Parameters
Time = 220411 1430 B	220411 1446 B
PH = 7.61	7.63
Temp = 18.7 °C	18.8
Cond = 905 us/cm	907
Turb = 0.48 ntu's	0.44
PHPre = 7.02-10.01	7.01-10.02
PHPost = 7.02-10.02	7.02-10.01

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	Lab
220411 1435 B	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 1436 B	" " (FD)	"	"	"	"
—— 1437 B	NDMA LL	Ice	(1) 1L Amber	103501	SR
—— 1438 B	" " (FB)	"	"	"	"

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
220411 0700 B	VOC by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
—— 0701 B	NDMA LL	Ice	(1) 1L Amber	103501	SRL
——					

IDW 5 gal.

Continued from page

Read and Understood By

Signed 4-11-2022 Date

Signed 4-12-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-11-2022

Page 1 of 1

Sample Location: ST-7-779

Analytical Requirement										
Pertinent Notes (if any)										XGMD
Sample Number	# of Containers	Sample Matrix*	VOA	NOMA LL						Charge Number
2204110700B TB	3	A	X							
—1435B	3	|	X							
—1436B FB	3	|	X							
—1437B	1	|		X						
—1438B FB	1	|		X						
—0701B TB	1	|		X						

Sample Location:

Analytical Requirement										
Pertinent Notes (if any)										
Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-11-2022 1540		Jon W Munch	4-12-22/0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ______________

WSTF 381C (05/2016)

PROJECT ST-7-970 FLUTe ENV-0020

Dan Halvorsen & Marcus Avalos present. Weather is clear and cool. This well
will be purged and sampled using a FLUTe system. Samples will be collected
using a dedicated Teflon discharge hose. Purge pressure set at 228 and
sample pressure set at 207 psi. Bubbler set at 3 psi and stable at 7 psi.
minimum of 4 gallons purged prior to sampling. 15 minute recovery between
purges. Carboy G in use.

Pre-sample Parameters

PH	= 7.63	7.68
Temp	= 18.1	18.3
COND	= 838	837
TURB	= 0.46	0.40

Meter ID
PH / COND = 60
TURB = 7
STD = 47.3
RDG = 47.6
LOT = 200645
Exp : 4/22

Initial Parameters		Final Parameters
Time	= 2204111450B	2204111510 B
PH	= 7.67	7.68
COND	= 8.28 uS/cm	831
TURB	= 0.73 ntu's	0.41
pH Pre	= 7.02-10.02	7.01-10.01
pH Post	= 7.01-10.02	7.01-10.02
Temp	= 18.4°C	18.5

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	LAB
2204111455B	Voa by 8260 LL	Ice/HCl	(3) 40 ml vial	2621	ALS
—— 1456B	" " ~~NDMA LL~~ (FB)	"	"	"	"
—— 1457 B	NDMA LL	Ice	(1) 1L Amber	103501	SE
—— 1458 B	" " (FB)	"	"	"	"

IDW = 5 gal.

Continued from page

4-11-2022

Read and Understood By

4-12-22
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.11.2022 Page 1 of 1

Sample Location: ST-7-970

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOC	NDMA LL						Charge Number X6MO
2204111455B	3	A	✓							
——1456B FB	3		✓							
——1457B	1			✓						
——1458B FB	1			✓						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.11.2022 1540			4-12-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

ROJECT WW-S-459 FLUTe ENV.0020

Notebook No. D32 # 122(B)

Continued from page

an Halvorsen + Matt Garcia present. Weather is Clear, Cool + windy. This well will be purged and sampled using a FLUTe system. Samples will be collected using a dedicated Teflon discharge hose. Purge pressure set at 224 psi and sample pressure at ~~204~~ 203 psi. Bubbler set at 3psi and stable at 5 psi. inimum of 4 gallons will be purged prior to sampling. 15 minute recovery between purges. Carboy G5 in use.

re-Sample Parameters

pH =	8.62	8.26
emp =	14.5	15.7
ond =	1027	1004
urB =	0.41	0.55

Meter ID

pH/Cond = 68
Turb = 7
" STD = 47.3
" RDG = 47.6
" Lot - 200445
" Exp = 4/22

arameters		Final Parameters
ime	= 220413~~1053~~ 1300B	2204131315B
pH	= 8.97	8.78
Temp	= 16.7 °C	16.6
ond	= 1022 us/cm	1014
urB	= 0.49 ntu's	0.66
pH Pre	= 6.98-10.01	6.96-9.97
pH Post	= 6.98-10.02	6.98-9.98

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	LAB
2204131310 B	Voa by 8260 LL	Ice/HCl	(3) 40 ml Vial	2621	ALS
——1311 B	" " (FB)	"	"	"	"
——1312 B	NDMA LL	Ice	(1) 1L Amber	103501	SRI
——1313 B	" " (FB)	"	"	"	"

IDW = 5 1/2 gal

Continued from page

Read and Understood By

Signed 4-13-2022 Date

Jon W Munck Signed 4-14-22 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-13-2022

Page 1 of ______

Sample Location: ww 5-459

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA	NDMA LL						Charge Number
										XGMD
2204131310 B	3	A	✓							
—— 1311 B FB	3		✓							
—— 1312 B	1			✓						
—— 1313 B FB	1			✓						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-13-2022			4-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

Notebook No. D32 # 122(B) 91

PROJECT WW 5.579 FLUTe ENV-0020

Continued from page ________

Dan Halvorsen & Matt Garcia present. Weather is Clear, Cool & windy. This Well will be purged and Sampled using a FLUTe system. Samples will be Collected using a dedicated Teflon discharge hose. Purge pressure set at 224 psi and Sample pressure set at ~~204~~ 203 psi. Bubbler set at 3 psi and Stable at 5 psi. minimum of 4 gallons will be purged prior to sampling. 15 minute recovery between Purges. Carboy 65 in use.

Presample Parameters

PH	= 8.56	8.79
TEMP	= 15.9	16.0
COND	= 956	974
TURB	= 1.26	0.54

Meter ID

PH/COND = 60

TURB = 7

" STD = 47.3

" RDG = 47.6

" LOT = 200445

" EXP = 4/22

Initial Parameters		Final Parameters
Time	= 2204131053 B	2204131410B
PH	= 8.77	8.01
TEMP	= 16.2°C	16.4
COND	= 991 us/cm	1006
TURB	= 0.80	0.48
PH Pre	= 6.99-9.96 (14.7°C)	6.99-10.01
PH Post	= 6.98-10.01	7.00-9.98

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
2204131400B	VOCs by 8260 LL	Ice (HCL)	(3) 40 ml Vial	2621	ALS
—— 1401 B	" " (FB)	"	"	"	"
—— 1402B	UDMH LL	Ice	(1) 1L Amber	103501	SEI
—— 1403B	" " (FB)	"	"	"	"

EDW = 5 1/2 psi

Continued from page

4-13-2022

Read and Understood By

4-14-22

Signed

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-13-2022

Page 1 of ______

Sample Location: WW-5-579

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA 4L						Charge Number
										XGMD
2204131400B	3	A	X							
—— 1401 B FB	3	↓	X							
—— 1402 B	1	↓		X						
—— 1403 B FB	1	↓		X						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-13-2022			4-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________________

WSTF 381C (05/2016)

ROJECT WW-5-809 FLUTe ENV-0020

Notebook No. D32 #122 B

Continued from page ______

Dan Halvorsen & Matt Garcia present. Weather is Clear and Cold. This Well will be purged and sampled using a FLUTe system. Samples will be Collected using a dedicated Teflon discharge hose. Purge pressure set at 224 psi and sample pressure set at 203 psi. Bubbler set at 3 psi and stable at 5 psi. Minimum of 4 gallons purged prior to sampling. 15 minute recovery between purges. Carboy is in use.

re-Sample Parameters

H = 8.07 7.76
emp = 15.2 15.6
ond = 865 907
urb = 0.48 0.38

Meter ID

PH|COND = 60
TURB = 7
" STD = 47.3
" RDG = 47.6
" LOT = 200445
" Exp = 4/22

itial Parameters

ime = 220413/057 B
pH = 8.15
emp = 14.7
ond = 929 us/cm
urb = 0.39 ntus
HPre = 6.99-9.98 (14.7° C)
HPost - 6.89-9.98

Final Parameters

220413 1428B
8.66
15.1
938
0.50
6.99-10.00
7.00-10.00

SAMPLES

ample #	Analysis	Preserve	Container	LOT	LAB
220413/1415 B	Voa by 8260 LL	Ice/HCl	(3) 40 ml vial	2621	ALS
—— 1416 B	" " (FB)	"	"	"	"
—— 1417 B	NDMA LL	Ice	(2) 1L Amber	103501	SRL
—— 1418 B	" " (FB)	"	"	"	

TDW = 5 1/3 gal.

Continued from page

4.13-2022
Signed Date

Read and Understood By

4-14-22
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-13-2022 Page 1 of ______

Sample Location: WW-5-805

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	VOC	NDMA LL						Charge Number XGMD
22041314 15 B	3	A	X							
1416 B FB	3		X							
1417 B	1			X						
1418 B FB	1			X						

Sample Location:

Pertinent Notes (if any) Sample Number	# of Containers	Sample Matrix*	Analytical Requirement							Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.13.2022			4-14-22 /0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ________________

WSTF 381C (05/2016)

PROJECT WW-5-909 FLUTe ENV-0020

Continued from page ______

Dan Halvorsen & Matt Garcia present. Weather is Clear and Cold. This Well will be purged and sampled using a FLUTe System. Samples will be collected using a dedicated Teflon discharge hose. Purge pressure set at 224 psi and sample pressure at 203 psi. Bubbler set at 3 psi and stable at 5 psi. minimum of 4 gallons purged prior to sampling. 15 minute recovery between purges. Carboy G5 in use.

Pre-Sample Parameters

PH = 8.31 8.26
Temp = 15.9 15.8
COND = 1222 1228
TURB = 0.83 0.79

Meter ID

PH/COND = 60
TURB = 7
STD = 47.3
RDG = 47.6
LOT = 200445
Exp = 4/22

Initial Parameters	Final Parameters
Time = 2204131104 B	2204131450B
PH = 8.29	8.33
Temp = 16.1	16.6
COND = 1216 us/cm	1228
TURB = 0.59 ntus	0.33
BuPre = 6.99-9.98	6.99-10.00
BuPost = 6.99-9.98	7.00-10.01

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	LAB
2204131440B	VOC by 8260LL	Ice) HCl	(3) 40 ml Vial	2(62)	DLS
——1441 B	" " (FB)	"	"	"	"
——1442 B	NDMA LL	Ice	(1) 1L Amber	103501	SRI
——1443 B	" " (FB)	"		"	"

IDW = 5 1/2 gal

Continued from page

Read and Understood By

4-13-2022 Jon W Munch 4-14-22

Signed **Date** **Signed** **Date**

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-13-2022

Page 1 of ____

Sample Location: UW-5-909

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOC	NDMA						XGMD Charge Number
220413 1440 B	3	A	✓							
—— 1441 B FB	3	|	✓							
—— 1442 B	1	|		✓						
—— 1443 B FB	1	|		✓						

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4-13-2022			4-14-22 / 0900

* Sample Matrix Types: G – Gaseous; A – Aqueous; S – Solid; O – Other: ____________

Appendix C
Chemical Analytical Program
(Internal QA reports)

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

February 2022

NM8800019434

Report Submitted: July 14, 2022

Report Prepared by:
Carlyn A. Tufts
Environmental Scientist
Navarro Research and Engineering, Inc.

1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a periodic report to assess the quality of groundwater analytical data reported. The monthly Quality Assurance Report (QAR) prepared and reviewed by responsible environmental contractor data management personnel provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method, if any.
- A list of the sample events for which groundwater samples were collected in February 2022.
- The quantity and type of quality control samples collected or prepared in February 2022.
- Definitions of data qualifiers used in WSTF analytical data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of quality assurance narratives for the month arranged by analytical method.
- A summary table of detections in equipment blank, field blank, and trip blank samples.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous Quality Assurance Reports

There were no notable anomalies requiring follow-up associated with previous QARs.

2.2 Notable Anomalies

There were no notable anomalies in the groundwater data associated with the February 2022 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in February 2022. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events identified in Table 1. As specified by the GMP, specific quality control samples are utilized to assess the quality of analytical data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. When data quality criteria are not met, data qualifiers are applied to the data. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for February 2022

Well ID	Event Date
400-EV-131	2/1/2022
400-GV-125	2/1/2022
BLM-32-571	2/1/2022
BLM-32-632	2/1/2022
ST-5-655	2/1/2022
400-JV-150	2/2/2022
600-E-280	2/2/2022
BLM-32-543	2/2/2022
ST-2-466	2/2/2022
ST-5-485	2/2/2022
B650-EFF-1	2/3/2022
B650-INF-1	2/3/2022
B655-EFF-2	2/4/2022
B655-INF-2	2/4/2022
100-A-182	2/7/2022
300-B-166	2/7/2022
BLM-23-431	2/7/2022
PL-7-630	2/7/2022

Well ID	Event Date
ST-4-589	2/7/2022
PL-12-570	2/8/2022
PL-7-480	2/8/2022
PL-7-560	2/8/2022
100-C-365	2/9/2022
200-C-225	2/10/2022
200-C-270	2/10/2022
NASA 3	2/10/2022

Well ID	Event Date
200-C-170	2/14/2022
200-F-370	2/14/2022
PL-12-800	2/14/2022
200-F-225	2/15/2022
200-F-420	2/15/2022
300-A-170	2/15/2022
300-E-138	2/16/2022
MPE-1	2/16/2022

Well ID	Event Date
MPE-10	2/16/2022
MPE-8	2/16/2022
MPE-9	2/16/2022
300-E-183	2/17/2022
MPE-11	2/17/2022
ST-5-481	2/23/2022

Table 2 – Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Nitrate plus Nitrite as N by EPA Method 353.2	**8**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**29**	**1**	**1**	0	0	**3**	**1**
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**4**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**28**	**19**	**9**	**2**	0	**3**	**1**
Low Level Volatile Organics by SW-846 Method 8260C	**12**	**7**	**5**	**6**	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**3**	0	0	0	0	0	0
Anions by Various EPA Methods	**6**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**19**	**1**	**1**	0	0	**2**	**1**
Nitrosamines by Low-Level Method	**16**	**11**	**5**	**8**	0	**2**	0
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 3/1/2021	QC Qty. since 3/1/2021	QC % since 3/1/2021	Sample Quantity February 2022	QC Quantity February 2022	QC % February 2022
VOA Duplicates	10	524	54	**10**	40	3	8
VOA Matrix Spikes	2	524	11	**2**	40	1	3
607 Duplicates	10	321	35	**11**	29	3	10
607 Matrix Spikes	2	321	7	**2**	29	1	3
607 Equipment Blanks	2	321	9	**3**	29	1	3
607 Field Blanks	2	321	9	**3**	29	1	3
NDMA_LL Duplicates	10	313	37	**12**	16	2	13
NDMA_LL Matrix Spikes	2	313	8	**3**	16	0	0
Metals Duplicates	10	205	21	**10**	19	2	11
Metals Matrix Spikes	2	205	6	**3**	19	1	5
Metals Equipment Blanks	5	205	11	**5**	19	1	5
Metals Field Blanks	5	205	10	**5**	19	1	5

Quality Control Requirement	Requirement %	Sample Events since 3/1/2021	QC Qty. since 3/1/2021	QC % since 3/1/2021	Sample Events February 2022	QC Quantity February 2022	QC % February 2022
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	524	524	**100%**	40	40	100%

Quality Control Requirement	Requirement %	Sample Events since 3/1/2021	QC Qty. since 3/1/2021	QC % since 3/1/2021	Sample Events February 2022	QC Quantity February 2022	QC % February 2022
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	309	309	**100%**	16	16	100%

Quality Control Requirement	Requirement %	Shipments since 3/1/2021	TB Qty. since 3/1/2021	TB % since 3/1/2021	Shipments in February 2022	TB Quantity February 2022	QC % February 2022
VOA Trip Blank (per shipment)	*Should approach 100%*	97	97	**100%**	8	8	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	94	94	**100%**	8	8	100%

Table 4 – Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 – Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Nitrate plus Nitrite as N by EPA Method 353.2	**8**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**96**	0	0	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**4**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**2019**	0	**1**	0	0	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**782**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**360**	0	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Anions by Various EPA Methods	**24**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**567**	0	**2**	0	0	0	0	0
Nitrosamines by Low-Level Method	**36**	**1**	0	0	0	0	0	0
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0	0

Table 6 – Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Nitrate plus Nitrite as N by EPA Method 353.2	**8**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**96**	0	0	0	0	0	0	0	0	**3**
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**4**	0	0	0	0	**1**	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**2019**	0	**1**	0	0	0	0	0	0	**26**
Low Level Volatile Organics by SW-846 Method 8260C	**782**	0	0	0	0	0	0	0	0	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**360**	0	0	0	0	0	0	0	0	**2**
Anions by Various EPA Methods	**24**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**567**	0	0	0	0	**7**	0	0	0	**112**
Nitrosamines by Low-Level Method	**36**	**1**	0	0	0	0	**4**	0	0	**6**
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
B650-EFF-1	2/3/2022	For Low Level SW-846 Method 8260C, acetone (8.4 ug/L) was detected in the field blank (2202031302). No groundwater data are affected by this field blank contamination.
NASA 3	2/10/2022	For Low Level SW-846 Method 8260C, chloromethane (0.36 ug/L) was detected in the field blank (2202101431C) below the reporting limit. No groundwater data are affected by this field blank contamination.
PL-7-630	**2/7/2022**	**For Low Level SW-846 Method 8260C, cyclotetrasiloxane, octamethyl- (6.3 ug/L) was tentatively identified by a GC/MS library search in the equipment blank (2202071035Y). Affected data are appropriately qualified.**
PL-7-630	**2/7/2022**	**For Low Level SW-846 Method 8260C, cyclotetrasiloxane, octamethyl- (5.9 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2202070810Y). Affected data are appropriately qualified.**
ST-5-481	**2/23/2022**	**For Low Level SW-846 Method 8260C, silane, methoxytrimethyl- (8.9 ug/L) was tentatively identified by a GC/MS library search in sample 2202231000A.**
B650-EFF-1	2/3/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-7-630	2/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-4-589	2/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-5-481	2/23/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/9/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-EFF-1	2/3/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-EFF-2	2/4/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
NASA 3	2/10/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-7-480	2/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-7-560	2/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-EFF-1	2/3/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-EFF-2	2/4/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/9/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
B655-EFF-2	2/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
B655-EFF-2	2/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
NASA 3	2/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-7-480	2/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-560	2/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-560	2/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-2-466	2/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-589	2/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-5-481	2/23/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-5-481	2/23/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-5-485	2/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-5-655	2/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-5-655	2/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
200-C-225	**2/10/2022**	**For SW-846 Method 8260C, chloromethane (0.34 ug/L) was detected below the reporting limit and silane, methoxytrimethyl- (5.3 ug/L) was tentatively identified by a GC/MS library search in the equipment blank (2202101350Y). Affected data are appropriately qualified.**
100-A-182	2/7/2022	For SW-846 Method 8260C, field duplicate samples 2202071430C and 2202071431C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 7.4%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For SW-846 Method 8260C, field duplicate samples 2202160824 and 2202160825 the relative percent difference for trichlorofluoromethane (CFC 11) was 6.5%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For SW-846 Method 8260C, field duplicate samples 2202160824 and 2202160825 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 7.7%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For SW-846 Method 8260C, field duplicate samples 2202160824 and 2202160825 the relative percent difference for trichloroethene (TCE) was 1.3%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For SW-846 Method 8260C, field duplicate samples 2202160824 and 2202160825 the relative percent difference for tetrachloroethene (PCE) was 10.8%. Upper acceptance limit for relative percent difference is 25%.
300-E-183	2/17/2022	For SW-846 Method 8260C, field duplicate samples 2202171000Y and 2202171001Y the relative percent difference for trichlorofluoromethane (CFC 11) was 3.8%. Upper acceptance limit for relative percent difference is 25%.
200-F-420	2/15/2022	For SW-846 Method 8260C, matrix spike recoveries for sample 2202151111Y were within laboratory control limits.
300-B-166	**2/7/2022**	**For SW-846 Method 8260C, silane, methoxytrimethyl- (5.2 ug/L) was tentatively identified by a GC/MS library search in sample 2202071000A.**
200-F-225	**2/15/2022**	**For SW-846 Method 8260C, silane, methoxytrimethyl- (5.7 ug/L) was tentatively identified by a GC/MS library search in sample 2202160840Y.**
200-F-370	**2/14/2022**	**For SW-846 Method 8260C, silane, methoxytrimethyl- (8 ug/L) was tentatively identified by a GC/MS library search in sample 2202150855Y.**
MPE-8	**2/16/2022**	**For SW-846 Method 8260C, sulfur dioxide (17 ug/L) was tentatively identified by a GC/MS library search in sample 2202160858.**
100-A-182	2/7/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-C-170	2/14/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-F-225	2/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-F-370	2/14/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-F-420	2/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
300-A-170	2/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
300-B-166	2/7/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
300-E-138	2/16/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
300-E-183	2/17/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-EV-131	2/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-GV-125	2/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-JV-150	2/2/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
600-E-280	2/2/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-23-431	2/7/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-32-543	2/2/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-32-571	2/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-32-632	2/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
MPE-1	2/16/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
MPE-10	2/16/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
MPE-11	2/17/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
MPE-8	2/16/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
MPE-9	2/16/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-12-800	2/14/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-C-170	2/14/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-C-225	2/10/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-C-270	2/10/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-F-225	2/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-F-370	2/14/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate. Affected data below the MRL are appropriately qualified.
200-F-420	2/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
300-A-170	2/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
300-E-138	2/16/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
300-E-183	2/17/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-EV-131	2/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-GV-125	2/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-JV-150	2/2/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
600-E-280	2/2/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-INF-1	2/3/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-INF-2	2/4/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-32-543	2/2/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-32-571	2/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-32-632	2/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
MPE-1	2/16/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
MPE-10	2/16/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
MPE-11	2/17/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
MPE-8	2/16/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
MPE-9	2/16/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-12-570	2/8/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-12-800	2/14/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-C-170	2/14/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-F-225	2/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-F-370	2/14/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-F-420	2/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
300-A-170	2/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
B650-INF-1	2/3/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-INF-2	2/4/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-12-800	2/14/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-C-170	2/14/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-C-270	2/10/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-F-225	2/15/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-F-370	2/14/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-F-420	2/15/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
300-E-138	2/16/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
300-E-183	2/17/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
600-E-280	2/2/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
100-A-182	2/7/2022	For SW-846 Method 8260C, there were no detections in the field blank.
300-A-170	2/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
300-B-166	2/7/2022	For SW-846 Method 8260C, there were no detections in the field blank.
400-EV-131	2/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
400-GV-125	2/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
400-JV-150	2/2/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	2/3/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	2/4/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-23-431	2/7/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-32-543	2/2/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-32-571	2/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-32-632	2/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-1	2/16/2022	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-10	2/16/2022	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-11	2/17/2022	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-8	2/16/2022	For SW-846 Method 8260C, there were no detections in the field blank.
MPE-9	2/16/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PL-12-570	2/8/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PL-12-800	2/14/2022	For SW-846 Method 8260C, there were no detections in the field blank.
300-E-138	2/16/2022	For SW-846 Method 8260C, there were no detections in the trip blank.
PL-12-800	2/14/2022	For SW-846 Method 8260C, there were no detections in the trip blank.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
300-B-166	2/7/2022	For Modified EPA Method 607, field duplicate samples 2202071002A and 2202071003A the relative percent difference for bromacil was 2.6%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
300-B-166	2/7/2022	For Modified EPA Method 607, field duplicate samples 2202071002A and 2202071003A the relative percent difference for N-nitrodimethylamine was 3.9%. Upper acceptance limit for relative percent difference is 25%.
300-B-166	2/7/2022	For Modified EPA Method 607, field duplicate samples 2202071002A and 2202071003A the relative percent difference for N-nitrosodimethylamine was 7.2%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For Modified EPA Method 607, field duplicate samples 2202160827 and 2202160828 the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For Modified EPA Method 607, field duplicate samples 2202160827 and 2202160828 the relative percent difference for N-nitrosodimethylamine was 0.6%. Upper acceptance limit for relative percent difference is 25%.
MPE-1	2/16/2022	For Modified EPA Method 607, field duplicate samples 2202160827 and 2202160828 the relative percent difference for bromacil was 2.8%. Upper acceptance limit for relative percent difference is 25%.
300-E-183	2/17/2022	For Modified EPA Method 607, field duplicate samples 2202171002Y and 2202171025Y the relative percent difference for bromacil was 1.1%. Upper acceptance limit for relative percent difference is 25%.
ST-5-481	2/23/2022	For Modified EPA Method 607, matrix spike recoveries for sample 2202231410A were within laboratory control limits.
300-E-183	2/17/2022	For Modified EPA Method 607, there were no detections in the equipment blank.
200-C-270	2/10/2022	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-12-800	2/14/2022	For Low Level Nitrosamine Method, field duplicate samples 2202141007A and 2202141008A the relative percent difference for N-nitrosodimethylamine was 5.5%. Upper acceptance limit for relative percent difference is 25%.
ST-5-485	**2/2/2022**	**For Low Level Nitrosamine Method, for sample 2202021005Y the recovery of the internal standard NDMA-d6 (6.3%) was outside laboratory control limits (10-100%). The lab was unable to re-extract the sample due to a lack of reserve. However, since the signal to noise was greater than the minimum requirement of 3 (actual was >25), the lab believed there was sufficient signal strength for detection of NDMA. Native NDMA was not detected above the MDL in this sample. No additional corrective action was required by the lab.**
ST-5-485	2/2/2022	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.41 ng/L) was detected in the trip blank (2202020745Y) below the reporting limit. No groundwater data are affected by this trip blank contamination.
BLM-32-543	**2/2/2022**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.51 ng/L) was detected in the field blank (2202021344B). Affected data are appropriately qualified.**
ST-5-485	2/2/2022	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.79 ng/L) was detected in the equipment blank (2202020836Y). No groundwater data are affected by this equipment blank contamination.
B655-EFF-2	2/4/2022	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.84 ng/L) was detected in the field blank (2202040735). No groundwater data are affected by this field blank contamination.
BLM-32-571	2/1/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2202011518B and 2202011520B were within control limits or below the calculable range.
B650-EFF-1	2/3/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
B655-EFF-2	2/4/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-32-571	2/1/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-32-632	2/1/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
NASA 3	2/10/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
NASA 3	2/10/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-12-570	2/8/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-12-800	2/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-12-800	2/14/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-7-480	2/8/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-7-560	2/8/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-7-560	2/8/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-7-630	2/7/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-7-630	2/7/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-2-466	2/2/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-4-589	2/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-481	2/23/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-5-481	2/23/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-655	2/1/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-5-655	2/1/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-12-800	**2/14/2022**	**For Low Level Nitrosamine Method, trip blank 2202140801A, sample 2202141007A, duplicate sample 2202141008A, and field blank 2202141009A were extracted outside the hold time. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8270D QA Narratives
100-C-365	**2/9/2022**	**For SW-846 Method 8270D, benzenamine, 2,6-bis(1-methylethyl)- (9.1 ug/L) and two unknown compounds were tentatively identified by a GC/MS library search in sample 2202091439C.**
BLM-32-543	**2/2/2022**	**For SW-846 Method 8270D, benzenesulfonamide, N-butyl- (2,500 ug/L) and one unknown compound (770 ug/L) were tentatively identified by a GC/MS library search in sample 2202021405B.**
BLM-32-543	2/2/2022	For SW-846 Method 8270D, one unknown compound (800 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 395033. No groundwater data are affected by this method blank contamination.
100-C-365	2/9/2022	For SW-846 Method 8270D, the upper control criterion was exceeded for one or more analytes in the Duplicate Laboratory Control Sample (LCSD). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
100-C-365	2/9/2022	For SW-846 Method 8270D, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
100-C-365	**2/9/2022**	**For SW-846 Method 8270D, two unknown compounds were tentatively identified by a GC/MS library search in the method blank for analytical batch 395246. Affected data are appropriately qualified.**
100-A-182	**2/7/2022**	**For SW-846 Method8270D, one unknown compound (660 ug/l) was tentatively identified by a GC/MS library search in the method blank for analytical batch 395093. Affected data are appropriately qualified.**
100-A-182	**2/7/2022**	**For SW-846 Method8270D, one unknown compound (660 ug/l) was tentatively identified by a GC/MS library search in sample 2202071435C.**

Well ID	Event Date	Total Metals QA Narratives
ST-2-466	2/2/2022	For Total Metals, field duplicate samples 2202021445C and 2202021446C the relative percent difference for calcium was 1.9%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2022	For Total Metals, field duplicate samples 2202021445C and 2202021446C the relative percent difference for strontium was 1.9%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Total Metals QA Narratives
ST-2-466	2/2/2022	For Total Metals, field duplicate samples 2202021445C and 2202021446C the relative percent difference for sodium was 2.3%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2022	For Total Metals, field duplicate samples 2202021445C and 2202021446C the relative percent difference for magnesium was 2.4%. Upper acceptance limit for relative percent difference is 25%.
200-F-370	2/14/2022	For Total Metals, field duplicate samples 2202150857Y and 2202150920Y the relative percent difference for magnesium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
200-F-370	2/14/2022	For Total Metals, field duplicate samples 2202150857Y and 2202150920Y the relative percent difference for sodium was 0.5%. Upper acceptance limit for relative percent difference is 25%.
200-F-370	2/14/2022	For Total Metals, field duplicate samples 2202150857Y and 2202150920Y the relative percent difference for iron was 5.5%. Upper acceptance limit for relative percent difference is 25%.
200-F-370	2/14/2022	For Total Metals, field duplicate samples 2202150857Y and 2202150920Y the relative percent difference for calcium was 0.7%. Upper acceptance limit for relative percent difference is 25%.
200-F-370	2/14/2022	For Total Metals, field duplicate samples 2202150857Y and 2202150920Y the relative percent difference for strontium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
600-E-280	2/2/2022	For Total Metals, for matrix spike sample 2202021446Y the concentrations of calcium, magnesium, and sodium in the native sample were greater than four times the concentration of the spike added. The sample results for these metals are not qualified based on this control.
200-C-270	**2/10/2022**	**For Total Metals, magnesium (0.1 mg/L), strontium (0.006 mg/L), vanadium (0.001 mg/L), and zinc (0.004 mg/L) were detected in the equipment blank (2202100946Y) below the reporting limit. Affected data are appropriately qualified.**
600-E-280	**2/2/2022**	**For Total Metals, molybdenum (0.004 mg/L) was detected in the method blank for analytical batch 394955 below the reporting limit. Affected data are appropriately qualified.**
BLM-32-543	**2/2/2022**	**For Total Metals, molybdenum (0.004 mg/L) was detected in the method blank for analytical batch 394955 below the reporting limit. Affected data are appropriately qualified.**
ST-2-466	**2/2/2022**	**For Total Metals, molybdenum (0.004 mg/L) was detected in the method blank for analytical batch 394955 below the reporting limit. Affected data are appropriately qualified.**
ST-5-485	**2/2/2022**	**For Total Metals, molybdenum (0.004 mg/L) was detected in the method blank for analytical batch 394955 below the reporting limit. Affected data are appropriately qualified.**
ST-5-655	**2/1/2022**	**For Total Metals, molybdenum (0.004 mg/L) was detected in the method blank for analytical batch 394955 below the reporting limit. Affected data are appropriately qualified.**
600-E-280	2/2/2022	For Total Metals, there were no detections in the field blank.
ST-5-481	**2/23/2022**	**For Total Metals, zinc (0.007 mg/L) was detected in the method blank for analytical batch 395989 below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Miscellaneous QA Narratives
100-C-365	**2/9/2022**	**For SW-846 Method 8015C, Diesel Range Organics (DRO) as C10-C28 Alkanes (130 ug/L) was detected in the method blank for analytical batch 395298. Affected data are appropriately qualified.**

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
B650-EFF-1	2/3/2022	Carboy PF1	8260_LL	VOA-FB	67-64-1	Acetone	8.4	ug/L	FB
PL-7-630	2/7/2022	Carboy G2	8260_LL	VOA-EB	556-67-2	Cyclotetrasiloxane, octamethyl-	6.3	ug/L	TIC TB EB
PL-7-630	2/7/2022	Carboy G2	8260_LL	VOA-TB	556-67-2	Cyclotetrasiloxane, octamethyl-	5.9	ug/L	TIC TB EB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
200-C-225	2/10/2022	Carboy G2	8260	VOA-EB	1825-61-2	Silane, methoxytrimethyl-	5.3	ug/L	TIC EB
B655-EFF-2	2/4/2022	Carboy PF1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.84	ng/L	FB
ST-5-485	2/2/2022	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.79	ng/L	TB EB
BLM-32-543	2/2/2022	Carboy G1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.51	ng/L	FB
ST-5-485	2/2/2022	Carboy G2	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.41	ng/L	J TB EB
NASA 3	2/10/2022	Carboy G3	8260_LL	VOA-FB	74-87-3	Chloromethane	0.36	ug/L	J FB
200-C-225	2/10/2022	Carboy G2	8260	VOA-EB	74-87-3	Chloromethane	0.34	ug/L	J EB
200-C-270	2/10/2022	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.1	mg/L	J EB
200-C-270	2/10/2022	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.006	mg/L	J EB
200-C-270	2/10/2022	Carboy G2	METALS	METALS-EB	7440-66-6	Zinc, Total	0.004	mg/L	J EB
200-C-270	2/10/2022	Carboy G2	METALS	METALS-EB	7440-62-2	Vanadium, Total	0.001	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

March 2022

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1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a periodic report to assess the quality of groundwater analytical data reported. The monthly Quality Assurance Report (QAR) prepared and reviewed by responsible environmental contractor data management personnel provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method, if any.
- A list of the sample events for which groundwater samples were collected in March 2022.
- The quantity and type of quality control samples collected or prepared in March 2022.
- Definitions of data qualifiers used in WSTF analytical data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of quality assurance narratives for the month arranged by analytical method.
- A summary table of detections in equipment blank, field blank, and trip blank samples.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous Quality Assurance Reports

There were no notable anomalies requiring follow-up associated with previous QARs.

2.2 Notable Anomalies

There were no notable anomalies in the groundwater data associated with the March 2022 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in March 2022. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events identified in Table 1. As specified by the GMP, specific quality control samples are utilized to assess the quality of analytical data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. When data quality criteria are not met, data qualifiers are applied to the data. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for March 2022

Well ID	Event Date
BLM-13-300	3/1/2022
BLM-9-419	3/1/2022
WW-3-569	3/1/2022
BLM-21-400	3/2/2022
PL-11-470	3/2/2022
PL-11-530	3/2/2022
WW-1-452	3/2/2022
WW-3-469	3/2/2022
WW-3-710	3/2/2022
BLM-7-509	3/3/2022
WW-3-978	3/3/2022
PL-11-710	3/7/2022
PL-11-820	3/7/2022
PL-11-980	3/7/2022
ST-4-481	3/7/2022
ST-4-690	3/7/2022
PL-8-605	3/8/2022
PL-8-780	3/8/2022

Well ID	Event Date
ST-6-528	3/8/2022
ST-6-568	3/8/2022
PL-8-965	3/9/2022
ST-6-678	3/9/2022
ST-6-824	3/9/2022
ST-6-970	3/9/2022
BW-1-268	3/10/2022
PL-8-455	3/10/2022
WW-2-489	3/10/2022
WW-2-664	3/10/2022

Well ID	Event Date
100-HG-139	3/14/2022
BLM-42-569	3/14/2022
BLM-42-709	3/14/2022
BW-6-355	3/14/2022
BLM-5-527	3/15/2022
PL-2-504	3/15/2022
PL-4-464	3/15/2022
200-D-240	3/17/2022
B650-EFF-1	3/18/2022
B650-INF-1	3/18/2022

Well ID	Event Date
B655-EFF-2	3/18/2022
B655-INF-2	3/18/2022
700-D-186	3/21/2022
700-H-350	3/21/2022
700-J-200	3/21/2022
700-A-253	3/23/2022
700-H-535	3/23/2022
700-H-670	3/23/2022

Table 2 – Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**24**	**1**	**1**	0	**1**	**2**	**1**
Perchlorate by SW-846 Method 6850	**14**	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**17**	**14**	**3**	**2**	**1**	**5**	0
Low Level Volatile Organics by SW-846 Method 8260C	**29**	**21**	**8**	**7**	0	**1**	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**10**	**1**	0	0	0	**1**	0
Anions by Various EPA Methods	**8**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**20**	**1**	**1**	0	**1**	**2**	0
Nitrosamines by Low-Level Method	**32**	**22**	**8**	**8**	**1**	**3**	**1**
Total Dissolved Solids by Standard Method 2540C	**8**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 4/1/2021	QC Qty. since 4/1/2021	QC % since 4/1/2021	Sample Quantity March 2022	QC Quantity March 2022	QC % March 2022
VOA Duplicates	10	521	55	**11**	46	6	13
VOA Matrix Spikes	2	521	11	**2**	46	1	2
607 Duplicates	10	310	34	**11**	24	2	8
607 Matrix Spikes	2	310	7	**2**	24	1	4
607 Equipment Blanks	2	310	9	**3**	24	1	4
607 Field Blanks	2	310	9	**3**	24	1	4
NDMA_LL Duplicates	10	314	37	**12**	32	3	9
NDMA_LL Matrix Spikes	2	314	8	**3**	32	1	3
Metals Duplicates	10	200	21	**10**	20	2	10
Metals Matrix Spikes	2	200	5	**2**	20	0	0
Metals Equipment Blanks	5	200	11	**5**	20	1	5
Metals Field Blanks	5	200	10	**5**	20	1	5

Quality Control Requirement	**Requirement %**	**Sample Events since 4/1/2021**	**QC Qty. since 4/1/2021**	**QC % since 4/1/2021**	**Sample Events March 2022**	**QC Quantity March 2022**	**QC % March 2022**
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	521	521	**100%**	46	46	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	308	308	**100%**	30	30	100%

Quality Control Requirement	**Requirement %**	**Shipments since 4/1/2021**	**TB Qty. since 4/1/2021**	**TB % since 4/1/2021**	**Shipments in March 2022**	**TB Quantity March 2022**	**QC % March 2022**
VOA Trip Blank (per shipment)	*Should approach 100%*	95	95	**100%**	9	9	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	93	93	**100%**	8	8	100%

Table 4 – Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 – Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**78**	0	0	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**14**	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1430**	**1**	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Low Level Volatile Organics by SW-846 Method 8260C	**1954**	0	0	**1**	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**235**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**32**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**594**	0	**1**	0	0	0	0	0
Nitrosamines by Low-Level Method	**64**	0	0	0	0	0	0	0
Total Dissolved Solids by Standard Method 2540C	**8**	0	0	0	0	0	0	0

Table 6 – Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Nitrate plus Nitrite as N by EPA Method 353.2	**10**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**78**	0	0	0	0	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**14**	0	0	0	0	0	0	0	0	**1**
Organics by SW-846 Method 8015M	**2**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1430**	0	0	0	0	**1**	0	0	0	**22**
Low Level Volatile Organics by SW-846 Method 8260C	**1954**	0	0	0	0	**1**	0	0	0	**8**
Semi-Volatile Organics by SW-846 Method 8270D	**235**	0	**2**	0	0	**3**	0	0	0	**1**
Anions by Various EPA Methods	**32**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**594**	0	0	0	0	**2**	0	0	0	**109**
Nitrosamines by Low-Level Method	**64**	**3**	0	0	0	0	0	0	0	**6**
Total Dissolved Solids by Standard Method 2540C	**8**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, due to an error preparing the external chain of custody, the field logbook lists the analysis as regular method 8260, however, the samples were analyzed by low level method 8260. No groundwater data are affected by this error.
PL-11-470	**3/2/2022**	**For Low Level SW-846 Method 8260C, 1,4-dioxane, 2,5-dimethyl-(14 ug/L), sulfur dioxide (8.1 ug/L), and one unknown compound (6.2 ug/L) were tentatively identified by a GC/MS library search in sample 2203021402B.**
BLM-42-569	**3/14/2022**	**For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the trip blank (2203140750C) below the reporting limit. Affected data are appropriately qualified.**
BLM-42-569	**3/14/2022**	**For Low Level SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. Affected data are appropriately qualified.**
BLM-42-709	3/14/2022	For Low Level SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. No groundwater data are affected by this method blank contamination.
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, field duplicate samples 2203100931C and 2203100933C the relative percent difference for trichlorofluoromethane (CFC 11) was 5.4%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, field duplicate samples 2203100931C and 2203100933C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 6.2%. Upper acceptance limit for relative percent difference is 25%.
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, field duplicate samples 2203100931C and 2203100933C the relative percent difference for dichlorofluoromethane (CFC 21) was 10.5%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, field duplicate samples 2203100931C and 2203100933C the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 9.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-42-569	3/14/2022	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2203140946C were within laboratory control limits.
WW-3-569	**3/1/2022**	**For Low Level SW-846 Method 8260C, silane, methoxytrimethyl (8.9 ug/L) was tentatively identified by a GC/MS library search in sample 2203011025Y.**
B650-EFF-1	3/18/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B655-EFF-2	3/18/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-569	3/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-709	3/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-7-509	3/3/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-11-470	3/2/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-11-530	3/2/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-11-710	3/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-11-820	3/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-8-455	3/10/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-8-605	3/8/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PL-8-780	3/8/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-8-965	3/9/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-6-678	3/9/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-6-824	3/9/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-6-970	3/9/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-1-452	3/2/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-2-489	3/10/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-2-664	3/10/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-3-469	3/2/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-3-569	3/1/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-3-710	3/2/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
WW-3-978	3/3/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B650-EFF-1	3/18/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-EFF-2	3/18/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-11-470	3/2/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-11-530	3/2/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-11-710	3/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-11-820	3/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-11-980	3/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-8-605	3/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-8-780	3/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-4-481	3/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-4-690	3/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-6-528	3/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-6-568	3/8/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-1-452	3/2/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-3-469	3/2/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-3-569	3/1/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-3-710	3/2/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-EFF-1	3/18/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-EFF-2	3/18/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-42-569	3/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-42-709	3/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-11-470	3/2/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-11-530	3/2/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-11-710	3/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL).

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-11-820	3/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-11-980	3/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-8-605	3/8/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-8-780	3/8/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-8-965	3/9/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-4-481	3/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-4-690	3/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-6-528	3/8/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-6-568	3/8/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-6-678	3/9/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-6-824	3/9/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL).

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-6-970	3/9/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-1-452	3/2/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-3-469	3/2/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-3-569	3/1/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-3-710	3/2/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B650-EFF-1	3/18/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
B650-EFF-1	3/18/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
B655-EFF-2	3/18/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-42-569	3/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-42-709	3/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-7-509	3/3/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BW-1-268	3/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-470	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-530	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-710	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-820	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-980	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-8-455	3/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-455	3/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-780	3/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-965	3/9/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-4-481	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-481	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-4-690	3/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-6-528	3/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-6-568	3/8/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-6-678	3/9/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-6-824	3/9/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-6-970	3/9/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-1-452	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-489	3/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-664	3/10/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-3-469	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-569	3/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-569	3/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
WW-3-710	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-710	3/2/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
WW-3-978	3/3/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
100-HG-139	3/14/2022	For SW-846 Method 8260C in blind control sample (2203141100A), the percent recovery for tetrachloroethene (130%) was outside of the standard limits (75-125%). Additionally, vinyl chloride (0.25 ug/L) was detected below the reporting limit but none was added. No groundwater data are affected by this elevated recovery.
PL-2-504	**3/15/2022**	**For SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the field blank (2203150931C) below the reporting limit. Affected data are appropriately qualified.**
100-HG-139	3/14/2022	For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. No groundwater data are affected by this method blank contamination.
BW-6-355	3/14/2022	For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-2-504	**3/15/2022**	**For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. Affected data are appropriately qualified.**
PL-4-464	3/15/2022	For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 757849 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-21-400	3/2/2022	For SW-846 Method 8260C, field duplicate samples 2203021445A and 2203021446A the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 3.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-21-400	3/2/2022	For SW-846 Method 8260C, field duplicate samples 2203021445A and 2203021446A the relative percent difference for trichlorofluoromethane (CFC 11) was 4.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-21-400	3/2/2022	For SW-846 Method 8260C, field duplicate samples 2203021445A and 2203021446A the relative percent difference for trichloroethene (TCE) was 1.9%. Upper acceptance limit for relative percent difference is 25%.
100-HG-139	3/14/2022	For SW-846 Method 8260C, field duplicate samples 2203140950A and 2203140951A the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 7.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, field duplicate samples 2203151355C and 2203151356C the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, field duplicate samples 2203151355C and 2203151356C the relative percent difference for trichloroethene (TCE) was 3.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, field duplicate samples 2203151355C and 2203151356C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 4.7%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
B650-INF-1	3/18/2022	For SW-846 Method 8260C, field duplicate samples 2203180600 and 2203180601 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, field duplicate samples 2203180600 and 2203180601 the relative percent difference for trichloroethene (TCE) was 4.1%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, field duplicate samples 2203180600 and 2203180601 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
700-D-186	3/21/2022	For SW-846 Method 8260C, field duplicate samples 2203211327A and 2203211328A the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
100-HG-139	3/14/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-D-240	3/17/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-A-253	3/23/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-D-186	3/21/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-H-350	3/21/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-H-535	3/23/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-H-670	3/23/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
700-J-200	3/21/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B655-INF-2	3/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-13-300	3/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-21-400	3/2/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-9-419	3/1/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BW-6-355	3/14/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-2-504	3/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-4-464	3/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-D-240	3/17/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-INF-2	3/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-13-300	3/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-9-419	3/1/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
100-HG-139	3/14/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-D-240	3/17/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-A-253	3/23/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-D-186	3/21/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-H-350	3/21/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-H-535	3/23/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-H-670	3/23/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-J-200	3/21/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-INF-2	3/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-13-300	3/1/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-9-419	3/1/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BW-6-355	3/14/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-2-504	3/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-4-464	3/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
700-H-350	3/21/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
700-H-535	3/23/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
700-H-670	3/23/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
100-HG-139	3/14/2022	For SW-846 Method 8260C, there were no detections in the field blank.
200-D-240	3/17/2022	For SW-846 Method 8260C, there were no detections in the field blank.
700-A-253	3/23/2022	For SW-846 Method 8260C, there were no detections in the field blank.
700-D-186	3/21/2022	For SW-846 Method 8260C, there were no detections in the field blank.
700-J-200	3/21/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	3/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	3/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-13-300	3/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-21-400	3/2/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-5-527	3/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-9-419	3/1/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BW-6-355	3/14/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PL-4-464	3/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
700-J-200	3/21/2022	For SW-846 Method 8260C, there were no detections in the trip blank.
PL-4-464	3/15/2022	For SW-846 Method 8260C, there were no detections in the trip blank.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
100-HG-139	3/14/2022	For Modified EPA Method 607 in blind control sample (2203141101A), all recoveries were within standard limits.
BLM-5-527	3/15/2022	For Modified EPA Method 607, field duplicate samples 2203151358C and 2203151359C the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2022	For Modified EPA Method 607, field duplicate samples 2203151358C and 2203151359C the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B655-INF-2	3/18/2022	For Modified EPA Method 607, field duplicate samples 2203180743 and 2203180744 the relative percent difference for N-nitrodimethylamine was 1.4%. Upper acceptance limit for relative percent difference is 25%.
B655-INF-2	3/18/2022	For Modified EPA Method 607, field duplicate samples 2203180743 and 2203180744 the relative percent difference for N-nitrosodimethylamine was 2.0%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
B655-INF-2	3/18/2022	For Modified EPA Method 607, field duplicate samples 2203180743 and 2203180744 the relative percent difference for bromacil was 3.8%. Upper acceptance limit for relative percent difference is 25%.
BW-6-355	3/14/2022	For Modified EPA Method 607, matrix spike recoveries for sample 2203141433A were within laboratory control limits.
700-H-535	3/23/2022	For Modified EPA Method 607, there were no detections in the equipment blank.
WW-1-452	3/2/2022	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-8-605	3/8/2022	For Low Level Nitrosamine Method in blind control sample (2203080900Y), all recoveries were within standard limits however N-nitrodimethylamine (1.16 ng/L) was detected but none was added.
PL-8-780	3/8/2022	For Low Level Nitrosamine Method, for equipment blank 2203081416Y the recovery of the internal standard NDMA-d6 (8.79%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for these samples were well above the minimum of 3 (the lowest signal was > 97) allowing for detection of native NDMA above the MDL. No additional corrective action was required.
ST-4-481	3/7/2022	For Low Level Nitrosamine Method, for field blank 2203070953A the recovery of the internal standard NDMA-d6 (6.76%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for these samples were well above the minimum of 3 (the lowest signal was > 97) allowing for detection of native NDMA above the MDL. No additional corrective action was required.
ST-4-690	**3/7/2022**	**For Low Level Nitrosamine Method, for sample 2203071403A, matrix spike 2203071404A, matrix spike duplicate 2203071405A, and field blank 2203071406A the recovery of the internal standard NDMA-d6 (7.12%), (8.98%), (6.19%), and (5.52%) were outside laboratory control limits (10-100%). The samples could not be re-extracted due to lack of reserve. The signal to noise ratio for these samples were well above the minimum of 3 (the lowest signal was > 97) allowing for detection of native NDMA above the MDL. No additional corrective action was required. Associated groundwater data are qualified with an asterisk (*).**
PL-8-605	**3/8/2022**	**For Low Level Nitrosamine Method, for sample 2203081051Y the recovery of the internal standard NDMA-d6 (8.50%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for these samples were well above the minimum of 3 (the lowest signal was > 97) allowing for detection of native NDMA above the MDL. No additional corrective action was required. Associated groundwater data are qualified with an asterisk (*).**
PL-4-464	**3/15/2022**	**For Low Level Nitrosamine Method, for sample 2303150953A the recovery of the internal standard NDMA-d6 (8.2%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for these samples were well above the minimum of 3 (the lowest signal was > 97) allowing for detection of native NDMA above the MDL. No additional corrective action was required. Associated groundwater data are qualified with an asterisk (*).**
ST-4-690	3/7/2022	For Low Level Nitrosamine Method, matrix spike recoveries for sample 2203071404A and 2203071405A were within laboratory control limits.
PL-8-780	3/8/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2203090916Y and 2203090935Y were within control limits or below the calculable range.
WW-3-710	3/2/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2203020941Y and 2203020942Y were within control limits or below the calculable range.
ST-6-528	3/8/2022	For Low Level Nitrosamine Method, sample 2203081403B was received at the analytical laboratory broken. Resampling was conducted on 3/15/2022.
ST-6-568	3/8/2022	For Low Level Nitrosamine Method, sample 2203081423B and duplicate sample 2203081425B were received at the analytical laboratory broken. Resampling was conducted on 3/15/2022, however a duplicate sample was not collected.
B650-EFF-1	3/18/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
B650-EFF-1	3/18/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
B655-EFF-2	3/18/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-13-300	3/1/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-569	3/14/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-42-569	3/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-709	3/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-7-509	3/3/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-470	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-530	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-710	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-820	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-980	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-4-464	3/15/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-4-464	3/15/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-8-455	3/10/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-8-455	3/10/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-605	3/8/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-8-605	3/8/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-780	3/8/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-8-965	3/9/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-4-481	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-4-481	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-4-690	3/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-528	3/8/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-568	3/8/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-678	3/9/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-824	3/9/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-970	3/9/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-1-452	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-489	3/10/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-664	3/10/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-3-469	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-710	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-710	3/2/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-978	3/3/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
PL-8-455	**3/10/2022**	**For SW-846 Method 8270D, 1,4-dioxane (0.053 ug/L) was detected in the method blank for analytical batch 396812. Affected data are appropriately qualified.**
PL-8-455	**3/10/2022**	**For SW-846 Method 8270D, 1,4-dioxane (0.072 ug/L) was detected in the method blank for analytical batch 396730. Affected data are appropriately qualified.**
ST-6-678	3/9/2022	For SW-846 Method 8270D, 1,4-dioxane (0.072 ug/L) was detected in the method blank for analytical batch 396730. No groundwater data are affected by this method blank contamination.
ST-6-528	3/8/2022	For SW-846 Method 8270D, 1,4-dioxane (0.11 ug/L) was detected in the field blank (2203081406B). No groundwater data are affected by this field blank contamination.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
BLM-42-709	**3/14/2022**	**For SW-846 Method 8270D, di-n-butyl phthalate (2.3 ug/L) was detected in the method blank for analytical batch 396774 below the reporting limit. Affected data are appropriately qualified.**
PL-11-470	3/2/2022	For SW-846 Method 8270D, field duplicate samples 2203021408B and 2203021409B the relative percent difference for 1,4-dioxane was 13.3%. Upper acceptance limit for relative percent difference is 25%.
BLM-42-709	3/14/2022	For SW-846 Method 8270D, the extraction of sample 203141414C was initially performed within holding time, but was re-extracted due to a QC failure. Efforts were made to re-extract the samples as soon as possible. The re-extraction was performed past the recommended holding time. Only the original results are reported.
BLM-42-709	**3/14/2022**	**For SW-846 Method 8270D, the lower control limit for the spike recovery of the Laboratory Control Sample (LCSD) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. The analytes affected are flagged in the LCSD Summary. The LCS was acceptable. Affected groundwater data are appropriately qualified.**
PL-8-455	3/10/2022	For SW-846 Method 8270D, the lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for the Internal Standard. As the Duplicate LCS was acceptable and an LCSD was not needed for this run, the LCSD was reported as the LCS. All other spiked QC recovery for the prep run were acceptable.
ST-6-678	3/9/2022	For SW-846 Method 8270D, the lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for the Internal Standard. As the Duplicate LCS was acceptable and LCSD was not required for this run, the LCSD was reported as the LCS. All other spiked QC recovery for the prep run were acceptable.
BLM-13-300	3/1/2022	For SW-846 Method 8270D, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	Total Metals QA Narratives
100-HG-139	3/14/2022	For Total Metals, blind control sample (2203141102A) was prepared at a concentration below the reporting limits for magnesium and calcium. The results for these metals are not qualified based on this control.
BLM-13-300	3/1/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 396269 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-21-400	**3/2/2022**	**For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. Affected data are appropriately qualified.**
BLM-7-509	3/3/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. No groundwater data are affected by this method blank contamination.
WW-1-452	3/2/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. No groundwater data are affected by this method blank contamination.
WW-3-469	**3/2/2022**	**For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. Affected data are appropriately qualified.**
WW-3-569	3/1/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 396269 below the reporting limit. No groundwater data are affected by this method blank contamination.
WW-3-710	3/2/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. No groundwater data are affected by this method blank contamination.

Well ID	Event Date	Total Metals QA Narratives
WW-3-978	3/3/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 693269 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-7-509	3/3/2022	For Total Metals, field duplicate samples 2203030935A and 2203030936A the relative percent difference for strontium was 4.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-7-509	3/3/2022	For Total Metals, field duplicate samples 2203030935A and 2203030936A the relative percent difference for calcium was 4.7%. Upper acceptance limit for relative percent difference is 25%.
BLM-7-509	3/3/2022	For Total Metals, field duplicate samples 2203030935A and 2203030936A the relative percent difference for magnesium was 5.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-7-509	3/3/2022	For Total Metals, field duplicate samples 2203030935A and 2203030936A the relative percent difference for sodium was 5.3%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/7/2022	For Total Metals, field duplicate samples 2203070954A and 2203070955A the relative percent difference for calcium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/7/2022	For Total Metals, field duplicate samples 2203070954A and 2203070955A the relative percent difference for magnesium was 1.3%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/7/2022	For Total Metals, field duplicate samples 2203070954A and 2203070955A the relative percent difference for sodium was 1.5%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/7/2022	For Total Metals, field duplicate samples 2203070954A and 2203070955A the relative percent difference for strontium was 0.4%. Upper acceptance limit for relative percent difference is 25%.
WW-3-710	**3/2/2022**	**For Total Metals, potassium (0.6 mg/L), sodium (0.4 mg/L), and strontium (0.003 mg/L) were detected in the equipment blank (2203020832Y) below the reporting limit. Affected data are appropriately qualified.**
100-HG-139	3/14/2022	For Total Metals, there were no detections in the field blank.

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
WW-3-710	3/2/2022	Carboy G1	METALS	METALS-EB	7440-09-7	Potassium, Total	0.6	mg/L	J EB
WW-3-710	3/2/2022	Carboy G1	METALS	METALS-EB	7440-23-5	Sodium, Total	0.4	mg/L	J EB
PL-2-504	3/15/2022	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.29	ug/L	J RB FB
BLM-42-569	3/14/2022	Carboy G3	8260_LL	VOA-TB	74-87-3	Chloromethane	0.29	ug/L	J RB TB
ST-6-528	3/8/2022	Carboy G3	8270	SVOA_SIM-FB	123-91-1	1,4-Dioxane	0.11	ug/L	FB
WW-3-710	3/2/2022	Carboy G1	METALS	METALS-EB	7440-24-6	Strontium, Total	0.003	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

April 2022

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1.0 Introduction

The WSTF Groundwater Monitoring Plan (GMP) requires the preparation of a periodic report to assess the quality of groundwater analytical data reported. The monthly Quality Assurance Report (QAR) prepared and reviewed by responsible environmental contractor data management personnel provides the following information:

- A summary of notable anomalies and a follow-up on previous anomalies, if necessary.
- A summary of notable data quality issues by analytical method, if any.
- A list of the sample events for which groundwater samples were collected in April 2022.
- The quantity and type of quality control samples collected or prepared in April 2022.
- Definitions of data qualifiers used in WSTF analytical data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of quality assurance narratives for the month arranged by analytical method.
- A summary table of detections in equipment blank, field blank, and trip blank samples.

2.0 Data Quality

2.1 Notable Anomalies Identified in Previous Quality Assurance Reports

There were no notable anomalies requiring follow-up associated with previous QARs.

2.2 Notable Anomalies

There were no notable anomalies in the groundwater data associated with the April 2022 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in April 2022. This report is based on data quality issues related to the sample events listed in Table 1. Tables 2 through 8 contain information related to the sample events identified in Table 1. As specified by the GMP, specific quality control samples are utilized to assess the quality of analytical data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GMP. When data quality criteria are not met, data qualifiers are applied to the data. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the WSTF analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by **bold text** in Table 7. Table 8 provides a summary of all detections in WSTF blank samples.

Table 1 – Sample Events for April 2022

Well ID	Event Date	Well ID	Event Date	Well ID	Event Date
JP-1-424	4/1/2022	JER-1-483	4/5/2022	JER-2-504	4/6/2022
JP-2-447	4/1/2022	JER-1-563	4/5/2022	JER-2-584	4/6/2022
BLM-40-517	4/4/2022	JER-1-683	4/5/2022	JER-2-684	4/6/2022
BLM-40-595	4/4/2022	PL-10-484	4/5/2022	ST-7-453	4/7/2022
PL-10-813	4/4/2022	PL-10-592	4/5/2022	ST-7-544	4/7/2022
PL-10-962	4/4/2022	BLM-39-385	4/6/2022	ST-7-779	4/11/2022

Well ID	Event Date
ST-7-970	4/11/2022
PL-6-725	4/13/2022
WW-5-459	4/13/2022
WW-5-579	4/13/2022
WW-5-809	4/13/2022
WW-5-909	4/13/2022
BLM-10-517	4/14/2022
JP-3-509	4/14/2022
JP-3-689	4/14/2022
PL-6-545	4/14/2022

Well ID	Event Date
B650-EFF-1	4/15/2022
B650-INF-1	4/15/2022
B655-EFF-2	4/15/2022
B655-INF-2	4/15/2022
BLM-40-688	4/15/2022
PFE-4A	4/15/2022
400-FV-131	4/18/2022
400-HV-147	4/18/2022
BLM-14-327	4/18/2022
BLM-6-488	4/18/2022

Well ID	Event Date
200-B-240	4/19/2022
BLM-39-560	4/19/2022
BLM-41-420	4/19/2022
BLM-41-670	4/19/2022
PFE-2	4/19/2022
PFE-5	4/19/2022
PFE-7	4/19/2022
PL-1-486	4/19/2022
600-G-138	4/20/2022
BW-3-180	4/20/2022

Table 2 – Quantity of Quality Control Samples

Method	Samples	Field Blanks	Equip Blanks	Trip Blanks	Blind Controls	Duplicates	Matrix Spikes
Chloride by EPA Method 300.0	**1**	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**7**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**18**	**1**	**1**	0	**1**	**2**	**1**
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**1**	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**1**	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**1**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**15**	**13**	**2**	**2**	**1**	**6**	0
Low Level Volatile Organics by SW-846 Method 8260C	**33**	**27**	**6**	**7**	0	0	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**9**	**1**	0	0	0	**1**	0
Dioxins/Furans by SW-846 Method 8290	**1**	0	0	0	0	0	0
Cyanide by SW-846 Method 9012B	**1**	0	0	0	0	0	0
Sulfide by SW-846 Method 9030	**1**	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0
Anions by Various EPA Methods	**6**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**15**	**1**	**1**	0	**1**	**1**	**1**
Nitrosamines by Low-Level Method	**35**	**28**	**7**	**9**	**1**	**3**	**1**
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 5/1/2021	QC Qty. since 5/1/2021	QC % since 5/1/2021	Sample Quantity April 2022	QC Quantity April 2022	QC % April 2022
VOA Duplicates	10	521	56	**11**	48	6	12
VOA Matrix Spikes	2	521	11	**2**	48	1	2
607 Duplicates	10	307	34	**11**	18	2	11
607 Matrix Spikes	2	307	7	**2**	18	1	6
607 Equipment Blanks	2	307	9	**3**	18	1	6
607 Field Blanks	2	307	9	**3**	18	1	6
NDMA_LL Duplicates	10	314	36	**11**	35	3	9
NDMA_LL Matrix Spikes	2	314	8	**3**	35	1	3

Quality Control Requirement	Requirement %	Samp. Qty. since 5/1/2021	QC Qty. since 5/1/2021	QC % since 5/1/2021	Sample Quantity April 2022	QC Quantity April 2022	QC % April 2022
Metals Duplicates	10	200	20	**10**	15	1	7
Metals Matrix Spikes	2	200	6	**3**	15	1	7
Metals Equipment Blanks	5	200	11	**5**	15	1	7
Metals Field Blanks	5	200	11	**5**	15	1	7

Quality Control Requirement	Requirement %	Sample Events since 5/1/2021	QC Qty. since 5/1/2021	QC % since 5/1/2021	Sample Events April 2022	QC Quantity April 2022	QC % April 2022
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	521	521	**100%**	48	48	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	308	308	**100%**	35	35	100%

Quality Control Requirement	Requirement %	Shipments since 5/1/2021	TB Qty. since 5/1/2021	TB % since 5/1/2021	Shipments in April 2022	TB Quantity April 2022	QC % April 2022
VOA Trip Blank (per shipment)	*Should approach 100%*	95	95	**100%**	8	8	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	94	94	**100%**	8	8	100%

Table 4 – Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 – Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Chloride by EPA Method 300.0	**1**	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**7**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**60**	0	0	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**21**	0	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**7**	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**6**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1365**	0	0	0	**3**	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**2149**	**1**	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**123**	0	0	0	0	**2**	0	0
Dioxins/Furans by SW-846 Method 8290	**25**	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9012B	**1**	0	0	0	0	0	0	0
Sulfide by SW-846 Method 9030	**1**	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**24**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**432**	**1**	**1**	0	0	0	0	0
Nitrosamines by Low-Level Method	**76**	0	**2**	0	0	0	0	0
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0	0

Table 6 – Quantity of Laboratory based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	"*"	"A"	"AD"	"G"	"RB"	"T"	"D"	"i"	"J"
Chloride by EPA Method 300.0	**1**	0	0	0	0	0	0	0	0	0
Nitrate plus Nitrite as N by EPA Method 353.2	**7**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**60**	0	0	0	0	0	0	**1**	0	**1**
Perchlorate by SW-846 Method 6850	**6**	0	0	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**21**	0	**1**	0	0	0	0	0	0	0
PCBs by SW-846 Method 8082	**7**	0	0	0	0	0	0	0	0	0
Herbicides by SW-846 Method 8151	**6**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1365**	0	0	0	0	0	0	0	0	**24**
Low Level Volatile Organics by SW-846 Method 8260C	**2149**	0	0	0	0	0	0	0	0	**12**
Semi-Volatile Organics by SW-846 Method 8270D	**123**	0	0	0	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**25**	0	0	0	0	**1**	0	0	0	**1**
Cyanide by SW-846 Method 9012B	**1**	0	0	0	0	0	0	0	0	0
Sulfide by SW-846 Method 9030	**1**	0	0	0	0	0	0	0	0	0
Phenolics by SW-846 Method 9066	**1**	0	0	0	0	0	0	0	0	0
Anions by Various EPA Methods	**24**	0	0	0	0	0	0	0	0	**1**
Total Metals by Various SW-846 Methods	**432**	0	0	0	0	0	0	0	0	**79**
Nitrosamines by Low-Level Method	**76**	0	0	0	0	0	0	0	0	**11**
Total Dissolved Solids by Standard Method 2540C	**6**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
B655-EFF-2	**4/15/2022**	**For Low Level SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.22 ug/L) was detected in the field blank (2204150536) below the reporting limit. Affected data are appropriately qualified.**
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the trip blank (2204060700B) below the reporting limit. No groundwater data are affected by this trip blank contamination.
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the method blank for analytical batch 760394 below the reporting limit. No groundwater data are affected by this method blank contamination.
JER-2-584	4/6/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the method blank for analytical batch 760394 below the reporting limit. No groundwater data are affected by this method blank contamination.
JER-2-684	4/6/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the method blank for analytical batch 760394 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the method blank for analytical batch 760394 below the reporting limit. No groundwater data are affected by this method blank contamination.
ST-7-544	4/7/2022	For Low Level SW-846 Method 8260C, chloromethane (0.29 ug/L) was detected in the method blank for analytical batch 760394 below the reporting limit. No groundwater data are affected by this method blank contamination.
JER-2-584	4/6/2022	For Low Level SW-846 Method 8260C, chloromethane (0.3 ug/L) was detected in the field blank (2204061432B) below the reporting limit. No groundwater data are affected by this field blank contamination.
ST-7-544	4/7/2022	For Low Level SW-846 Method 8260C, chloromethane (0.3 ug/L) was detected in the field blank (2204071447B) below the reporting limit. No groundwater data are affected by this field blank contamination.
JP-1-424	4/1/2022	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2204010926A were within laboratory control limits.
B650-EFF-1	**4/15/2022**	**For Low Level SW-846 Method 8260C, silane, methoxytrimethyl- (5.6 ug/L) were tentatively identified by a GC/MS library search in sample 2204150608.**
JER-1-563	**4/5/2022**	**For Low Level SW-846 Method 8260C, sulfur dioxide (17 ug/L), silane, (2-methoxyethyl)trimethyl- (5.9 ug/L), and one unknown compound (9.2 ug/L) were tentatively identified by a GC/MS library search in sample 2204051500B.**
B650-EFF-1	4/15/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B655-EFF-2	4/15/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-10-517	4/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-40-688	4/15/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-41-420	4/19/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-41-670	4/19/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
JER-2-584	4/6/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
JER-2-684	4/6/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
JP-3-509	4/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
JP-3-689	4/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-1-486	4/19/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PL-6-545	4/14/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
ST-7-544	4/7/2022	For Low Level SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B650-EFF-1	4/15/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-EFF-2	4/15/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-10-517	4/14/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-40-517	4/4/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-40-595	4/4/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-40-688	4/15/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-41-420	4/19/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-41-670	4/19/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-1-483	4/5/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-1-563	4/5/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-1-683	4/5/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-2-584	4/6/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JER-2-684	4/6/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
JP-1-424	4/1/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JP-2-447	4/1/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JP-3-509	4/14/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
JP-3-689	4/14/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-10-484	4/5/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-10-592	4/5/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-10-813	4/4/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-10-962	4/4/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-1-486	4/19/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-6-545	4/14/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PL-6-725	4/13/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-7-544	4/7/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-7-779	4/11/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
ST-7-970	4/11/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-5-459	4/13/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-5-579	4/13/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-5-809	4/13/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
WW-5-909	4/13/2022	For Low Level SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-EFF-1	4/15/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-EFF-2	4/15/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-10-517	4/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-40-517	4/4/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-40-688	4/15/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-41-420	4/19/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-41-670	4/19/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JER-2-584	4/6/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JER-2-684	4/6/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JP-1-424	4/1/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JP-2-447	4/1/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JP-3-509	4/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
JP-3-689	4/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PL-1-486	4/19/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-6-545	4/14/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PL-6-725	4/13/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-7-544	4/7/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-7-779	4/11/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
ST-7-970	4/11/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-5-459	4/13/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-5-579	4/13/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-5-809	4/13/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
WW-5-909	4/13/2022	For Low Level SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B650-EFF-1	4/15/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-10-517	4/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-517	4/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-517	4/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
BLM-40-595	4/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-688	4/15/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-420	4/19/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-670	4/19/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-483	4/5/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-563	4/5/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-683	4/5/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-504	4/6/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-684	4/6/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-1-424	4/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-1-424	4/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JP-2-447	4/1/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-509	4/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-509	4/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JP-3-689	4/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-10-484	4/5/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-592	4/5/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-813	4/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-962	4/4/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-1-486	4/19/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-6-545	4/14/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-6-725	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-6-725	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-453	4/7/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-7-779	4/11/2022	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-7-779	4/11/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-970	4/11/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-459	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-579	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-809	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-909	4/13/2022	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-14-327	**4/18/2022**	**For SW-846 Method 8260C in blind control sample (2204181423A), the percent recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (134%), tetrachloroethene (128%), and trichlorofluoromethane (152%) was outside of the standard limits (75-125%). Affected data are appropriately qualified.**
BLM-39-385	4/6/2022	For SW-846 Method 8260C, chloromethane (0.32 ug/L) was detected in the method blank for analytical batch 760547 below the reporting limit. No groundwater data are affected by this method blank contamination.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, field duplicate samples 2204150731 and 2204150732 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 5.6%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, field duplicate samples 2204150731 and 2204150732 the relative percent difference for trichloroethene (TCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
B650-INF-1	4/15/2022	For SW-846 Method 8260C, field duplicate samples 2204150731 and 2204150732 the relative percent difference for trichlorofluoromethane (CFC 11) was 4.3%. Upper acceptance limit for relative percent difference is 25%.
PFE-5	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190852 and 2204190853 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0.0%. Upper acceptance limit for relative percent difference is 25%.
PFE-5	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190852 and 2204190853 the relative percent difference for trichlorofluoromethane (CFC 11) was 4.7%. Upper acceptance limit for relative percent difference is 25%.
PFE-5	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190852 and 2204190853 the relative percent difference for trichloroethene (TCE) was 5.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190930Y and 2204190931Y the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 21.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190930Y and 2204190931Y the relative percent difference for dichlorofluoromethane (CFC 21) was 18.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190930Y and 2204190931Y the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 24.3%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190930Y and 2204190931Y the relative percent difference for trichlorofluoromethane (CFC 11) was 19.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204190930Y and 2204190931Y the relative percent difference for trichloroethene (TCE) was 18.2%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204191002A and 2204191004A the relative percent difference for trichlorofluoromethane (CFC 11) was 1.1%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	4/19/2022	For SW-846 Method 8260C, field duplicate samples 2204191002A and 2204191004A the relative percent difference for trichloroethene (TCE) was 2.2%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/20/2022	For SW-846 Method 8260C, field duplicate samples 2204200950C and 2204200951C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 2.3%. Upper acceptance limit for relative percent difference is 25%.
600-G-138	4/20/2022	For SW-846 Method 8260C, field duplicate samples 2204201030A and 2204201031A the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 6.9%. Upper acceptance limit for relative percent difference is 25%.
600-G-138	4/20/2022	For SW-846 Method 8260C, field duplicate samples 2204201030A and 2204201031A the relative percent difference for trichloroethene (TCE) was 2.7%. Upper acceptance limit for relative percent difference is 25%.
200-B-240	4/19/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-FV-131	4/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-HV-147	4/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
600-G-138	4/20/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s)

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
B655-INF-2	4/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-14-327	4/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-39-385	4/6/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BLM-6-488	4/18/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
BW-3-180	4/20/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PFE-2	4/19/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PFE-4A	4/15/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PFE-5	4/19/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
PFE-7	4/19/2022	For SW-846 Method 8260C, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-B-240	4/19/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-FV-131	4/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
400-HV-147	4/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
B655-INF-2	4/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-14-327	4/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-39-385	4/6/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-6-488	4/18/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PFE-2	4/19/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PFE-4A	4/15/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PFE-5	4/19/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
PFE-7	4/19/2022	For SW-846 Method 8260C, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
200-B-240	4/19/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-FV-131	4/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-HV-147	4/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
600-G-138	4/20/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
B655-INF-2	4/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-14-327	4/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-39-385	4/6/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-6-488	4/18/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BW-3-180	4/20/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PFE-2	4/19/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PFE-4A	4/15/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PFE-5	4/19/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
PFE-7	4/19/2022	For SW-846 Method 8260C, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-39-385	4/6/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
BLM-39-560	4/19/2022	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-B-240	4/19/2022	For SW-846 Method 8260C, there were no detections in the field blank.
400-FV-131	4/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
400-HV-147	4/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
600-G-138	4/20/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	4/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	4/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-14-327	4/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-6-488	4/18/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BW-3-180	4/20/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-2	4/19/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-4A	4/15/2022	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-7	4/19/2022	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-6-488	4/18/2022	For SW-846 Method 8260C, there were no detections in the trip blank.
BW-3-180	4/20/2022	For SW-846 Method 8260C, there were no detections in the trip blank.
PFE-5	4/19/2022	For SW-846 Method 8260C, trichloroethene (TCE) (0.23 ug/L) was detected in the field blank (2204190854) below the reporting limit. No groundwater data are affected by this field blank contamination.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
BLM-14-327	4/18/2022	For Modified EPA Method 607 in blind control sample (2204181424A), all recoveries were within standard limits.
PL-6-545	4/14/2022	For Modified EPA Method 607, due to labelling and external chain of custody errors, results were incorrectly reported for sample number 2204141300Y. The sample number (2204141301Y) is corrected to match the field logbook.
PFE-5	4/19/2022	For Modified EPA Method 607, field duplicate samples 2204190855 and 2204190856 the relative percent difference for bromacil was 4.7%. Upper acceptance limit for relative percent difference is 25%.
PFE-5	4/19/2022	For Modified EPA Method 607, field duplicate samples 2204190855 and 2204190856 the relative percent difference for N-nitrodimethylamine was 13.3%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
PFE-5	4/19/2022	For Modified EPA Method 607, field duplicate samples 2204190855 and 2204190856 the relative percent difference for N-nitrosodimethylamine was 9.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-40-517	4/4/2022	For Modified EPA Method 607, matrix spike recoveries for sample 2204041013C were within laboratory control limits.
BLM-39-560	4/19/2022	For Modified EPA Method 607, relative percent differences (RPD) for duplicate samples 2204190932Y and 2204190955Y were within control limits or below the calculable range.
BLM-39-385	4/6/2022	For Modified EPA Method 607, there were no detections in the equipment blank.
600-G-138	4/20/2022	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-41-670	4/19/2022	For Low Level Nitrosamine Method in blind control sample (2204191110C), N-nitrodimethylamine (0.65 ng/L) was detected but none was added.
PL-6-725	4/13/2022	For Low Level Nitrosamine Method, for equipment blank 2204130916Y the recovery of the internal standard NDMA-d6 (8.8%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for this sample was well above the minimum of 3 (the actual signal was > 242) allowing for detection of native NDMA above the MDL. No additional corrective action was required.
WW-5-459	4/13/2022	For Low Level Nitrosamine Method, for field blank 2204131313B the recovery of the internal standard NDMA-d6 (7.3%) was outside laboratory control limits (10-100%). The sample could not be re-extracted due to lack of reserve. The signal to noise ratio for this sample was well above the minimum of 3 (the actual signal was > 160) allowing for detection of native NDMA above the MDL. No additional corrective action was required.
BLM-40-688	4/15/2022	For Low Level Nitrosamine Method, matrix spike recoveries for sample 2204150913C and 2204150914C were within laboratory control limits.
PL-6-545	**4/14/2022**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.47 ng/L) was detected in the equipment blank (2204140951Y) below the reporting limit. Affected data are appropriately qualified.**
PL-6-725	**4/13/2022**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.81 ng/L) and N-nitrodimethylamine (0.28 ng/L) were detected in the equipment blank (2204130916Y) below the reporting limit with the exception of N-nitrosodimethylamine. Affected data are appropriately qualified.**
BLM-41-420	4/19/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2204191434C and 2204191440C were within control limits or below the calculable range.
BLM-41-670	4/19/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2204190959C and 2204191001C were within control limits or below the calculable range.
PFE-7	4/19/2022	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2204190953 and 2204190954 were within control limits or below the calculable range.
B650-EFF-1	4/15/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
B655-EFF-2	4/15/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-10-517	4/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-517	4/4/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-40-517	4/4/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-595	4/4/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-688	4/15/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-41-420	4/19/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-41-670	4/19/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
BLM-6-488	4/18/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-6-488	4/18/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
JER-1-483	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JER-1-563	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JER-1-683	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JER-2-504	4/6/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
JER-2-504	4/6/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JER-2-584	4/6/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JER-2-684	4/6/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-1-424	4/1/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-1-424	4/1/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
JP-2-447	4/1/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-3-509	4/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-3-509	4/14/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
JP-3-689	4/14/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PFE-7	4/19/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-10-484	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-592	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-10-592	4/5/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-813	4/4/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-962	4/4/2022	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-1-486	4/19/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-6-725	4/13/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-7-453	4/7/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-7-453	4/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-544	4/7/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-779	4/11/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-779	4/11/2022	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-7-970	4/11/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-459	4/13/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-579	4/13/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-809	4/13/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-909	4/13/2022	For Low Level Nitrosamine Method, there were no detections in the field blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
PL-10-484	4/5/2022	For SW-846 Method 8270D, 1,4-dioxane (0.032 ug/L) was detected in the field blank (2204051413Y) below the reporting limit. No groundwater data are affected by this field blank contamination.
200-B-240	**4/19/2022**	**For SW-846 Method 8270D, dichloromethane (methylene chloride) (5.6 ug/L) and two unknown compounds were tentatively identified by a GC/MS library search in sample 2204191013A.**
JER-2-504	**4/6/2022**	**For SW-846 Method 8270D, field duplicate samples 2204061415B and 2204061416B the relative percent difference for 1,4-dioxane was 68.0%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
200-B-240	4/19/2022	For SW-846 Method 8270D, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-B-240	4/19/2022	For SW-846 Method 8270D, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
200-B-240	**4/19/2022**	**For SW-846 Method 8270D, two unknown compounds were tentatively identified by a GC/MS library search in the method blank for analytical batch 398596. Affected data are appropriately qualified.**

Well ID	Event Date	Total Metals QA Narratives
BLM-14-327	4/18/2022	For Total Metals, blind control sample (2204181425A) was prepared at a concentration below the reporting limits for magnesium and calcium. The results for these metals are not qualified based on this control.
PL-6-545	4/14/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 398500 below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-6-725	4/13/2022	For Total Metals, cobalt (0.0009 mg/L) was detected in the method blank for analytical batch 398500 below the reporting limit. No groundwater data are affected by this method blank contamination.
JP-1-424	4/1/2022	For Total Metals, field duplicate samples 2204010930A and 2204010931A the relative percent difference for strontium was 0.5%. Upper acceptance limit for relative percent difference is 25%.
JP-1-424	4/1/2022	For Total Metals, field duplicate samples 2204010930A and 2204010931A the relative percent difference for calcium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
JP-1-424	4/1/2022	For Total Metals, field duplicate samples 2204010930A and 2204010931A the relative percent difference for sodium was 0.4%. Upper acceptance limit for relative percent difference is 25%.
JP-1-424	4/1/2022	For Total Metals, field duplicate samples 2204010930A and 2204010931A the relative percent difference for magnesium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
JP-2-447	4/1/2022	For Total Metals, for matrix spike sample 2204044400A the concentrations of calcium and magnesium in the native sample were greater than four times the concentration of the spike added. The sample results for these metals are not qualified based on this control.
BLM-39-560	**4/19/2022**	**For Total Metals, magnesium (0.07 mg/L), strontium (0.007 mg/L), and zinc (0.004 mg/L) were detected in the equipment blank (2204190826Y) below the reporting limit. Affected data are appropriately qualified.**
BW-3-180	**4/20/2022**	**For Total Metals, zinc (0.004 mg/L) was detected in the field blank (2204201006C) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Miscellaneous QA Narratives
PL-6-725	4/13/2022	For EPA Method 300.0, chloride (0.05 mg/L) was detected in the method blank for analytical batch 761901 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-B-240	**4/19/2022**	**For SW-846 Method 8081B, the lower control limit for the spike recovery of the Duplicate Laboratory Control Sample (DLCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. Affected data are appropriately qualified.**
200-B-240	4/19/2022	For SW-846 Method 8081B, the lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV) on one detector. All recoveries were acceptable on the secondary detector. Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
200-B-240	4/19/2022	For SW-846 Method 8151A, the upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
200-B-240	4/19/2022	For SW-846 Method 8151A, the upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did

Well ID	Event Date	Miscellaneous QA Narratives
		not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
200-B-240	**4/19/2022**	**For SW-846 Method 8290A, OCDD (1.17 pg/L) was detected in the method blank. Affected data are appropriately qualified.**

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-6-725	4/13/2022	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.81	ng/L	EB *
PL-6-545	4/14/2022	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.47	ng/L	J EB
ST-7-544	4/7/2022	Carboy G5	8260_LL	VOA-FB	74-87-3	Chloromethane	0.3	ug/L	J RB A FB
JER-2-584	4/6/2022	Carboy G5	8260_LL	VOA-FB	74-87-3	Chloromethane	0.3	ug/L	J RB A FB
JER-2-504	4/6/2022	Carboy G5	8260_LL	VOA-TB	74-87-3	Chloromethane	0.29	ug/L	J RB TB
PL-6-725	4/13/2022	Carboy G3	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.28	ng/L	J EB
PFE-5	4/19/2022	Carboy PF1	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.23	ug/L	J FB
B655-EFF-2	4/15/2022	Carboy PF1	8260_LL	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.22	ug/L	J FB
BLM-39-560	4/19/2022	Carboy G3	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.07	mg/L	J EB
PL-10-484	4/5/2022	Carboy G3	8270	SVOA_SIM-FB	123-91-1	1,4-Dioxane	0.032	ug/L	J FB
BLM-39-560	4/19/2022	Carboy G3	METALS	METALS-EB	7440-24-6	Strontium, Total	0.007	mg/L	J EB
BW-3-180	4/20/2022	Carboy G5	METALS	METALS-FB	7440-66-6	Zinc, Total	0.004	mg/L	J FB
BLM-39-560	4/19/2022	Carboy G3	METALS	METALS-EB	7440-66-6	Zinc, Total	0.004	mg/L	J EB

Appendix D
Comparison to Cleanup Levels

Appendix D.1: Groundwater Monitoring Wells
Appendix D.2: PFTS
Appendix D.3: MPITS

Appendix D.1
Groundwater Monitoring Wells

Analytical Results for Groundwater Monitoring Wells that Exceed Clean Up Levels

CAS Number **62-75-9** **Analyte** **N-Nitrosodimethylamine**

Cleanup Level **0.0011 ug/L (1.1 ng/L)** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-B-240	4/19/2022	607	2204191010A	N-Nitrosodimethylamine	0.13	µg/L	0.0095	0.0048	44	
300-A-170	2/15/2022	607	2202151429C	N-Nitrosodimethylamine	1.53	µg/L	0.0095	0.0048	47	
300-B-166	2/7/2022	607	2202071002A	N-Nitrosodimethylamine	3.3	µg/L	0.0094	0.0047	49	
300-B-166	2/7/2022	607	2202071003A	N-Nitrosodimethylamine	3.07	µg/L	0.0094	0.0047	49	
300-E-138	2/16/2022	607	2202161401Y	N-Nitrosodimethylamine	0.61	µg/L	0.0099	0.005	45	
300-E-183	2/17/2022	607	2202171002Y	N-Nitrosodimethylamine	0.007	µg/L	0.0095	0.0048	45	J
300-E-183	2/17/2022	607	2202171025Y	N-Nitrosodimethylamine	0.007	µg/L	0.0095	0.0048	45	J
BLM-14-327	4/18/2022	607	2204181348A	N-Nitrosodimethylamine	0.19	µg/L	0.0095	0.0048	44	
BLM-21-400	3/2/2022	607	2203021448A	N-Nitrosodimethylamine	0.39	µg/L	0.0096	0.0048	46	
BLM-23-431	2/7/2022	607	2202071412A	N-Nitrosodimethylamine	0.23	µg/L	0.0097	0.0049	49	
BLM-32-543	2/2/2022	NDMA_LL	2202021343B	N-Nitrosodimethylamine	3.21	ng/L	0.49	0.41		FB
BLM-39-385	4/6/2022	607	2204070811Y	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	47	
BLM-39-560	4/19/2022	607	2204190932Y	N-Nitrosodimethylamine	0.009	µg/L	0.0095	0.0048	44	J
BLM-39-560	4/19/2022	607	2204190955Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	44	
BLM-5-527	3/15/2022	607	2203151358C	N-Nitrosodimethylamine	0.11	µg/L	0.0095	0.0048	43	
BLM-5-527	3/15/2022	607	2203151359C	N-Nitrosodimethylamine	0.11	µg/L	0.0095	0.0048	43	
BW-1-268	3/10/2022	607	2203100934C	N-Nitrosodimethylamine	5.22	µg/L	0.0096	0.0048	43	
JER-1-563	4/5/2022	NDMA_LL	2204051502B	N-Nitrosodimethylamine	1.11	ng/L	0.48	0.4		
JER-1-683	4/5/2022	NDMA_LL	2204051522B	N-Nitrosodimethylamine	1.28	ng/L	0.48	0.4		
JER-2-504	4/6/2022	NDMA_LL	2204061413B	N-Nitrosodimethylamine	1.39	ng/L	0.49	0.41		
JER-2-584	4/6/2022	NDMA_LL	2204061433B	N-Nitrosodimethylamine	1.45	ng/L	0.49	0.41		
JER-2-684	4/6/2022	NDMA_LL	2204061453B	N-Nitrosodimethylamine	2.45	ng/L	0.48	0.4		
PL-11-470	3/2/2022	NDMA_LL	2203021404B	N-Nitrosodimethylamine	1.59	ng/L	0.47	0.4		
PL-11-530	3/2/2022	NDMA_LL	2203021428B	N-Nitrosodimethylamine	2.38	ng/L	0.48	0.4		
PL-12-800	2/14/2022	NDMA_LL	2202141008A	N-Nitrosodimethylamine	2.26	ng/L	0.47	0.4		T
PL-12-800	2/14/2022	NDMA_LL	2202141007A	N-Nitrosodimethylamine	2.14	ng/L	0.47	0.4		T
PL-2-504	3/15/2022	607	2203150932C	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	43	
PL-7-480	2/8/2022	NDMA_LL	2202081516Y	N-Nitrosodimethylamine	1.85	ng/L	0.47	0.4		
PL-8-965	3/9/2022	NDMA_LL	2203091431Y	N-Nitrosodimethylamine	2.25	ng/L	0.48	0.4		
WW-5-459	4/13/2022	NDMA_LL	2204131312B	N-Nitrosodimethylamine	1.78	ng/L	0.48	0.4		
WW-5-579	4/13/2022	NDMA_LL	2204131402B	N-Nitrosodimethylamine	2.73	ng/L	0.47	0.4		
WW-5-809	4/13/2022	NDMA_LL	2204131417B	N-Nitrosodimethylamine	5.02	ng/L	0.48	0.4		
WW-5-909	4/13/2022	NDMA_LL	2204131442B	N-Nitrosodimethylamine	2.01	ng/L	0.47	0.4		

CAS Number **127-18-4** **Analyte** **Tetrachloroethene (PCE)**

Cleanup Level **5 ug/L** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
BLM-39-385	4/6/2022	8260	2204070810Y	Tetrachloroethene (PCE)	8	ug/L	1	0.21		

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Cleanup Level **4.9 ug/L** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
200-B-240	4/19/2022	8260	2204191002A	Trichloroethene (TCE)	47	ug/L	1	0.2		
200-B-240	4/19/2022	8260	2204191004A	Trichloroethene (TCE)	46	ug/L	1	0.2		
200-D-240	3/17/2022	8260	2203171005A	Trichloroethene (TCE)	15	ug/L	1	0.2		
200-F-225	2/15/2022	8260	2202160840Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
600-G-138	4/20/2022	8260	2204201030A	Trichloroethene (TCE)	37	ug/L	1	0.2		
600-G-138	4/20/2022	8260	2204201031A	Trichloroethene (TCE)	38	ug/L	1	0.2		
BLM-14-327	4/18/2022	8260	2204181346A	Trichloroethene (TCE)	61	ug/L	1	0.2		
BLM-21-400	3/2/2022	8260	2203021446A	Trichloroethene (TCE)	51	ug/L	1	0.2		
BLM-21-400	3/2/2022	8260	2203021445A	Trichloroethene (TCE)	52	ug/L	1	0.2		
BLM-23-431	2/7/2022	8260	2202071410A	Trichloroethene (TCE)	54	ug/L	1	0.2		
BLM-39-385	4/6/2022	8260	2204070810Y	Trichloroethene (TCE)	190	ug/L	1	0.2		
BLM-39-560	4/19/2022	8260	2204190930Y	Trichloroethene (TCE)	10	ug/L	1	0.2		
BLM-39-560	4/19/2022	8260	2204190931Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
BLM-5-527	3/15/2022	8260	2203151355C	Trichloroethene (TCE)	26	ug/L	1	0.2		
BLM-5-527	3/15/2022	8260	2203151356C	Trichloroethene (TCE)	27	ug/L	1	0.2		
PL-12-800	2/14/2022	8260	2202141005A	Trichloroethene (TCE)	7.2	ug/L	1	0.2		
PL-2-504	3/15/2022	8260	2203150930C	Trichloroethene (TCE)	61	ug/L	1	0.2		

Appendix D.2
PFTS

Analytical Results for PFTS and PFE Wells that Exceed Clean Up Levels

CAS Number **62-75-9** **Analyte** **N-Nitrosodimethylamine**

Cleanup Level **0.0011 ug/L (1.1 ng/L)** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-INF-1	2/3/2022	607	2202031310	N-Nitrosodimethylamine	0.073	µg/L	0.0099	0.005	49	
B650-INF-1	4/15/2022	607	2204150734	N-Nitrosodimethylamine	0.068	µg/L	0.0097	0.0049	44	
B650-INF-1	3/18/2022	607	2203180603	N-Nitrosodimethylamine	0.07	µg/L	0.01	0.005	46	
PFE-2	4/19/2022	607	2204190920	N-Nitrosodimethylamine	0.15	µg/L	0.0095	0.0048	44	
PFE-5	4/19/2022	607	2204190856	N-Nitrosodimethylamine	0.32	µg/L	0.0098	0.0049	44	
PFE-5	4/19/2022	607	2204190855	N-Nitrosodimethylamine	0.29	µg/L	0.0096	0.0048	44	

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Cleanup Level **4.9 ug/L** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-INF-1	3/18/2022	8260	2203180600	Trichloroethene (TCE)	24	ug/L	1	0.2		
B650-INF-1	2/3/2022	8260	2202031308	Trichloroethene (TCE)	28	ug/L	1	0.2		
B650-INF-1	4/15/2022	8260	2204150732	Trichloroethene (TCE)	23	ug/L	1	0.2		
B650-INF-1	4/15/2022	8260	2204150731	Trichloroethene (TCE)	23	ug/L	1	0.2		
B650-INF-1	3/18/2022	8260	2203180601	Trichloroethene (TCE)	25	ug/L	1	0.2		
PFE-2	4/19/2022	8260	2204190918	Trichloroethene (TCE)	58	ug/L	1	0.2		
PFE-5	4/19/2022	8260	2204190853	Trichloroethene (TCE)	49	ug/L	1	0.2		
PFE-5	4/19/2022	8260	2204190852	Trichloroethene (TCE)	52	ug/L	1	0.2		

Appendix D.3
MPITS

Analytical Results for MPITS and MPE Wells that Exceed Clean Up Levels

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CAS Number **62-75-9** **Analyte** **N-Nitrosodimethylamine**

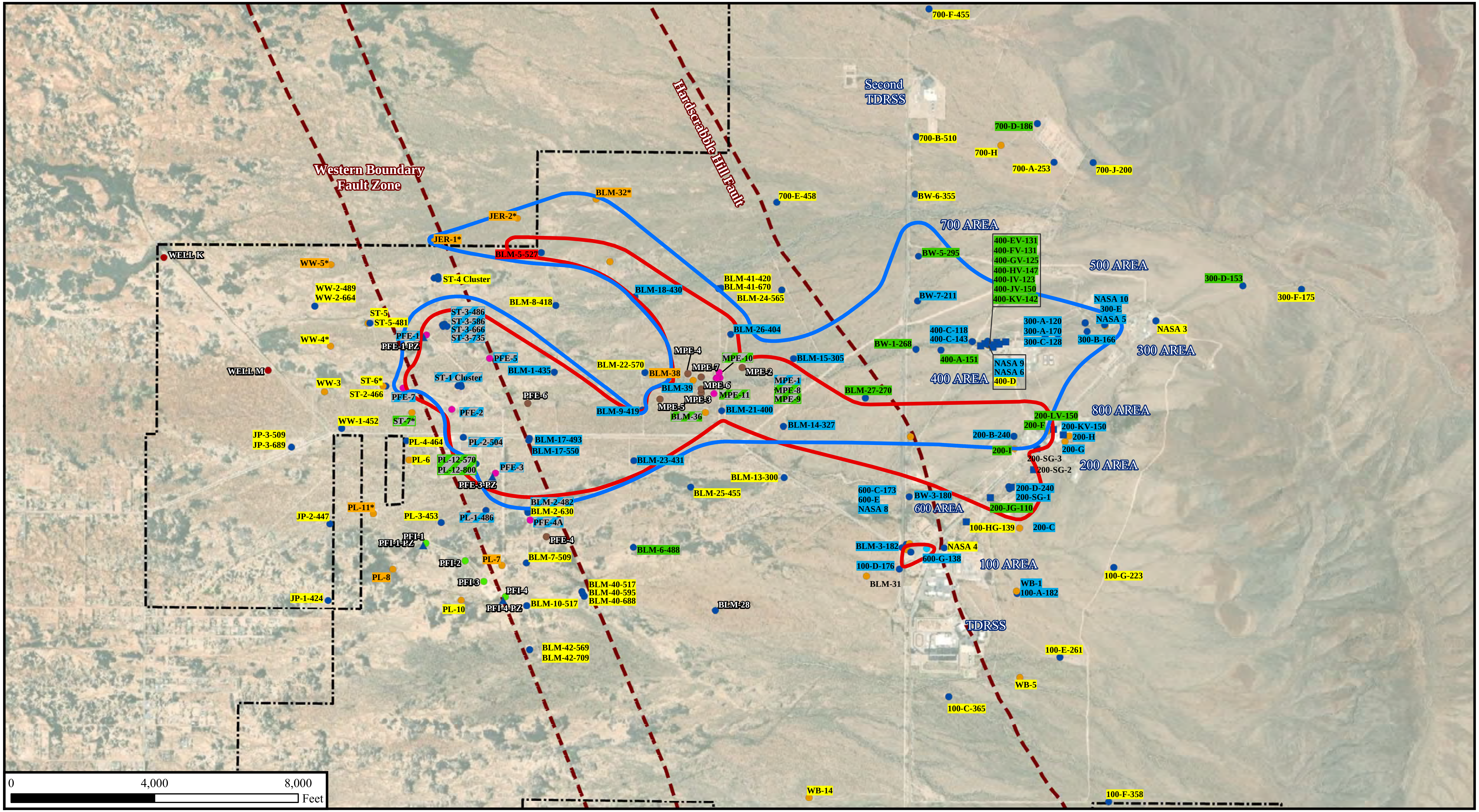
Clean Up Level **0.0011 ug/L (1.1 ng/L)** **Source GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-2	3/18/2022	607	2203180744	N-Nitrosodimethylamine	1.45	µg/L	0.0094	0.0047	46	
B655-INF-2	4/15/2022	607	2204150547	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	44	
B655-INF-2	2/4/2022	607	2202040748	N-Nitrosodimethylamine	1.64	µg/L	0.0094	0.0047	49	
B655-INF-2	3/18/2022	607	2203180743	N-Nitrosodimethylamine	1.48	µg/L	0.0094	0.0047	46	
MPE-1	2/16/2022	607	2202160827	N-Nitrosodimethylamine	3.18	µg/L	0.0096	0.0048	45	
MPE-1	2/16/2022	607	2202160828	N-Nitrosodimethylamine	3.16	µg/L	0.0095	0.0048	45	
MPE-10	2/16/2022	607	2202160916	N-Nitrosodimethylamine	2.96	µg/L	0.0095	0.0048	45	
MPE-11	2/17/2022	607	2202171003	N-Nitrosodimethylamine	0.28	µg/L	0.01	0.0051	45	
MPE-8	2/16/2022	607	2202160900	N-Nitrosodimethylamine	2.14	µg/L	0.0097	0.0049	45	
MPE-9	2/16/2022	607	2202160845	N-Nitrosodimethylamine	3.84	µg/L	0.0097	0.0049	45	

CAS Number **79-01-6** **Analyte** **Trichloroethene (TCE)**

Clean Up Level **4.9 ug/L** **Source** **GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-2	2/4/2022	8260	2202040746	Trichloroethene (TCE)	47	ug/L	1	0.2		
B655-INF-2	4/15/2022	8260	2204150545	Trichloroethene (TCE)	46	ug/L	1	0.2		
B655-INF-2	3/18/2022	8260	2203180741	Trichloroethene (TCE)	51	ug/L	1	0.2		
MPE-1	2/16/2022	8260	2202160824	Trichloroethene (TCE)	74	ug/L	1	0.2		
MPE-1	2/16/2022	8260	2202160825	Trichloroethene (TCE)	75	ug/L	1	0.2		
MPE-10	2/16/2022	8260	2202160914	Trichloroethene (TCE)	56	ug/L	1	0.2		
MPE-8	2/16/2022	8260	2202160858	Trichloroethene (TCE)	71	ug/L	1	0.2		
MPE-9	2/16/2022	8260	2202160843	Trichloroethene (TCE)	78	ug/L	1	0.2		



Time Concentration Plot Interpretations for Second Quarter 2022

Interpretations
- 🟨 Non-Detect
- 🟧 Fluctuating Low-Level NDMA Detections (≥1.1 ng/L)
- 🟩 Natural Migration - No Overall Trend
- 🟦 Natural Migration - Decreasing T-C
- 🟥 Natural Migration - Increasing T-C
- ▨ Pumping-Related Migration - No Overall Trend
- ▨ Pumping-Related Migration - Decreasing T-C
- ▨ Pumping-Related Migration - Increasing T-C

Well Type
- ● Conventional Well
- ● Perched Well
- ● Multiport Well
- ■ MSVGM Well
- ● Extraction Well
- ● Injection Well
- ▲ Piezometer
- ● Exploration Well
- ● Production Well

* Multiport well with FLUTe sampling system.

Other
- NDMA Cleanup Level (1.1 ng/L)
- TCE Cleanup Level (4.9 ug/L)
- Fault
- WSTF Boundary

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W E
S

July 2022

Appendix E:

Reporting Period: 2Q/2022

Summary of Maximum Concentrations, Current Concentrations and T-C Plot Interpretations for WSTF Monitoring Well Network

Background Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
100-F-358 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2022	0.43 DL	2010	0.21 DL	2022	0.63 DL	2010	0.2 DL	2022	0.005 DL	NP	2012	0.004 DL	NP	2022	N/A		N/A	
100-G-223 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2022	0.43 DL	2010	0.21 DL	2022	0.63 DL	2010	0.2 DL	2022	0.005 DL	NP	2012	0.004 DL	NP	2022	N/A		N/A	
300-F-175 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2022	0.43 DL	2010	0.21 DL	2022	0.63 DL	2010	0.2 DL	2022	0.005 DL	NP	2016	0.004 DL	NP	2022	N/A		N/A	
NASA 3 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	

100/600 Area Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
100-C-365 Conv	1989	Non Detect	1.00 DL	2010	0.24 DL	2022	1.00 DL	2010	0.21 DL	2022	1.00 DL	2010	0.2 DL	2022	0.05 RL	NP	1992	0.004 DL	NP	2022	N/A		N/A	
100-D-176 Conv	1997	Natural Migration (Decreasing)	1.60 DL	2003	0.24 DL	2021	2.00 DL	1999	0.21 DL	2021	9.60	1999	3.00	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
100-HG-139 MSVGM	2011	Non Detect	0.79 J	2011	0.24 DL	2022	0.33 J	2015	0.21 DL	2022	10	2014	0.2 DL	2022	0.005 DL	NP	2020	0.004 DL	NP	2022	0.93 RB FB	2012	0.93 RB FB	2012
600-C-173 Conv	1988	Natural Migration (Decreasing)	5.00 RL	1988	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	9.00	1998	1.80 RB FB	2021	0.1	NP	1988	0.004 DL	NP	2021	N/A		N/A	
600-E WestBay	1998	Natural Migration (Decreasing)	1.60 DL	2002	0.24 DL	2022	2.00 DL	1999	0.21 DL	2022	2.00 DL	1999	0.62 J	2022	0.005 DL	NP	2016	0.004 DL	NP	2022	N/A		N/A	
600-G-138 Conv	2011	Natural Migration (Decreasing)	5.10	2017	0.6 J	2022	0.3 DL	2018	0.21 DL	2022	130	2012	38	2022	0.1 DL	NP	2021	0.004 DL	NP	2022	0.96 RB FB	2012	0.96 RB FB	2012
BW-3-180 Conv	1988	Natural Migration (Decreasing)	10	1988	0.44 J	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
NASA 4 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	3.50	2009	0.33 J RB FB	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
NASA 8 Conv	1988	Natural Migration (Decreasing)	5.00	1996	0.27 DL	2018	2.50 RL	1996	0.28 DL	2018	130	1995	7.90	2018	0.05 RL	NP	1993	0.004 DL	NP	2018	N/A		N/A	

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
WB-1 Westbay	1990	Natural Migration (Decreasing)	15	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.26 J	2021	0.05 RL	NP	1993	0.004 DL	NP	2021	N/A		N/A	

200 Area Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
200-B-240 Conv	1989	Natural Migration (Decreasing)	280	1996	90	2022	15 QD	1989	1.90	2022	290 QD	1989	47	2022	1.60	25	1993	0.3	44	2022	N/A		N/A	
200-C WestBay	1993	Natural Migration (Decreasing)	51	1996	15	2022	2.50 RL	1996	0.21 DL	2022	4.30	2003	2.50	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
200-D-240 Conv	1988	Natural Migration (Decreasing)	240 QD	1995	53	2022	2.50 RL	1995	0.34 J	2022	110	1990	15	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
200-F WestBay	1995	Natural Migration (No Overall Trend)	41	2005	4.70	2022	2.50 RL	1996	0.21 DL	2022	34	2009	21	2022	0.41 J A	1	2021	0.004 DL	NP	2022	N/A		N/A	
200-G WestBay	1995	Natural Migration (Decreasing)	55	1995	4.60 QD	2021	2.50 RL	1996	0.21 DL	2021	4.80	2004	2.10	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-H WestBay	1994	Natural Migration (Decreasing)	6.00	2003	0.92 J	2021	2.50 RL	1996	0.21 DL	2021	3.00 J	1997	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-I WestBay	1997	Natural Migration (No Overall Trend)	2.40 J	1999	0.27 J	2021	2.00 DL	1999	0.55 J	2021	35	2019	29	2021	0.021 J	42	2006	0.004 DL	NP	2021	N/A		N/A	
200-JG-110 MSVGM	2012	Natural Migration (No Overall Trend)	17	2013	5.20	2021	2.20	2020	2.10	2021	25	2013	24	2021	0.005 DL	NP	2012	0.004 DL	NP	2021	0.93 J	2012	0.93 J	2012
200-KV-150 MSVGM	2015	Natural Migration (Decreasing)	90	2020	18	2021	0.3 DL	2015	0.21 DL	2021	22	2020	2.90	2021	0.005 DL	NP	2020	0.004 DL	NP	2021	N/A		N/A	
200-LV-150 Conv	2018	Natural Migration (No Overall Trend)	0.27 DL	2018	0.24 DL	2021	0.3 DL	2018	0.21 DL	2021	0.89 J Q	2018	0.24 J	2021	0.004 DL	NP	2018	0.004 DL	NP	2021	N/A		N/A	
200-SG-1 MSVGM	2004	Natural Migration (Decreasing)	81	2008	9.10	2021	17	2007	4.60	2021	380	2007	110	2021	0.016 J	44	2008	0.004 DL	NP	2021	N/A		N/A	
BLM-3-182 Conv	1988	Natural Migration (Decreasing)	10	1988	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	41	1991	3.30	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	

300/400 Area Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
300-A-120 Conv	1988	Natural Migration (Decreasing)	4300 FB	1996	52	2021	2.50 RL	1996	0.21 DL	2021	2.50	2004	0.34 J	2021	46	24	1990	2.90 QD	58	2021	N/A		N/A	
300-A-170 Conv	1988	Natural Migration (Decreasing)	6000	1988	240	2022	2.50 RL	1996	0.21 DL	2022	7.00	1988	1.00 J	2022	48 QD	21	1995	3.30	47	2022	N/A		N/A	
300-B-166 Conv	1988	Natural Migration (Decreasing)	1600	1988	180	2022	2.50 RL	1996	0.21 DL	2022	8.00	1988	0.32 J	2022	14	39	1991	6.70	49	2022	N/A		N/A	
300-C-128 Conv	1988	Natural Migration (Decreasing)	3000	1988	420	2021	2.50 RL	1996	0.21 DL	2021	3.70 J	1996	2.10	2021	47	32	2000	7.80	50	2021	N/A		N/A	
300-D-153 Conv	1988	Natural Migration (No Overall Trend)	6.30	2013	2.20	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
300-E WestBay	1995	Natural Migration (Decreasing)	180	1996	16	2022	2.50 RL	1996	0.21 DL	2022	9.30	1997	1.20	2022	49 A	1	2021	1.40	45	2022	N/A		N/A	
400-A-151 Conv	1989	Natural Migration (No Overall Trend)	450	1990	230	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.9 J	2022	280	18	1991	13	45	2022	N/A		N/A	
400-C-118 Conv	1989	Natural Migration (Decreasing)	1600	1989	200	2019	2.50 RL	1996	0.21 DL	2019	5.00	1989	1.60	2019	87	38	1989	4.90	55	2019	N/A		N/A	
400-C-143 Conv	1989	Natural Migration (Decreasing)	1600	1989	200	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	1.40	2021	93	15	1989	6.30	54	2021	N/A		N/A	
400-EV-131 MSVGM	2017	Natural Migration (No Overall Trend)	520	2017	380	2022	0.3 DL	2018	0.21 DL	2022	13	2017	1.50	2022	3.30	46	2020	1.80	44	2021	N/A		N/A	
400-FV-131 MSVGM	2017	Natural Migration (No Overall Trend)	290	2021	230	2022	0.3 DL	2018	0.21 DL	2022	1.90	2021	1.40	2022	3.30	60	2020	1.40	53	2021	N/A		N/A	
400-GV-125 MSVGM	2017	Natural Migration (No Overall Trend)	320	2021	270	2022	0.3 DL	2018	0.21 DL	2022	1.80	2022	1.80	2022	5.70	44	2021	5.70	44	2021	N/A		N/A	
400-HV-147 MSVGM	2017	Natural Migration (No Overall Trend)	240	2021	150	2022	0.3 DL	2018	0.21 DL	2022	2.00	2017	0.54 J	2022	320 D	53	2021	320 D	53	2021	N/A		N/A	
400-IV-123 MSVGM	2017	Natural Migration (No Overall Trend)	430	2017	140	2021	0.93 J	2018	0.21 DL	2021	0.29 J	2021	0.29 J	2021	0.041	87	2017	0.004 DL	NP	2021	N/A		N/A	

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
400-JV-150 MSVGM	2017	Natural Migration (No Overall Trend)	970	2021	730	2022	0.3 DL	2018	0.21 DL	2022	1.50	2017	0.95 J	2022	5.90	44	2021	5.90	44	2021	N/A		N/A	
400-KV-142 MSVGM	2017	Natural Migration (No Overall Trend)	1700	2018	990	2019	7.00 DL	2018	0.21 DL	2019	5.00 DL	2018	0.37 J	2019	1.50	36	2019	1.50	36	2019	N/A		N/A	
BW-1-268 Conv	1989	Natural Migration (No Overall Trend)	1100	1989	190	2022	2.50 RL	1996	0.21 DL	2022	5.00	1989	1.00	2022	130	18	1991	12	43	2022	N/A		N/A	
BW-5-295 Conv	1989	Natural Migration (No Overall Trend)	360	1989	86	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.46 J	2021	1.90	49	1997	1.00	52	2021	N/A		N/A	
BW-7-211 Conv	1989	Natural Migration (Decreasing)	2400	1991	130 Q	2021	2.50 RL	1995	0.21 DL	2021	13	1989	1.00 Q	2021	17	34	1994	2.40	50	2021	N/A		N/A	
NASA 10 Conv	1988	Natural Migration (Decreasing)	250	1996	11	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	4.70	19	1996	0.099	58	2021	N/A		N/A	
NASA 5 Conv	1988	Natural Migration (Decreasing)	350	1991	25 Q	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	13	19	1996	0.81	58	2021	N/A		N/A	
NASA 6 Conv	1988	Natural Migration (Decreasing)	1300	1996	150	2021	2.50 RL	1996	0.21 DL	2021	5.00	1990	0.31 J	2021	95	21	1996	28 D	54	2021	N/A		N/A	
NASA 9 Conv	1988	Natural Migration (Decreasing)	2000	1996	110	2019	12 RL	1988	0.21 DL	2019	12 RL	1988	0.56 J	2019	18	32	1990	1.40	52	2019	N/A		N/A	

Northern Boundary Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
700-A-253 Conv	1990	Non Detect	2.50 RL	1996	0.16 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
700-B-510 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	2.50 RL	1995	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-D-186 Conv	1990	Natural Migration (No Overall Trend)	2.50 RL	1995	0.5 J	2022	2.50 RL	1995	0.21 DL	2022	2.50 RL	1995	0.47 J	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
700-E-458 Conv	1990	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-F-455 Conv	1991	Non Detect	2.50 RL	1996	0.37 DL	2005	2.50 RL	1996	0.27 DL	2005	2.50 RL	1996	0.52 DL	2005	0.05 RL	NP	1997	0.005 DL	NP	2005	N/A		N/A	

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
700-H WestBay	1999	Non Detect	1.60 DL	2003	0.16 DL	2022	0.62 DL	2004	0.21 DL	2022	1.90 RB TB EB	2021	0.2 DL	2022	0.005 DL	NP	2013	0.004 DL	NP	2022	N/A		N/A	
700-J-200 Conv	1999	Non Detect	1.60 DL	2003	0.16 DL	2022	0.62 DL	2004	0.21 DL	2022	3.70	2005	0.29 J	2022	0.005 DL	NP	2017	0.004 DL	NP	2022	N/A		N/A	
BLM-24-565 Conv	1991	Non Detect	2.50 RL	1995	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	2.50 RL	1995	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
BLM-32 Westbay	1997	Fluctuating LL NDMA	1.60 DL	2002	0.24 DL	2022	2.00 DL	1999	0.21 DL	2022	2.00 DL	1999	0.2 DL	2022	0.016 J	36	2004	0.004 DL	NP	2022	21	2015	3.20 FB	2022
BLM-41-420 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.3 DL	2013	0.21 DL	2022	1.00	2013	0.2 DL	2022	0.005 DL	NP	2015	0.004 DL	NP	2021	5.40	2017	0.4 DL	2022
BLM-41-670 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.28 DL	2018	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.005 DL	NP	2013	0.004 DL	NP	2021	5.50 FB	2017	0.57	2022
BW-6-355 Conv	1992	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.32	37	2004	0.004 DL	NP	2022	N/A		N/A	
JER-1 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.72	2011	0.2 DL	2022	0.014 J	41	2005	0.004 DL	NP	2021	360	2009	1.30	2022
JER-2 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.63 DL	2010	0.2 DL	2022	0.016 J	43	2005	0.004 DL	NP	2021	290 QD	2006	2.50	2022

Southern Boundary Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
100-E-261 Conv	1989	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1996	0.004 DL	NP	2021	N/A		N/A	
BLM-13-300 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
BLM-25-455 Conv	1991	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
BLM-40-517 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.3 DL	2017	0.21 DL	2022	0.22 DL	2017	0.2 DL	2022	0.005 DL	NP	2018	0.004 DL	NP	2022	1.10	2017	0.4 DL	2022
BLM-40-595 FLUTe	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.28 DL	2018	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.005 DL	NP	2019	0.004 DL	NP	2021	0.67 FB	2014	0.4 DL	2022
BLM-40-688 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.3 DL	2016	0.21 DL	2022	0.22 DL	2016	0.2 DL	2022	0.005 DL	NP	2015	0.004 DL	NP	2021	0.74	2016	0.4 DL	2022
BLM-6-488 Conv	1990	Natural Migration (No Overall Trend)	3.10 J	1999	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	14	1999	2.20	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	45 FB	2001	0.4 DL	2022

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
WB-14 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.26 J	2021	0.05 RL	NP	1993	0.004 DL	NP	2021	N/A		N/A	
WB-5 Westbay	1990	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1991	0.004 DL	NP	2021	N/A		N/A	

MPCA Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
BLM-14-327 Conv	1990	Natural Migration (Decreasing)	230	1995	98 Q	2022	9.20	2002	2.20 Q	2022	180	1995	61	2022	1.20	18	2002	0.43	44	2022	N/A		N/A	
BLM-15-305 Conv	1989	Natural Migration (Decreasing)	770	1991	110	2022	2.50 RL	1996	0.21 DL	2022	22	1989	1.40	2022	150 A	8	1989	20	46	2022	N/A		N/A	
BLM-18-430 Conv	1989	Natural Migration (Decreasing)	120 QD	2005	17 Q	2022	2.50 RL	1996	0.21 DL	2022	58	2009	9.90	2022	0.15 QD	31	2009	0.042	33	2022	N/A		N/A	
BLM-21-400 Conv	1991	Natural Migration (Decreasing)	320	1996	75	2022	12	1995	2.50	2022	220	1991	52	2022	5.60	16	1995	0.85	46	2022	N/A		N/A	
BLM-22-570 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	2.50 RL	1995	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
BLM-23-431 Conv	1990	Natural Migration (Decreasing)	240	1995	44	2022	8.00	1991	1.60	2022	240	1995	54	2022	1.10	33	2006	0.47	49	2022	N/A		N/A	
BLM-26-404 Conv	1991	Natural Migration (Decreasing)	110	2008	55	2021	2.50 RL	1996	0.61 J	2021	28	2008	20	2021	1.20	50	1991	0.32	53	2021	N/A		N/A	
BLM-27-270 Conv	1991	Natural Migration (No Overall Trend)	500	2010	430	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	1.10	2021	13	41	2006	5.20	50	2021	N/A		N/A	
BLM-36 WestBay	2000	Pumping Related Migration (No Overall Trend)	98	2011	36	2021	4.40	2011	3.20	2021	97	2008	66	2021	2.00	43	2007	1.20	53	2021	N/A		N/A	
BLM-38 WestBay	2000	Fluctuating LL NDMA	1.60 DL	2003	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.7 DL	2003	0.2 DL	2021	0.024 J	33	2002	0.004 DL	NP	2021	2.10 EB	2022	2.10 EB	2022
BLM-39 WestBay	2000	Natural Migration (Decreasing)	340	2005	110	2022	10	2007	8.00	2022	330 QD	2002	190	2022	9.70	19	2002	4.70	47	2022	N/A		N/A	
BLM-5-527 Conv	1988	Natural Migration (Increasing)	23	2020	16	2022	2.50 RL	1996	0.62 J	2022	29	2020	27	2022	0.26	43	2022	0.26	43	2022	220 G	2017	220 G	2017

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
BLM-8-418 Conv	1988	Non Detect	2.50 RL	1996	0.25 J	2021	2.50 RL	1996	0.21 DL	2021	3.80 QD	2001	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
BLM-9-419 Conv	1989	Natural Migration (Decreasing)	320	1991	3.50	2022	12	1989	0.21 DL	2022	240	1989	2.50	2022	8.80	16	1995	0.005 DL	NP	2022	N/A		N/A	

Main Plume Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
BLM-1-435 Conv	1988	Natural Migration (Decreasing)	270	1991	45	2020	18	1988	2.40	2020	360	1988	62	2020	5.90	108	1997	1.30	68	2020	N/A		N/A	
BLM-17-493 Conv	1989	Natural Migration (Decreasing)	480	1989	45	2021	31	1989	2.20	2021	430	1989	58	2021	11 A Q	7	1989	1.60	53	2021	N/A		N/A	
BLM-17-550 Conv	1990	Natural Migration (Decreasing)	440	1991	98	2022	20	1990	3.60	2022	390	1991	85	2022	8.10	16	1995	1.50	45	2022	N/A		N/A	
BLM-2-482 Conv	1988	Pumping Related Migration (Decreasing)	320	1996	9.40	2012	16	1996	0.35 J	2012	450	1990	11	2012	2.30 QD	30	2006	0.072	58	2012	N/A		N/A	
BLM-2-630 Conv	1988	Non Detect	470 QD	1988	0.24 DL	2021	8.00	1991	0.21 DL	2021	310 QD	1988	0.2 DL	2021	1.30	31	2002	0.004 DL	NP	2021	N/A		N/A	
PL-1-486 Conv	1988	Pumping Related Migration (Decreasing)	190	1996	0.29 J	2022	4.60	2004	0.21 DL	2022	180	2004	0.2 DL	2022	0.093	43	2005	0.004 DL	NP	2022	260 QD	2002	0.4 DL	2022
PL-2-504 Conv	1989	Pumping Related Migration (Decreasing)	230	1996	38	2022	2.50 RL	1996	1.10	2022	180	2004	61	2022	0.45 QD	58	2021	0.19	43	2022	300 G RB Q	2020	300 G RB Q	2020
ST-1-473 Conv	1989	Pumping Related Migration (Decreasing)	610	1996	170	2021	13	2010	6.80	2021	370	2005	230	2021	1.70	27	2009	0.61	54	2021	N/A		N/A	
ST-1-541 Conv	1992	Pumping Related Migration (Decreasing)	790	1995	160	2021	37	1995	6.50	2021	650	1995	150	2021	4.80 QD	37	2003	3.40	50	2021	N/A		N/A	
ST-1-630 Conv	1992	Pumping Related Migration (Decreasing)	410	2006	210	2021	19 QD	2007	8.40	2021	440	2000	260	2021	1.90	40	2019	0.44	50	2021	N/A		N/A	

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
[1]ST-3-486	1991	Pumping Related Migration (Decreasing)	800	1996	2.50	2021	19	2003	0.35 J	2021	690	1991	3.80	2021	4.40	45	2011	0.18	51	2021	N/A		N/A	
ST-3-586 Conv	1992	Pumping Related Migration (Decreasing)	640 T TB Q	1996	0.64 J	2021	15	2007	0.21 DL	2021	320	2005	0.82 J	2021	3.80 QD	37	2003	0.012 J	51	2021	N/A		N/A	
ST-3-666 Conv	1992	Pumping Related Migration (Decreasing)	280	2009	2.70	2021	15	2009	0.28 J	2021	320	2009	4.20	2021	3.70	30	2006	0.092	50	2021	N/A		N/A	
ST-3-735 Conv	1992	Pumping Related Migration (Decreasing)	240	2005	13	2021	14	2007	0.96 J	2021	320	2005	25	2021	7.80 QD	32	2009	0.94	50	2021	N/A		N/A	

Plume Front Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
BLM-10-517 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	4.40	2012	0.2 DL	2022	0.095 RL	NP	1988	0.004 DL	NP	2022	5.90	2020	0.4 DL	2022
BLM-7-509 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.09 J	32	1996	0.004 DL	NP	2022	0.76 FB	2018	0.4 DL	2022
PL-3-453 Conv	1989	Non Detect	5.00 RL	1989	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	3.80 RB FB	2005	3.80 RB FB	2005
PL-4-464 Conv	1990	Non Detect	28	2005	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	21	2005	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	2.70 RB FB	2005	0.4 DL	2022
PL-6 Westbay	1992	Non Detect	4.10 J	1996	0.24 DL	2022	5.60	1996	0.21 DL	2022	4.90 J	1996	0.2 DL	2022	0.64	28	1999	0.004 DL	NP	2022	23	2001	0.85 EB	2022
PL-7 Westbay	1993	Fluctuating LL NDMA	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	4.90	2021	1.90	2022
ST-2-466 Conv	1989	Non Detect	2.50 RL	1995	0.24 DL	2022	2.50 RL	1995	0.21 DL	2022	2.50 RL	1995	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	2.60 RB	2004	0.56	2022
ST-4-481 Conv	1992	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2021	1.80 FB	2012	0.4 DL	2022
ST-4-589 Conv	1992	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2021	1.10 RB Q	2008	0.4 DL	2022
ST-4-690 Conv	1992	Non Detect	3.00 J	1998	0.24 DL	2022	2.50 RL	1995	0.21 DL	2022	10	1998	0.2 DL	2022	0.05 RL	NP	1997	0.005 DL	NP	2022	2.70	2008	0.42 DL	2022

Appendix E: Summary of Maximum Concentrations, Current Concentrations and T-C Plot Interpretations for WSTF Monitoring Well Network

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
ST-5 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.005 DL	NP	2022	7.20	2017	0.4 DL	2022
ST-5-481 Conv	1992	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.005 DL	NP	2022	0.7 FB	2002	0.4 DL	2022
ST-6 Westbay	1998	Non Detect	21 EB	2005	0.53	2022	2.00 DL	1999	0.21 DL	2022	67	2004	0.74	2022	0.012	90	2017	0.004 DL	NP	2021	28 RB FB Q	2005	0.4 DL	2022
ST-7 Westbay	1999	Pumping Related Migration (No Overall Trend)	1.70	2022	1.70	2022	0.62 DL	2004	0.21 DL	2022	1.90	2022	1.90	2022	0.005 DL	NP	2013	0.004 DL	NP	2021	3.80 FB	2002	0.4 DL	2022
WW-1-452 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.3 T	30	2006	0.004 DL	NP	2022	3.20 RB FB	2012	0.4 DL	2022

Sentinel Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
100-A-182 Conv	1989	Natural Migration (Decreasing)	5.00	1995	1.90	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2022	N/A		N/A	
400-D WestBay	1995	Non Detect	3.30 J EB	1996	0.24 DL	2021	3.50 J	1998	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.29	34	1996	0.004 DL	NP	2021	N/A		N/A	
BLM-42-569 Conv	2020	Non Detect	0.24 DL	2022	0.24 DL	2022	0.21 DL	2022	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.004 DL	NP	2021	0.004 DL	NP	2021	1.60 RB * TB FB	2021	0.4 DL	2022
BLM-42-709 Conv	2020	Non Detect	0.24 DL	2022	0.24 DL	2022	0.21 DL	2022	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.004 DL	NP	2020	0.004 DL	NP	2021	1.50 RB * FB	2021	0.4 DL	2022
JP-1-424 Conv	1988	Non Detect	5.50	2001	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	2.50 RL	1996	0.2 DL	2022	0.061 J	36	1998	0.005 DL	NP	2021	15 RB QD	2004	0.4 DL	2022
JP-2-447 Conv	1988	Non Detect	2.50 RL	1996	0.24 DL	2022	2.50 RL	1996	0.21 DL	2022	4.50	2001	0.2 DL	2022	0.05 RL	NP	1997	0.004 DL	NP	2021	14	2000	0.4 DL	2022
JP-3-509 Conv	2013	Non Detect	0.27 DL	2019	0.24 DL	2022	0.28 DL	2019	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.004 DL	NP	2017	0.004 DL	NP	2021	0.85 * TB	2021	0.4 DL	2022
JP-3-689 Conv	2014	Non Detect	0.27 DL	2019	0.24 DL	2022	0.28 DL	2019	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.005 DL	NP	2014	0.004 DL	NP	2021	1.80 TB FB	2021	0.4 DL	2022
PL-10 Westbay	2002	Non Detect	1.60 DL	2003	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.62 DL	2004	0.2 DL	2022	0.005 DL	NP	2021	0.005 DL	NP	2021	6.10	2019	0.45 J	2022
PL-11 FLUTe	2017	Fluctuating LL NDMA	0.45 J	2019	0.24 DL	2022	0.28 DL	2018	0.21 DL	2022	0.22 J	2019	0.2 DL	2022	0.005 DL	NP	2017	0.004 DL	NP	2021	5.90 SP	2019	2.40	2022
PL-12-570 Conv	2020	Pumping Related	17	2020	4.30	2022	0.46 J	2020	0.21 DL	2022	20	2020	3.90	2022	0.004 DL	NP	2020	0.004 DL	NP	2021	3.60	2020	0.82	2022

Reporting Period: 2Q/2022

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
		Migration (No Overall Trend)																						
PL-12-800 Conv	2020	Pumping Related Migration (No Overall Trend)	14	2020	6.40	2022	0.24 J	2021	0.21 DL	2022	17	2020	7.20	2022	0.004 DL	NP	2021	0.004 DL	NP	2021	4.60 FB	2021	2.30 T	2022
PL-8 Westbay	2000	Fluctuating LL NDMA	1.60 DL	2002	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.7 DL	2003	0.2 DL	2022	0.005 DL	NP	2015	0.004 DL	NP	2022	12 FB	2002	2.30	2022
WW-2-489 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.28 DL	2018	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.005 DL	NP	2014	0.004 DL	NP	2021	0.41 J FB	2016	0.4 DL	2022
WW-2-664 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2022	0.28 DL	2018	0.21 DL	2022	0.2 DL	2022	0.2 DL	2022	0.005 DL	NP	2014	0.004 DL	NP	2021	1.80 RB * FB	2021	0.4 DL	2022
WW-3 Westbay	2001	Non Detect	1.60 DL	2002	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.7 DL	2003	0.2 DL	2022	0.012 J	40	2004	0.004 DL	NP	2021	95 RB *	2007	0.85	2022
WW-4 Westbay	2001	Non Detect	1.60 DL	2002	0.24 DL	2019	0.62 DL	2004	0.21 DL	2019	0.7 DL	2003	0.2 DL	2019	0.005 DL	NP	2016	0.004 DL	NP	2018	35	2016	0.22 DL	2019
WW-5 Westbay	2001	Fluctuating LL NDMA	1.60 DL	2003	0.24 DL	2022	0.62 DL	2004	0.21 DL	2022	0.62 DL	2004	0.2 DL	2022	0.005 DL	NP	2016	0.004 DL	NP	2021	6.50 *	2021	5.0	2022

Other Well Group

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
MPE-1 Conv*	1999	Pumping Related Migration (Decreasing)	560	2005	160	2022	8.70	2010	3.90	2022	180	2010	75	2022	25	30	2009	7.10	45	2022	N/A		N/A	
MPE-10 Conv*	2004	Pumping Related Migration (No Overall Trend)	150	2017	70	2022	3.50	2020	2.80	2022	70	2021	56	2022	8.50	40	2021	6.60	45	2022	N/A		N/A	
MPE-11 Conv*	2004	Pumping Related Migration (No Overall Trend)	65	2008	7.30	2022	1.60	2008	0.27 J	2022	41	2008	4.60	2022	1.60	40	2007	0.62	45	2022	N/A		N/A	
MPE-8 Conv*	2003	Pumping Related Migration (No Overall Trend)	200	2020	160	2022	4.20	2021	3.30	2022	88	2021	71	2022	6.50	40	2021	4.80	45	2022	N/A		N/A	
MPE-9 Conv*	2004	Pumping Related Migration (No Overall Trend)	250	2015	43	2022	5.60	2018	3.10	2022	130	2018	78	2022	13	35	2019	8.50	45	2022	N/A		N/A	

Appendix E: Summary of Maximum Concentrations, Current Concentrations and T-C Plot Interpretations for WSTF Monitoring Well Network

Well	1st Sample	Interpretation	Freon 11 Concentration (ug/L)				PCE Concentration (ug/L)				TCE Concentration (ug/L)				NDMA 607 Concentration (ug/L)						NDMA LL Concentration (ng/L)			
			Max	Year	Last	Year	Max	Year	Last	Year	Max	Year	Last	Year	Max	Ex Eff	Year	Last	Ex Eff	Year	Max	Year	Last	Year
PFE-1 Conv*	2000	Pumping Related Migration (Decreasing)	110	2010	3.80	2021	4.80	2010	0.32 J	2021	140	2005	5.90	2021	0.39	36	2017	0.12	53	2021	N/A		N/A	
PFE-2 Conv*	2000	Pumping Related Migration (Decreasing)	170	2007	62	2022	7.60	2007	2.40	2022	220	2007	58	2022	0.39	38	2021	0.34	44	2022	N/A		N/A	
PFE-3 Conv*	1991	Pumping Related Migration (Decreasing)	290	2006	37	2021	18	2004	1.80	2021	340	2004	44	2021	3.90	18	1991	0.34	38	2021	N/A		N/A	
PFE-4A Conv*	2001	Pumping Related Migration (Decreasing)	190	2004	1.10	2022	8.40	2007	0.21 DL	2022	240	2004	1.20	2022	0.26	36	2010	0.004 DL	NP	2022	N/A		N/A	
[2]PFE-5	2000	Pumping Related Migration (Decreasing)	120	2009	22	2022	7.70	2006	1.90	2022	180	2009	52	2022	2.40	33	2006	0.73	44	2022	N/A		N/A	
PFE-7 Conv*	2001	Pumping Related Migration (Decreasing)	32	2004	3.80	2022	0.81 J	2004	0.21 DL	2022	41	2004	4.10	2022	0.022	44	2004	0.004 DL	NP	2022	N/A		N/A	

Notes:

T-C plot interpretations are based on a review of all T-C plots for a given well. This table generalizes the historical maximum concentration and last concentrations for four of the primary VOCs in groundwater. Evaluation of the data in this table should be used in conjunction with T-C plots as the maximum and current values do not always accurately represent the overall T-C plot trend.

NDMA analytical results using two methods: 1) Method 607 (ug/L), extraction efficiency provided, the applicable detection limit is typically 0.004 to 0.005 ug/L; and 2) Low Level (ng/L), the applicable detection limit is 0.22 to 0.23 ng/L.

For wells with several maximum concentrations with the same value (typically the detection limit), the latest sampling event for which the detection limit applied was used for the sample year.

J = Concentration values between the detection limit and practical quantitation limit.

FB = Detected in field blank

EB = Detected in equipment blank

NP = NDMA Method 607 extraction efficiency not provided where the analytical result is non-detect (eg, 0.004DL or 0.05RL)

TB = Detected in trip blank

QD = duplicate error

RL = Concentration presents half of the reporting limit. The maximum reporting limits and most recent year it was used are reported in the table. Reporting limits can change over time, typically decreasing as analytical techniques improve.

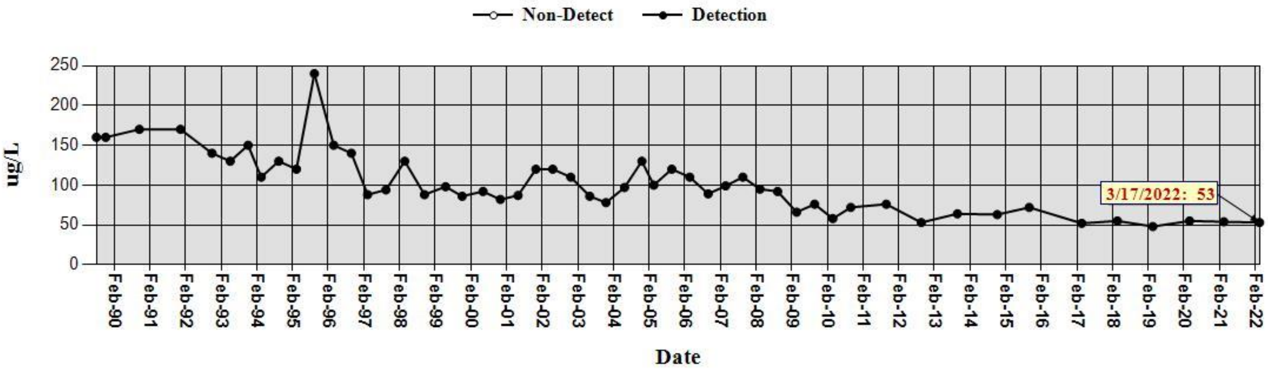
DL = Maximum detection limit and most recent year they were used are reported in the table. Detection limits can change over time, typically decreasing as analytical techniques improve.

[1] Increase in NDMA concentration noted for well ST-3-486 since 2011. 2013 result = 3.3 ppb. An increased contaminant mass of Plume Front NDMA may be moving into this well.

[2] Well PFE-5 taken offline in 2011. Last sampled on 2/19/2014 using a Bennett pump.

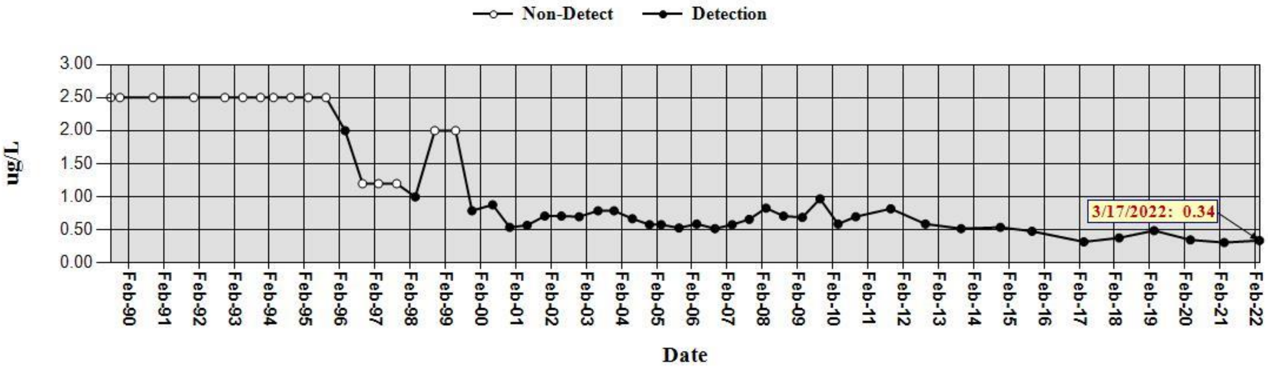
Well ID: 200-D-240
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



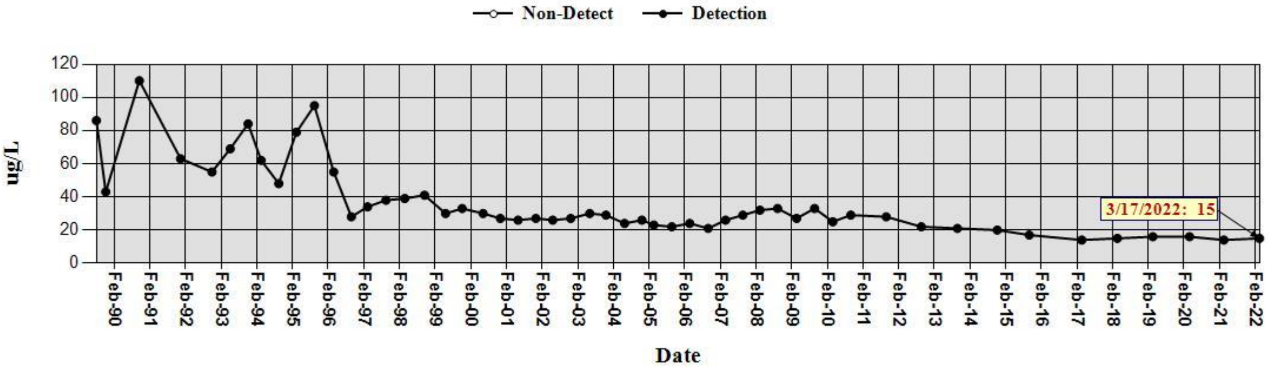
Well ID: 200-D-240
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: 200-D-240
CAS RN: 79-01-6 Trichloroethene

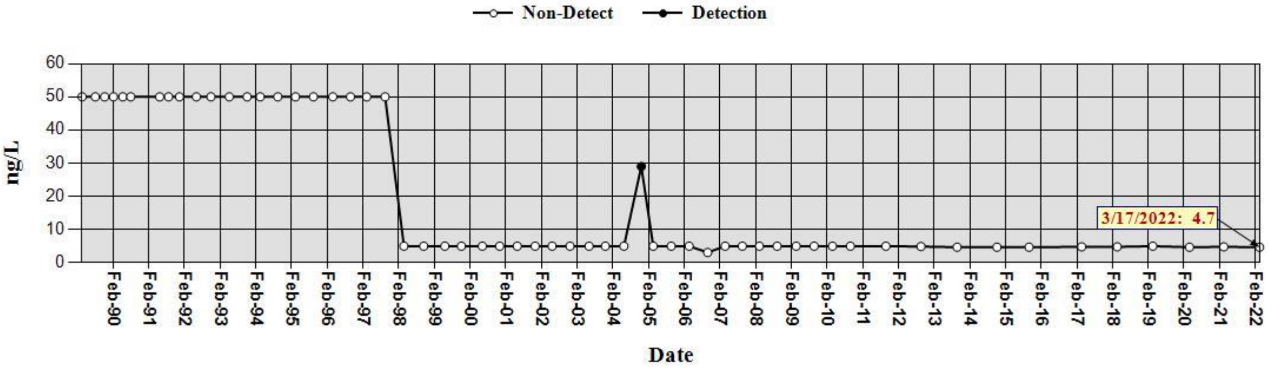
Analysis: 8260



Well ID: 200-D-240
CAS RN: 62-75-9 N-Nitrosodimethylamine

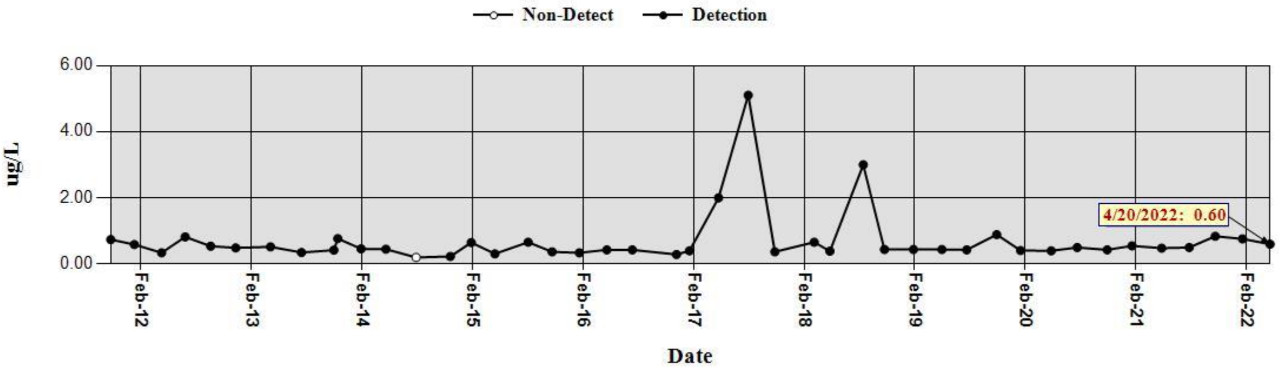
Analysis: 607

Results are Corrected for Extraction Efficiency



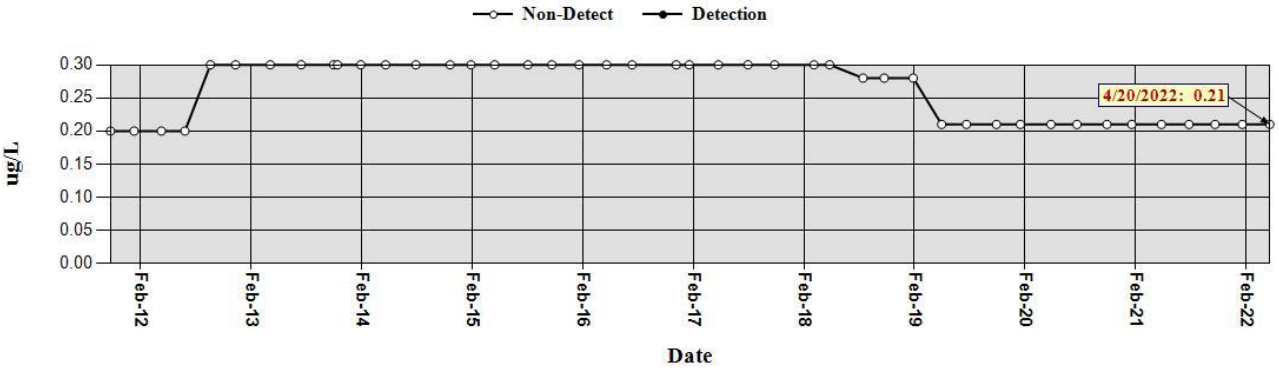
Well ID: 600-G-138
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



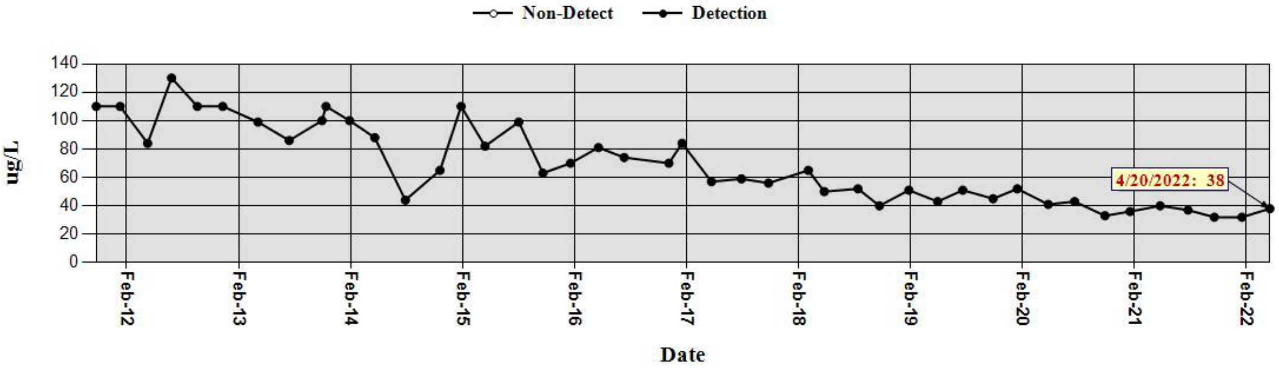
Well ID: 600-G-138
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



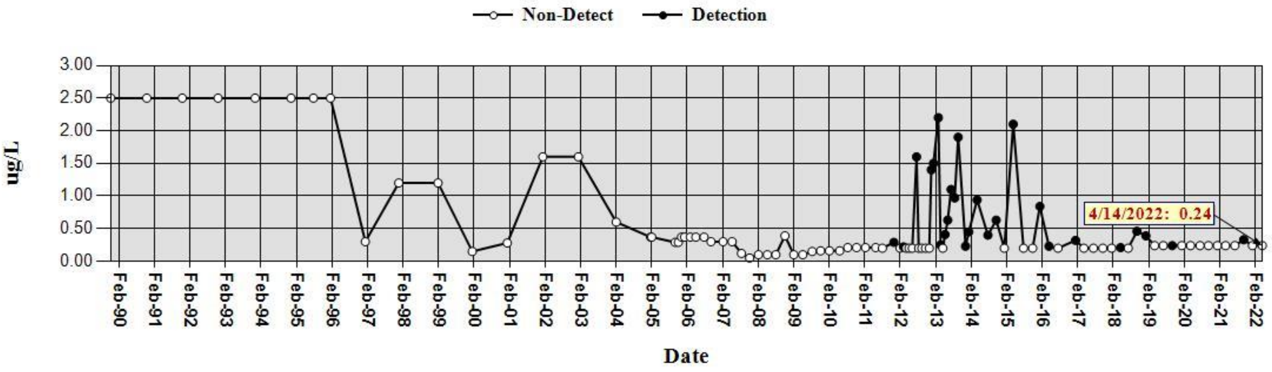
Well ID: 600-G-138
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



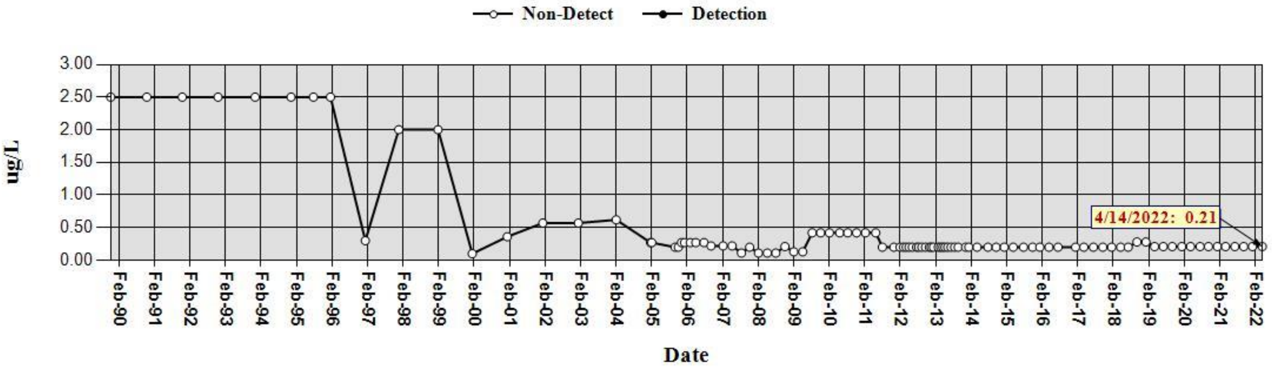
Well ID: BLM-10-517
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



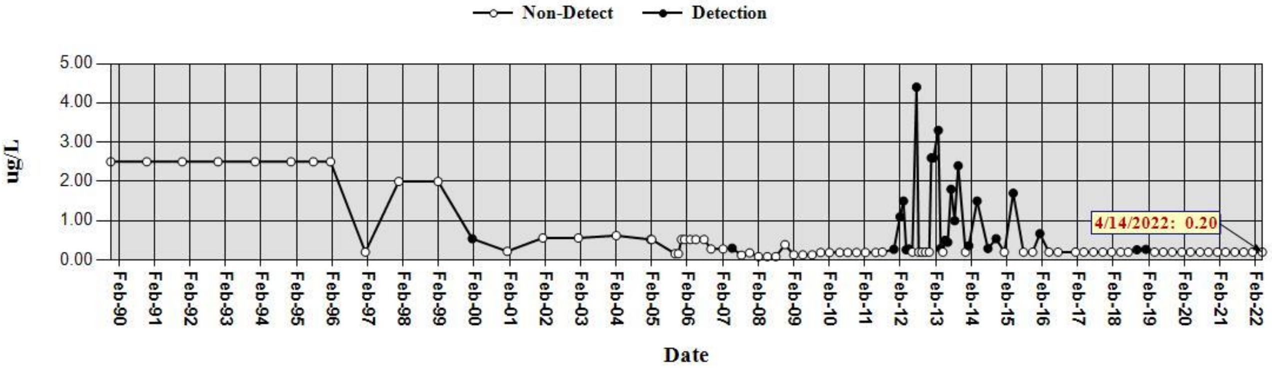
Well ID: BLM-10-517
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



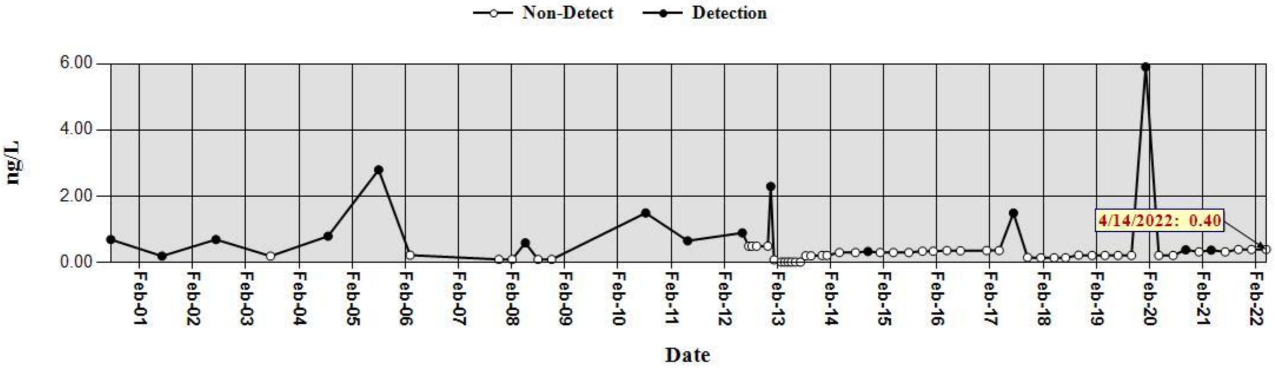
Well ID: BLM-10-517
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



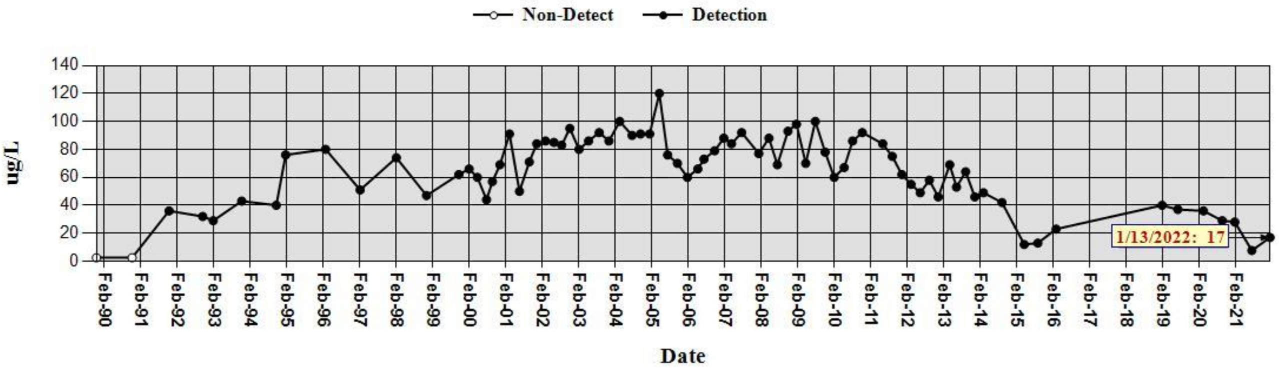
Well ID: BLM-10-517
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



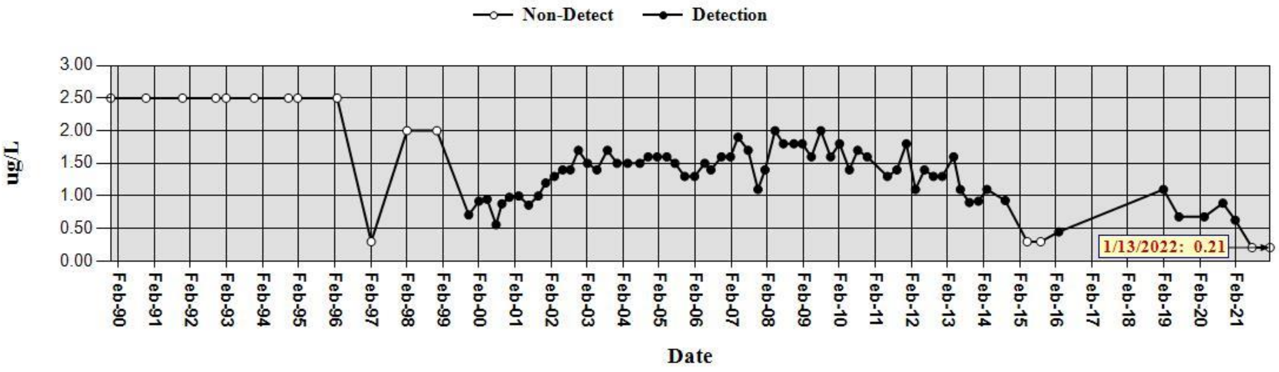
Well ID: BLM-18-430
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



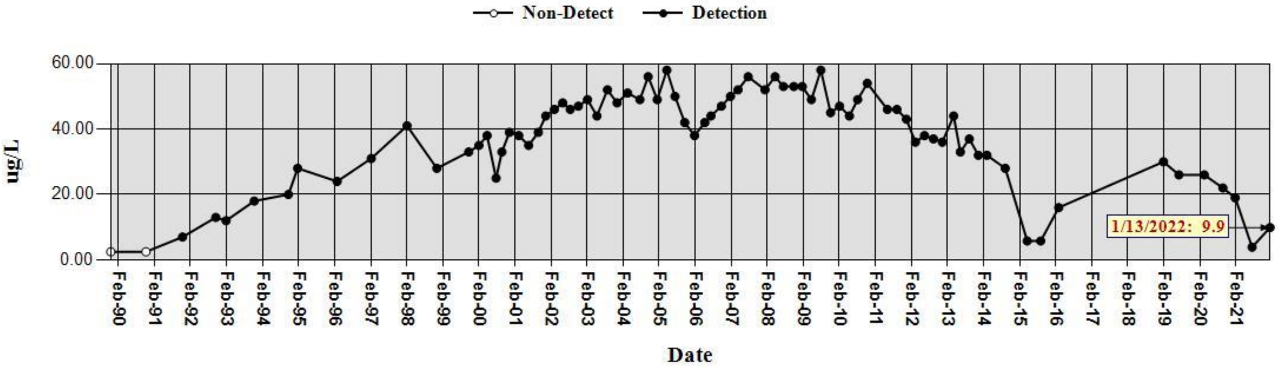
Well ID: BLM-18-430
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-18-430
CAS RN: 79-01-6 Trichloroethene

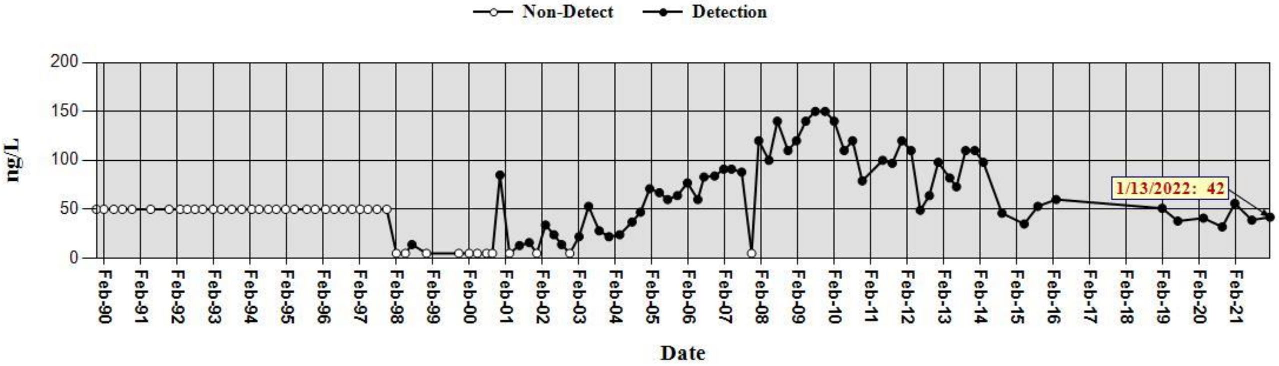
Analysis: 8260



Well ID: BLM-18-430
CAS RN: 62-75-9 N-Nitrosodimethylamine

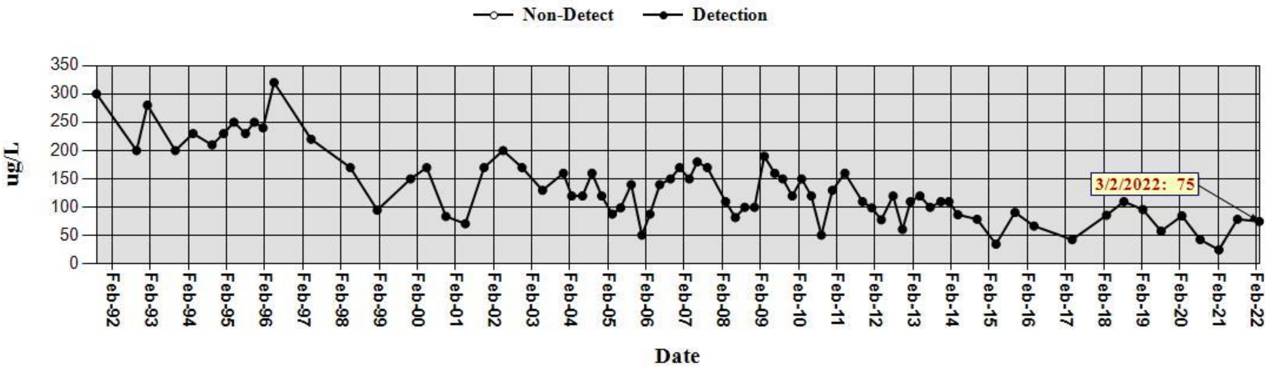
Analysis: 607

Results are Corrected for Extraction Efficiency



Well ID: BLM-21-400
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



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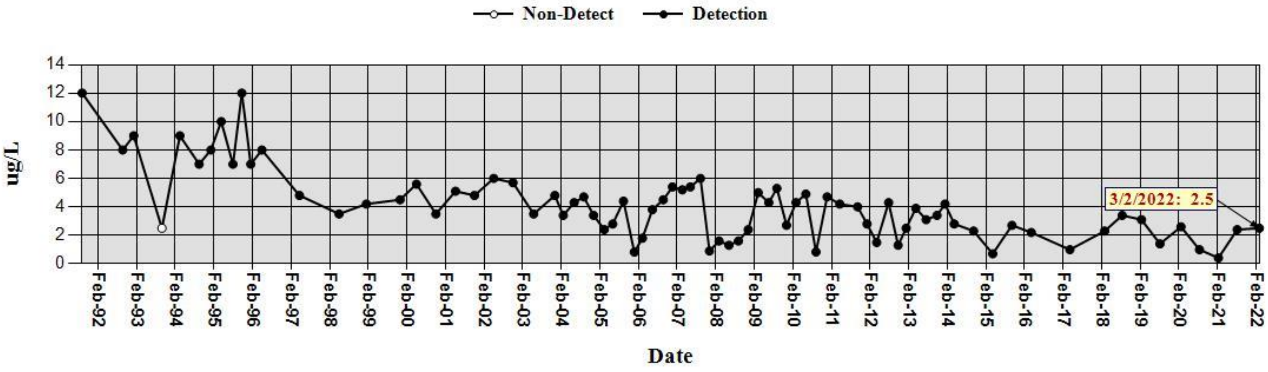
Well ID: BLM-21-400
CAS RN: 127-18-4 Tetrachloroethene

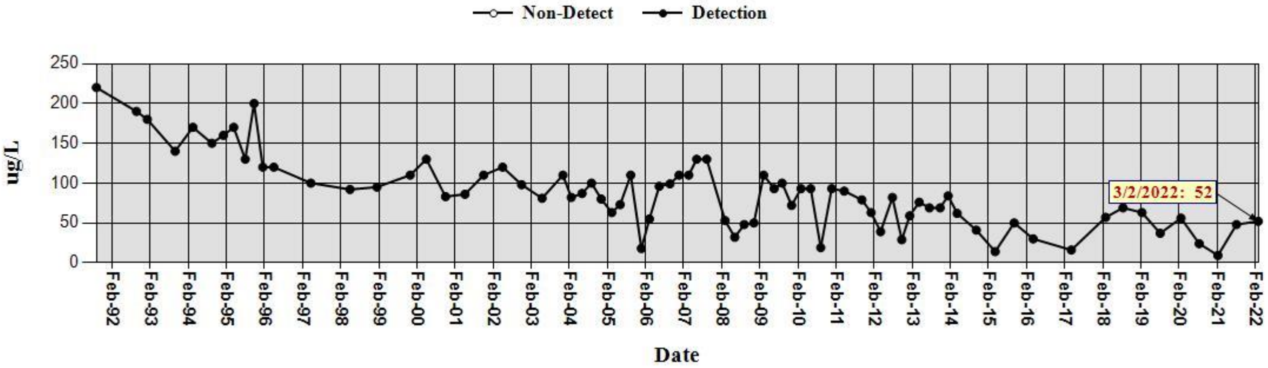
Analysis: 8260



3/2/2022: 2.5

Well ID: BLM-21-400
CAS RN: 79-01-6 Trichloroethene

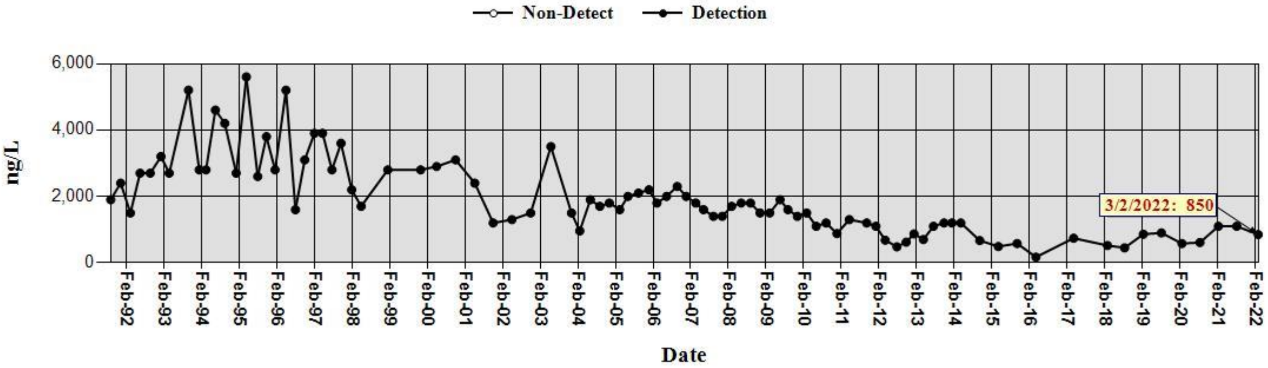
Analysis: 8260



Well ID: BLM-21-400
CAS RN: 62-75-9 N-Nitrosodimethylamine

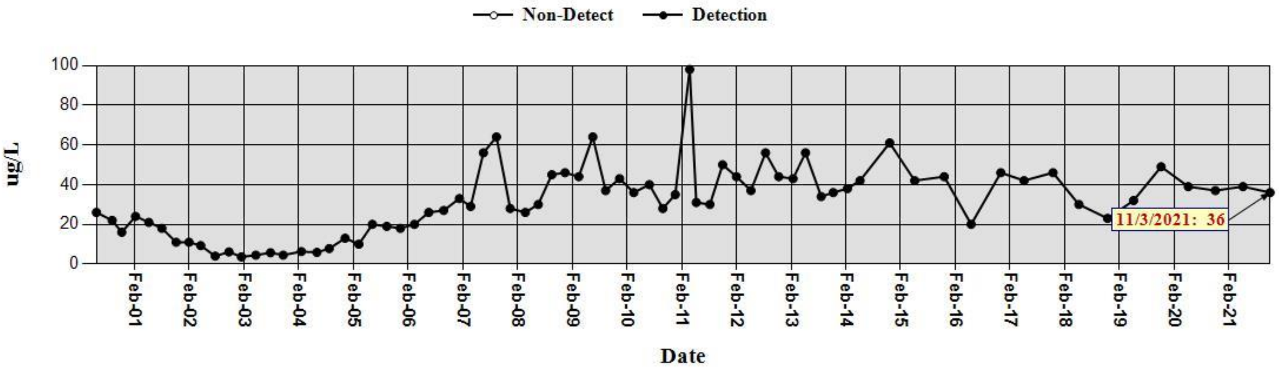
Analysis: 607

Results are Corrected for Extraction Efficiency



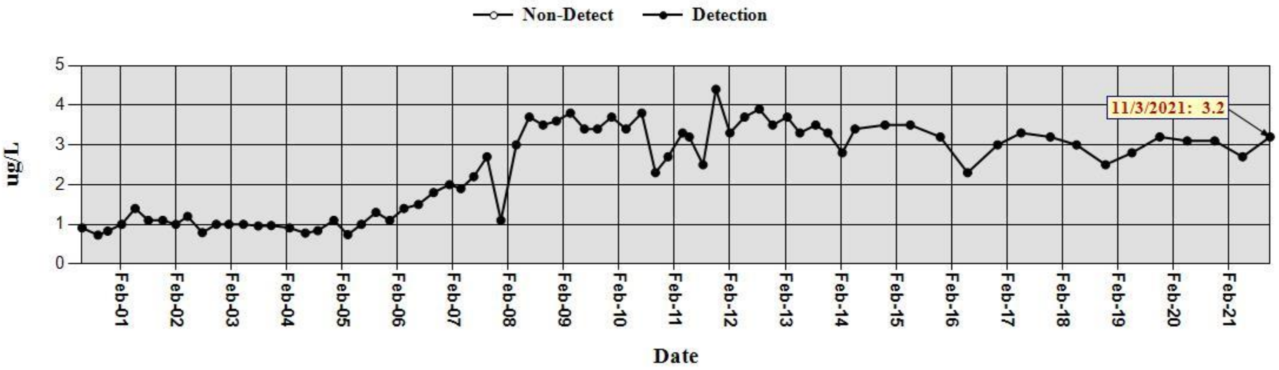
Well ID: BLM-36-350
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



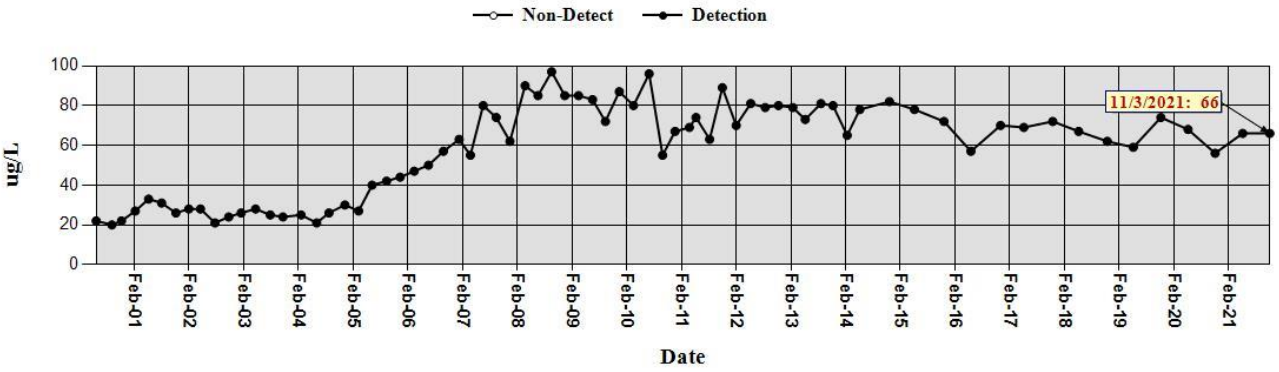
Well ID: BLM-36-350
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-36-350
CAS RN: 79-01-6 Trichloroethene

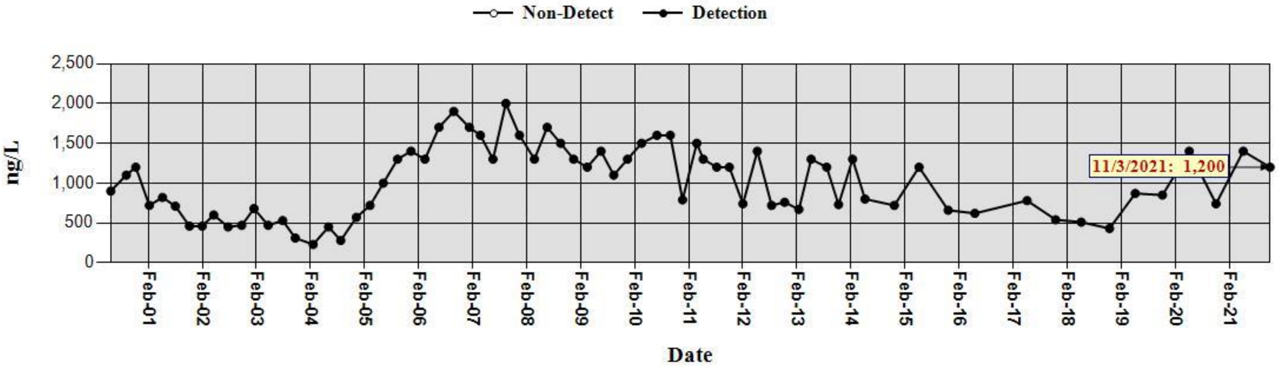
Analysis: 8260



Well ID: BLM-36-350
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: 607

Results are Corrected for Extraction Efficiency



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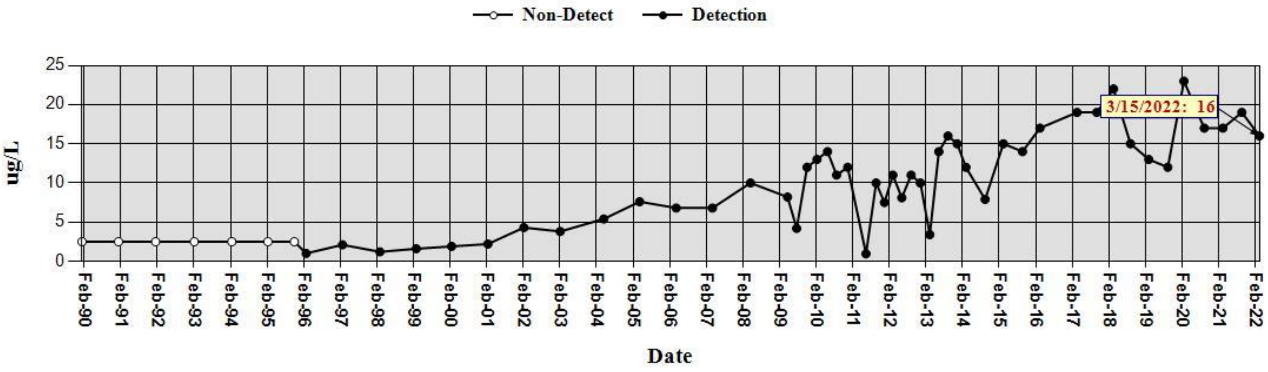
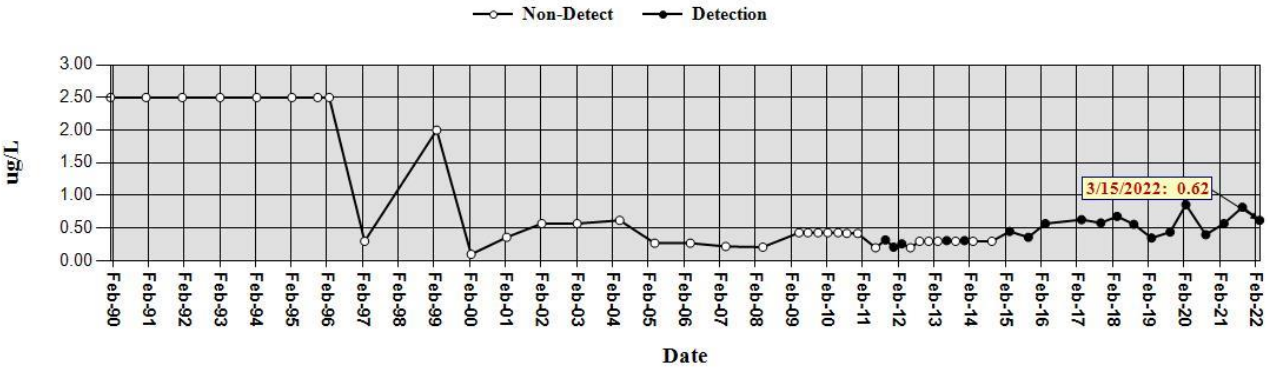
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



Well ID: BLM-5-527
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-5-527
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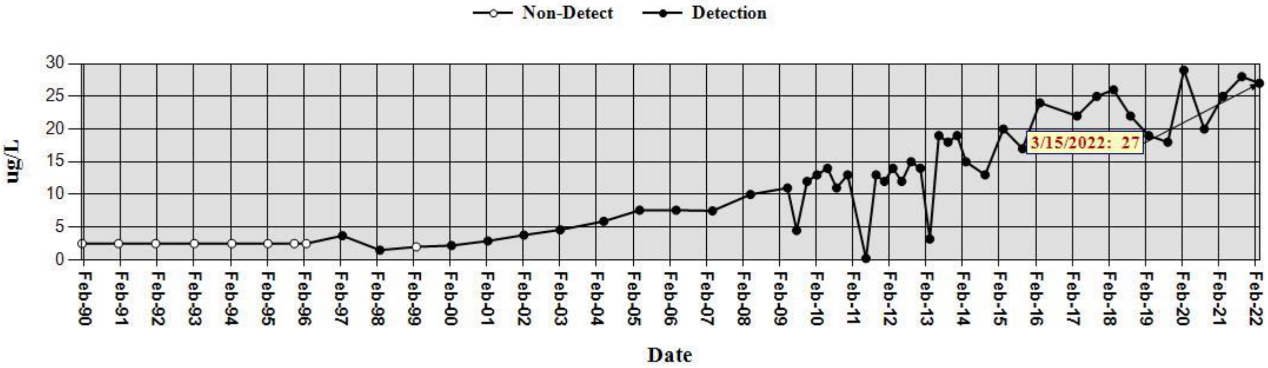
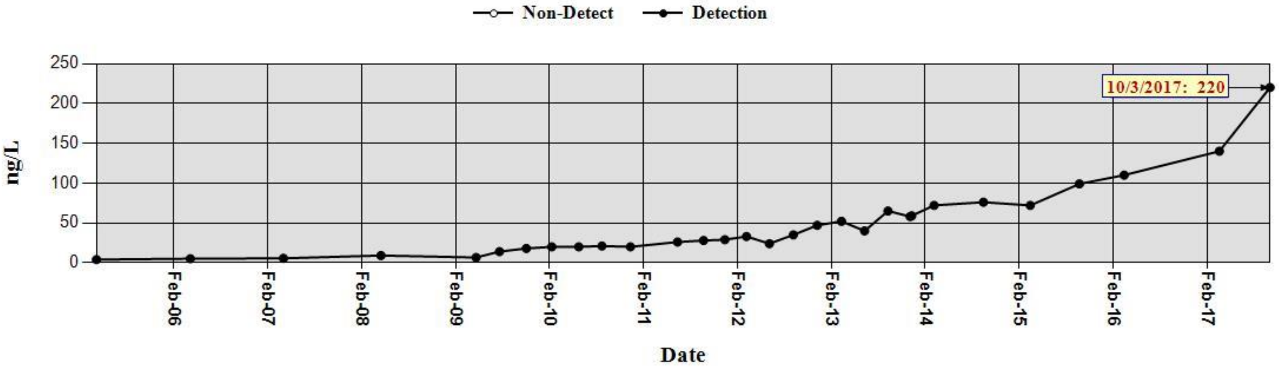
Analysis: 8260



Well ID: BLM-5-527
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



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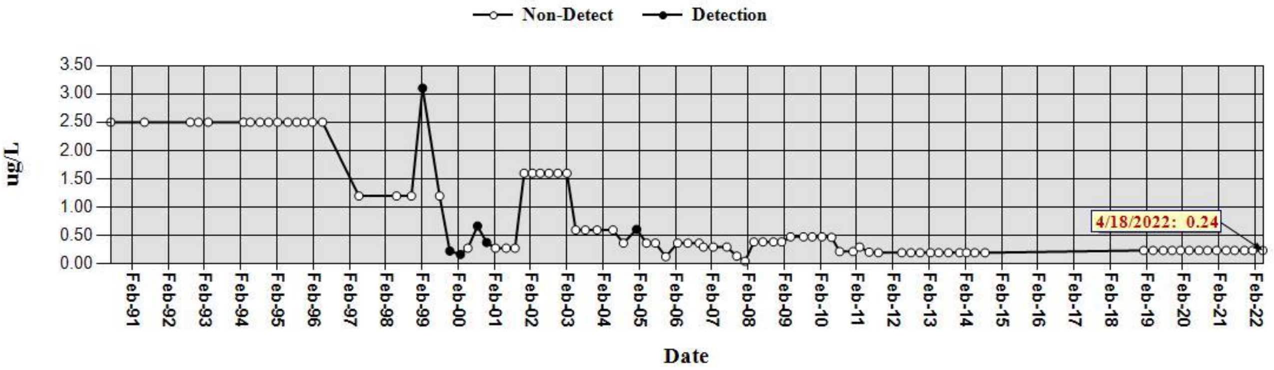
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

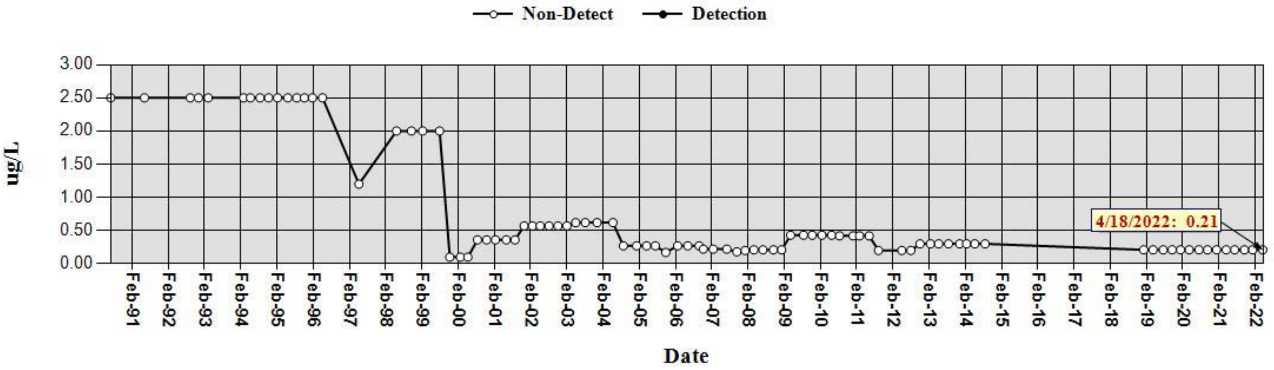
Analysis: 8260



4/18/2022: 0.24

Well ID: BLM-6-488
CAS RN: 127-18-4 Tetrachloroethene

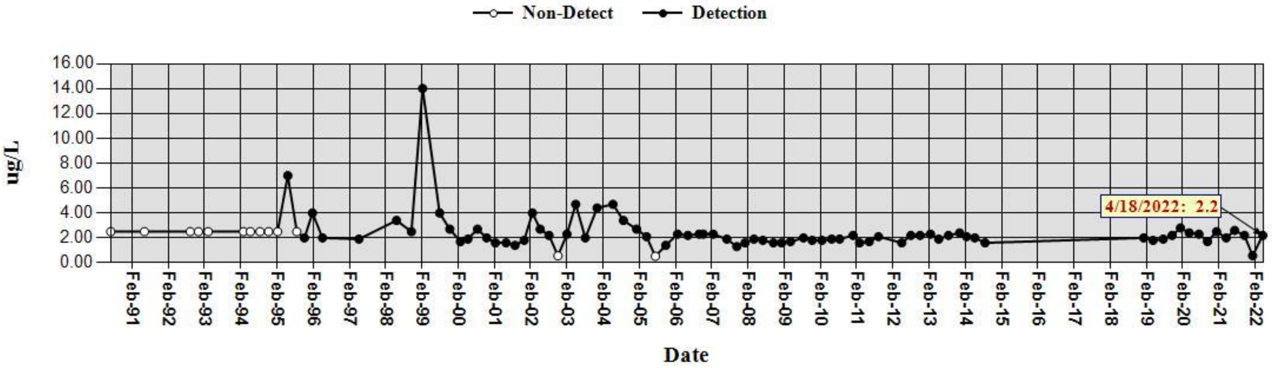
Analysis: 8260



4/18/2022: 0.21

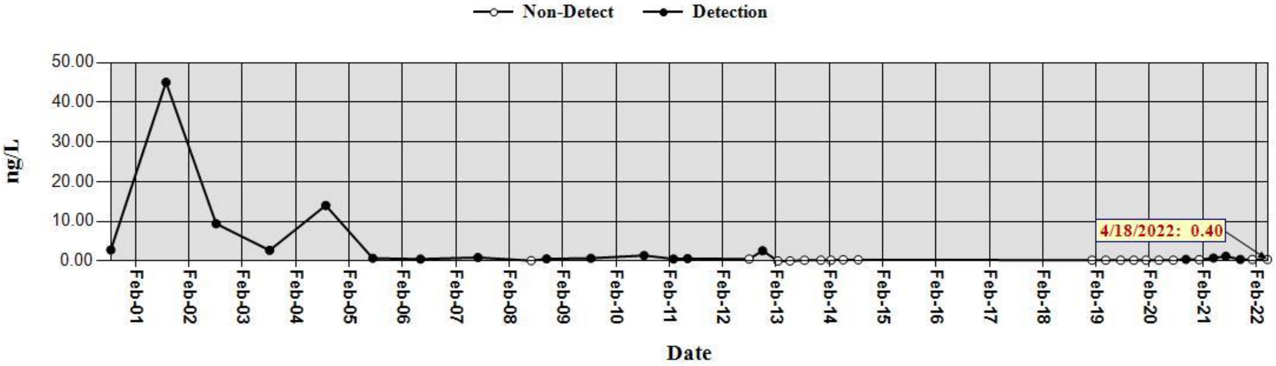
Well ID: BLM-6-488
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



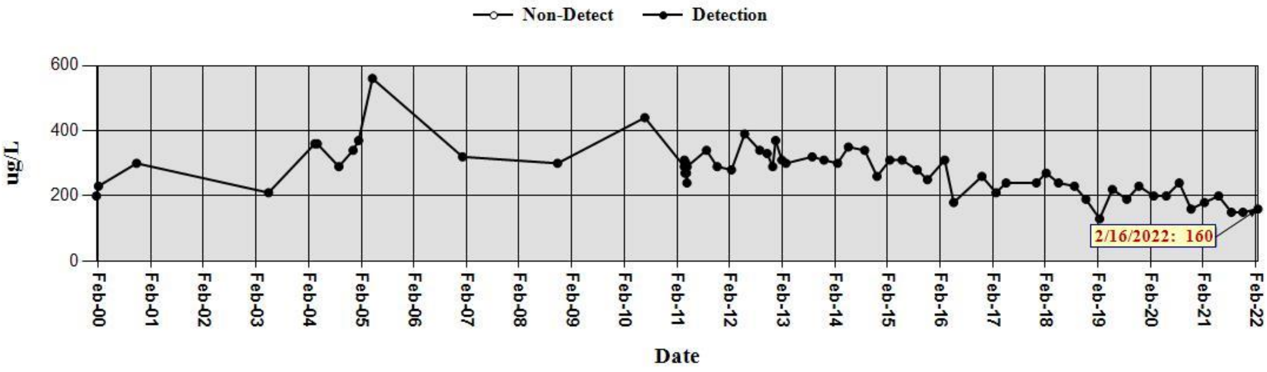
Well ID: BLM-6-488
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



Well ID: MPE-1
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



Well ID: MPE-1
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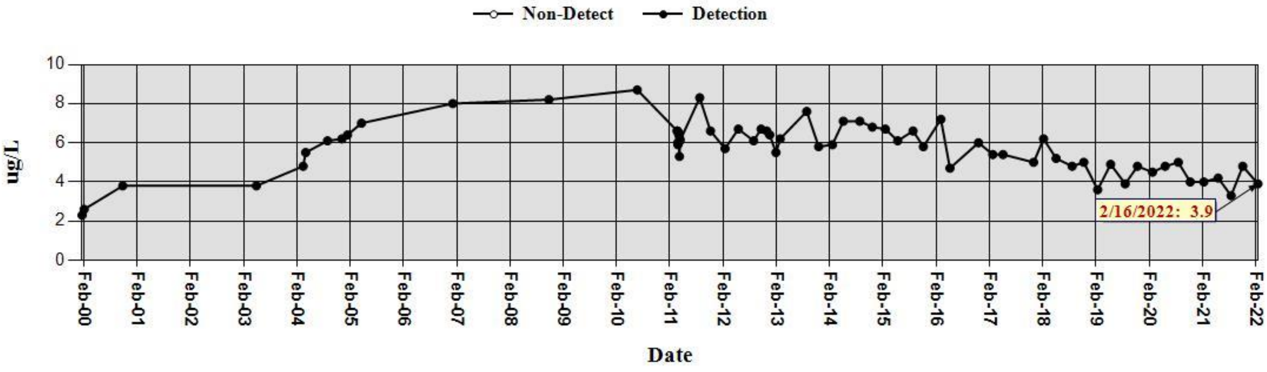
Analysis: 8260



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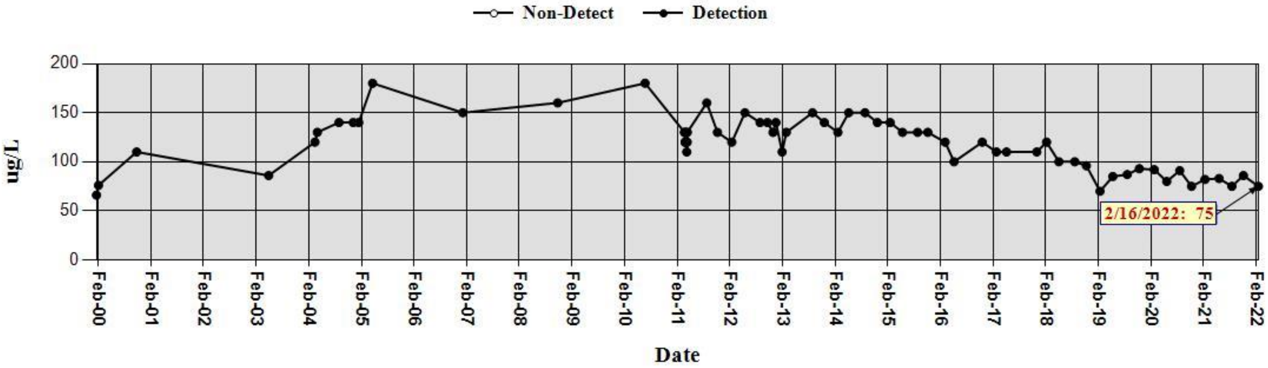
Analysis: 8260



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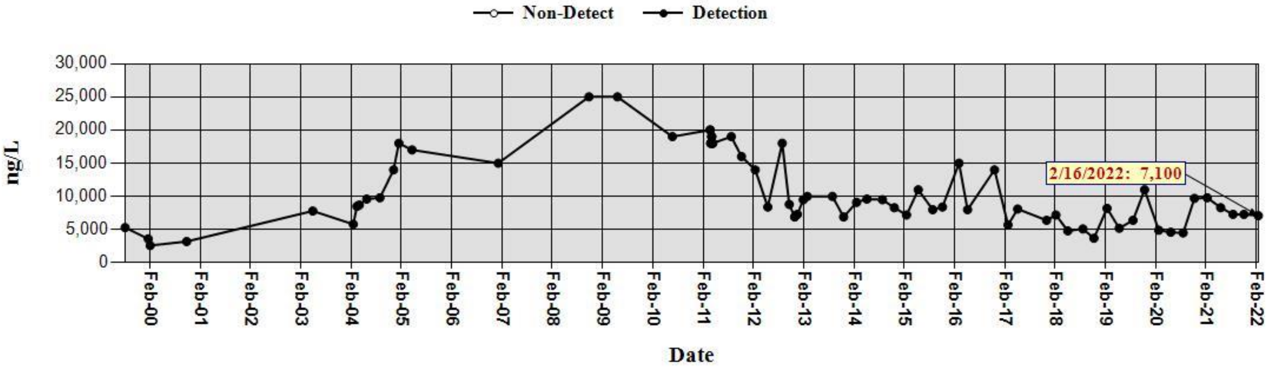
Analysis: 607

Results are Corrected for Extraction Efficiency



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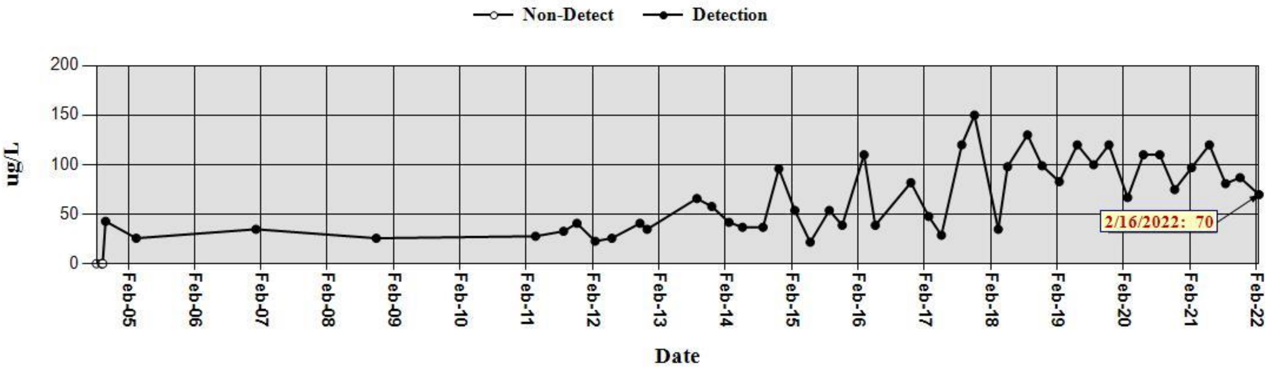
Analysis: 8260



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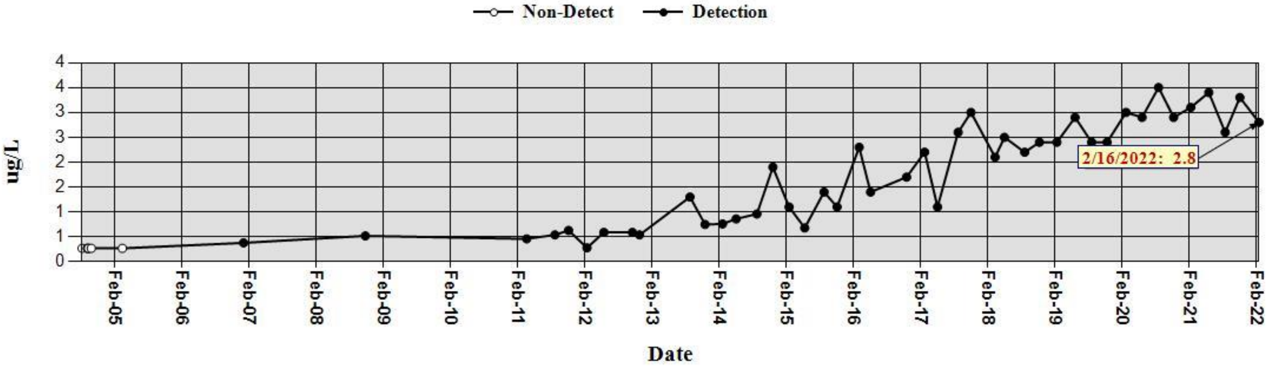

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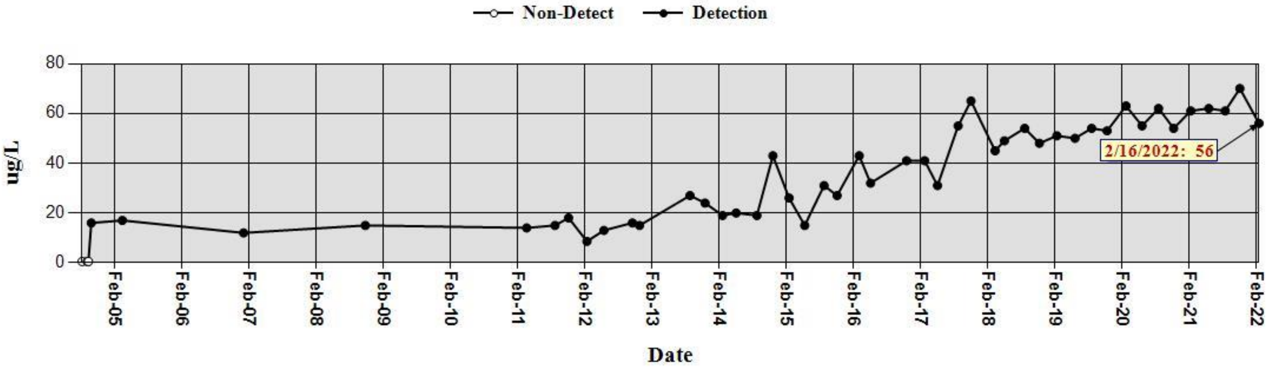

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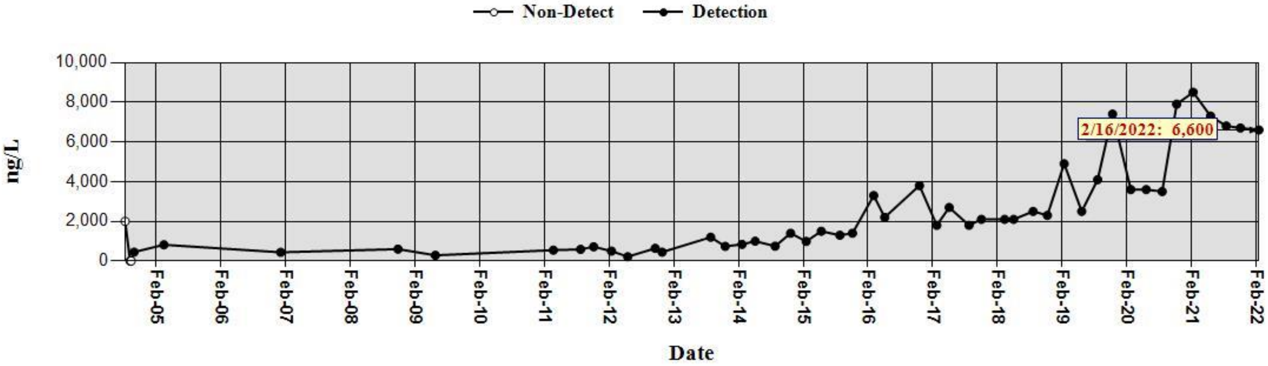
Analysis: 607

Results are Corrected for Extraction Efficiency



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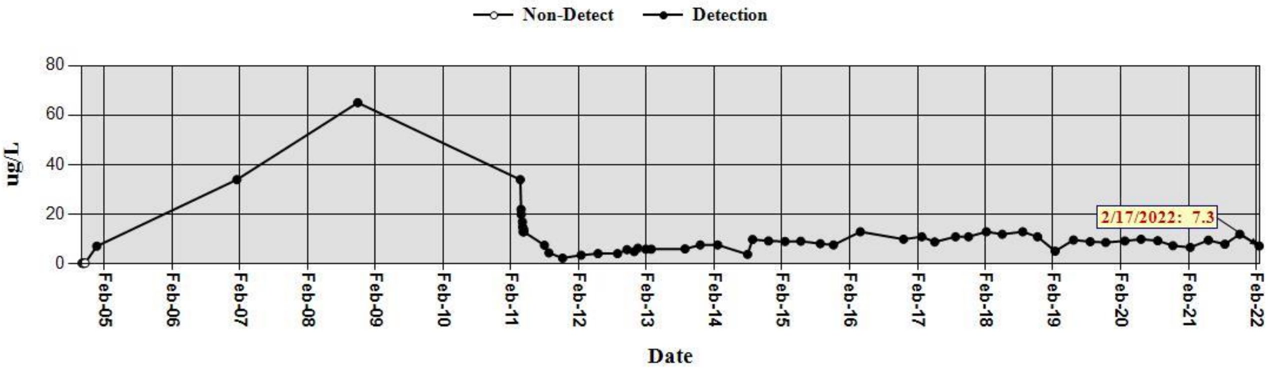
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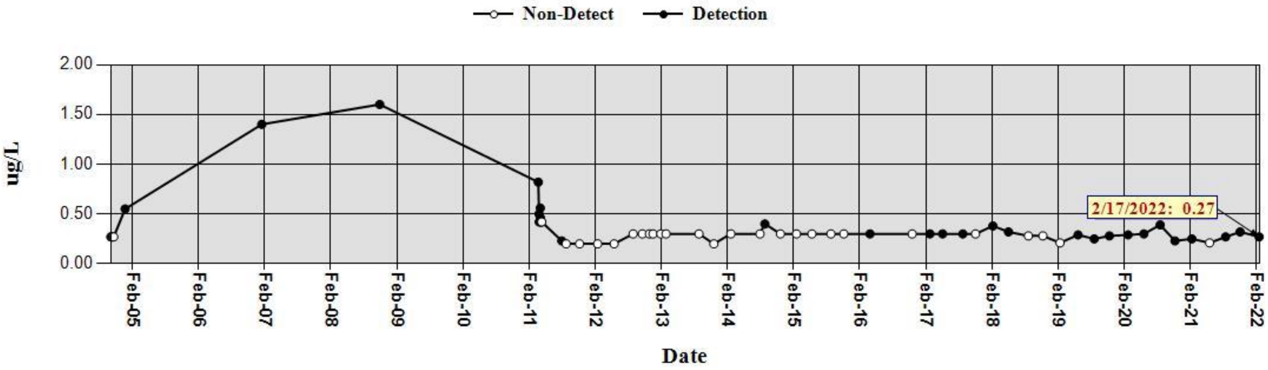
Analysis: 8260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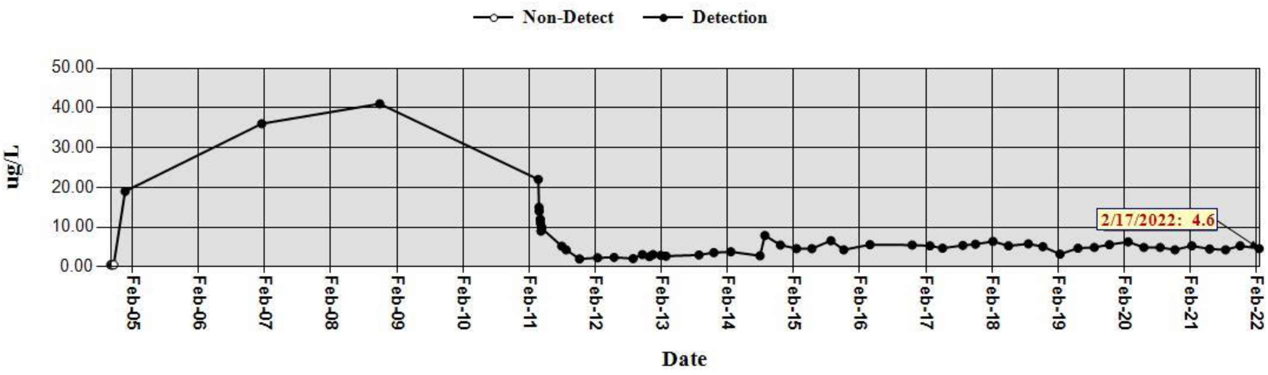

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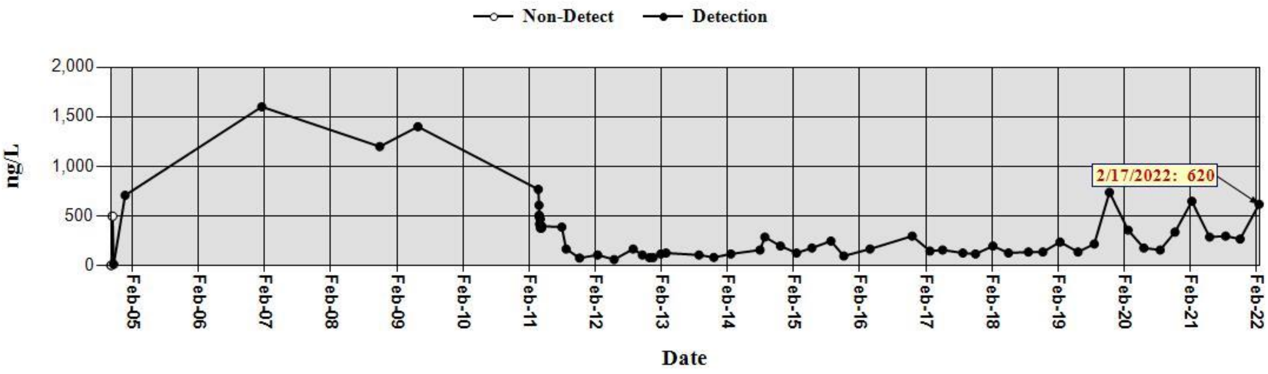
Analysis: 607

Results are Corrected for Extraction Efficiency



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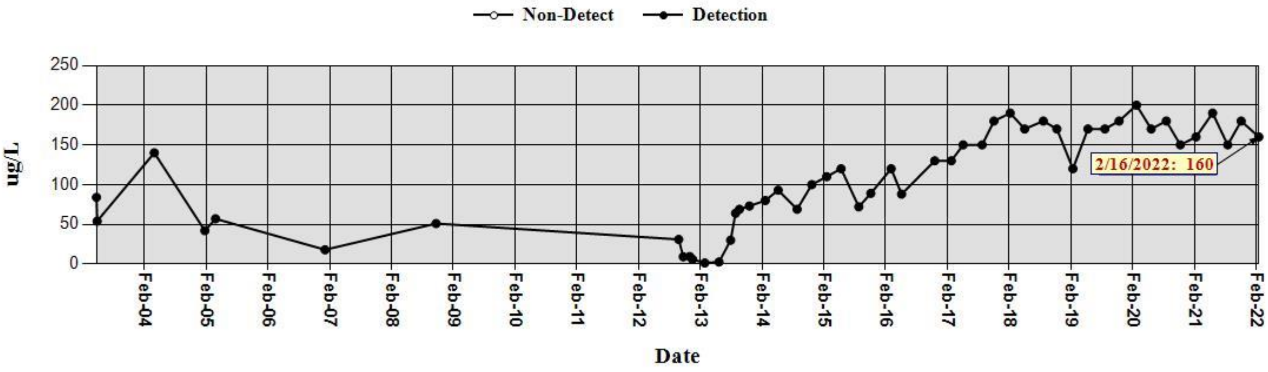
Analysis: 8260



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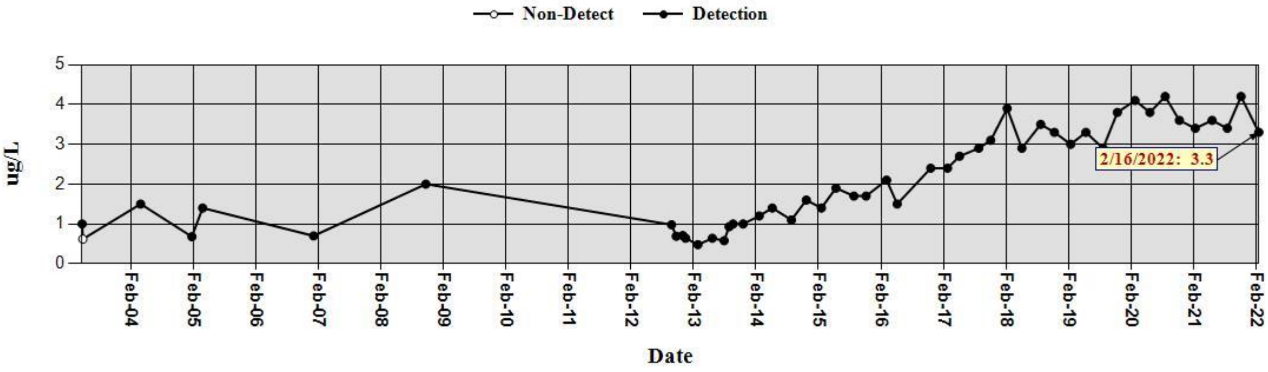

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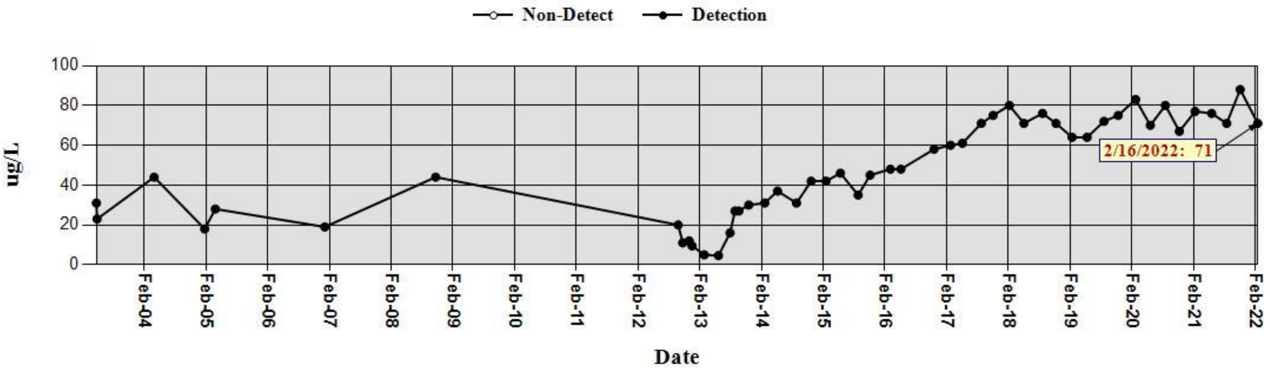
Analysis: 8260



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Analysis: 607

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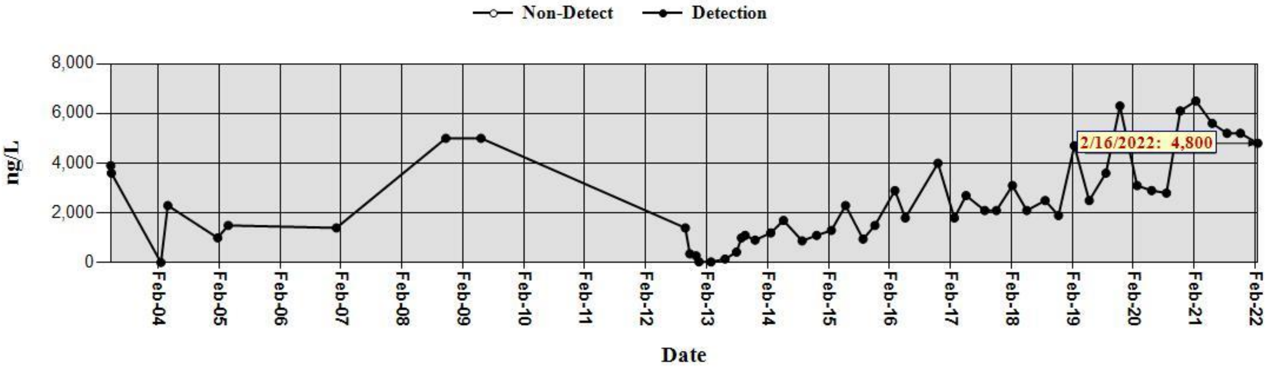

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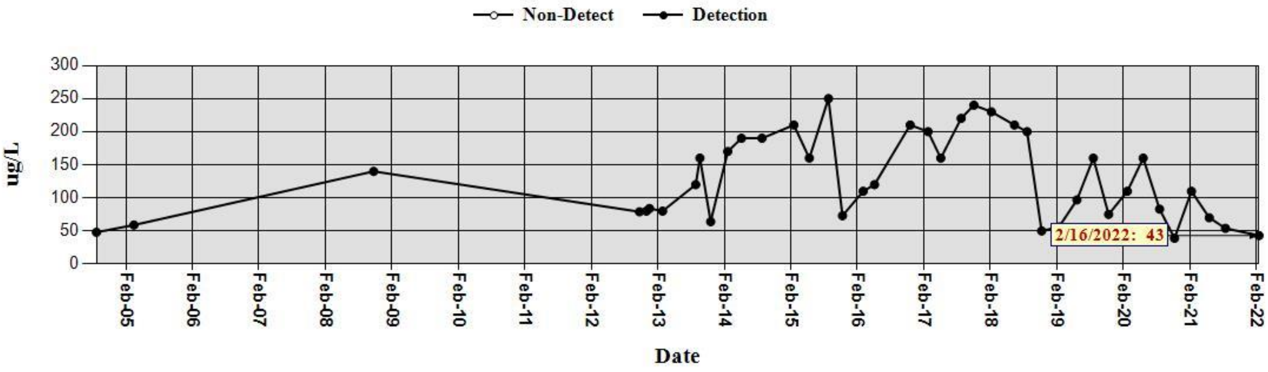

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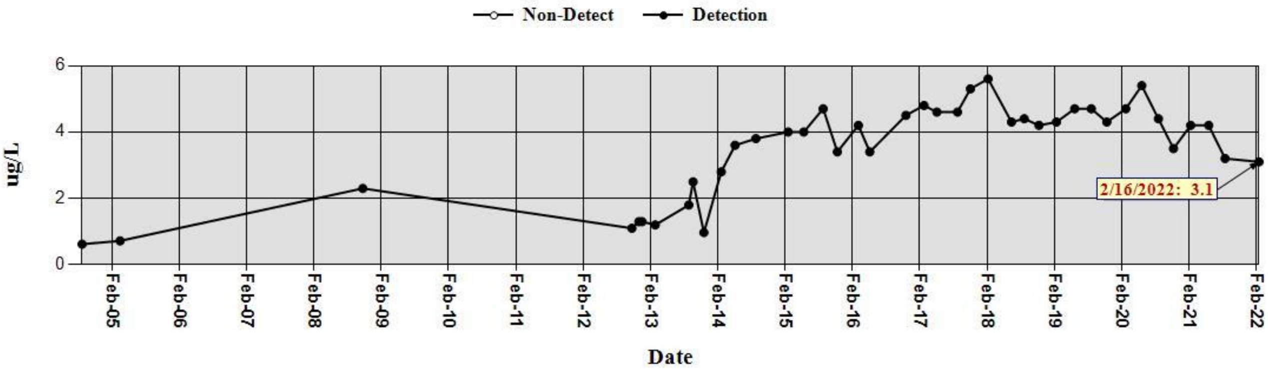

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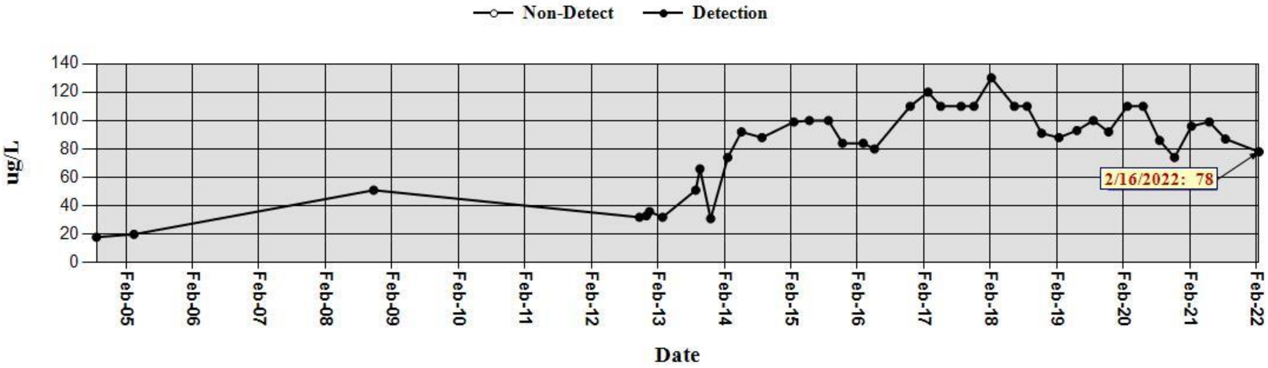
Analysis: 8260



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Analysis: 607

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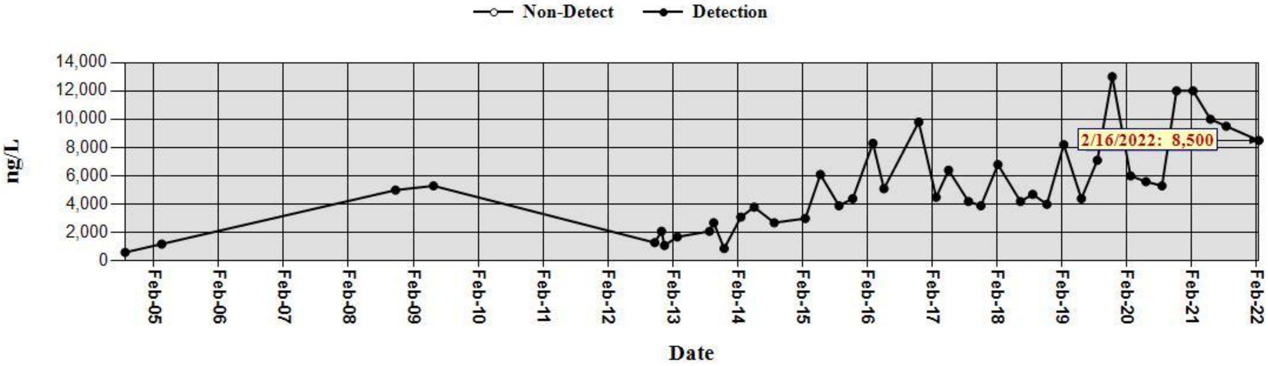

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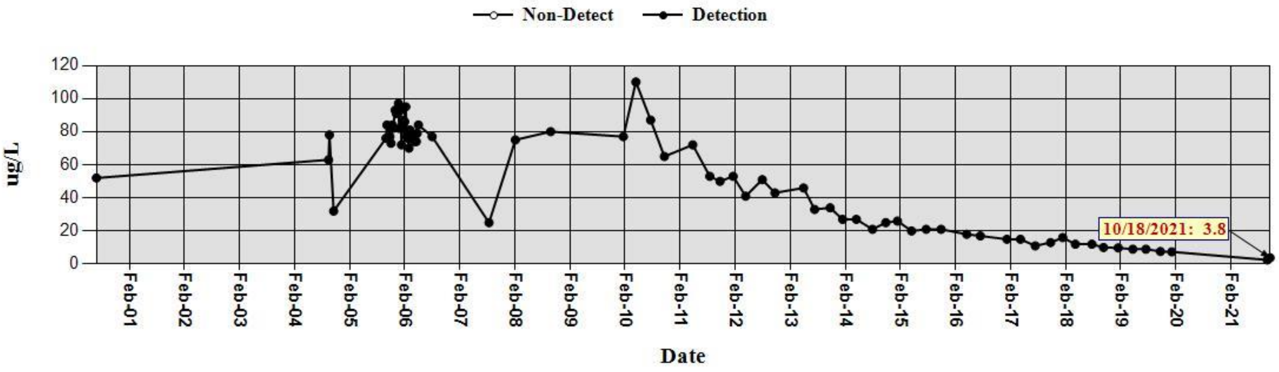

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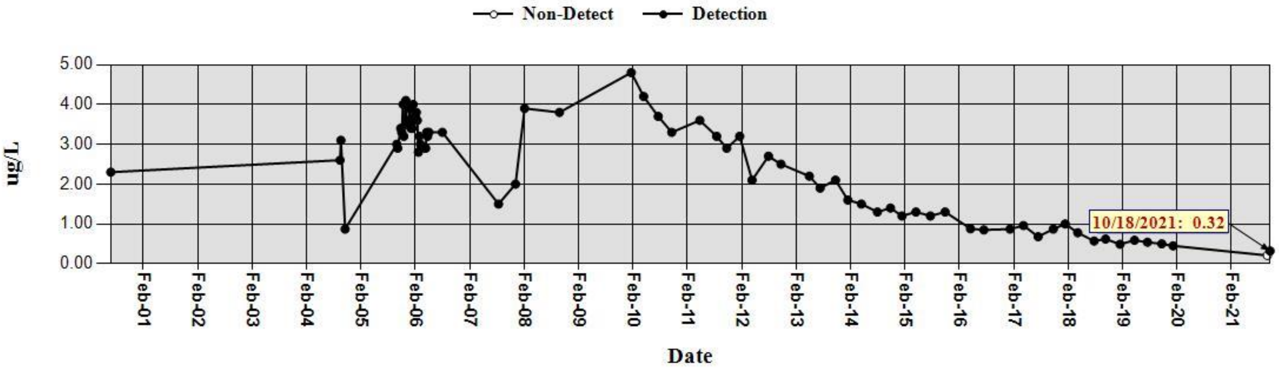

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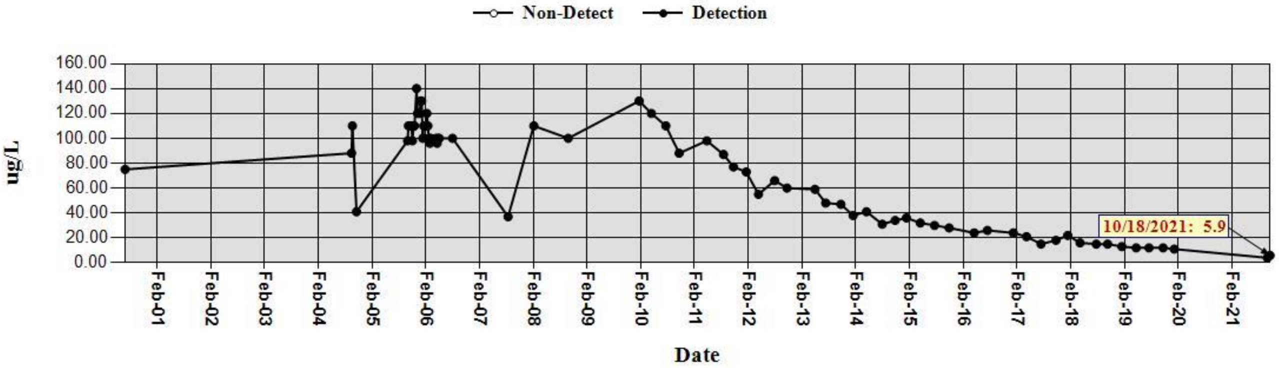

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Analysis: 607

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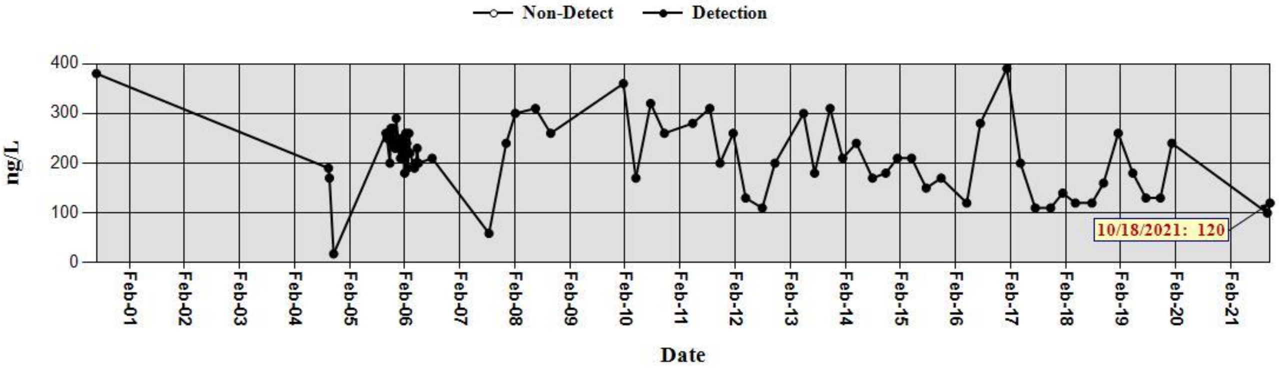

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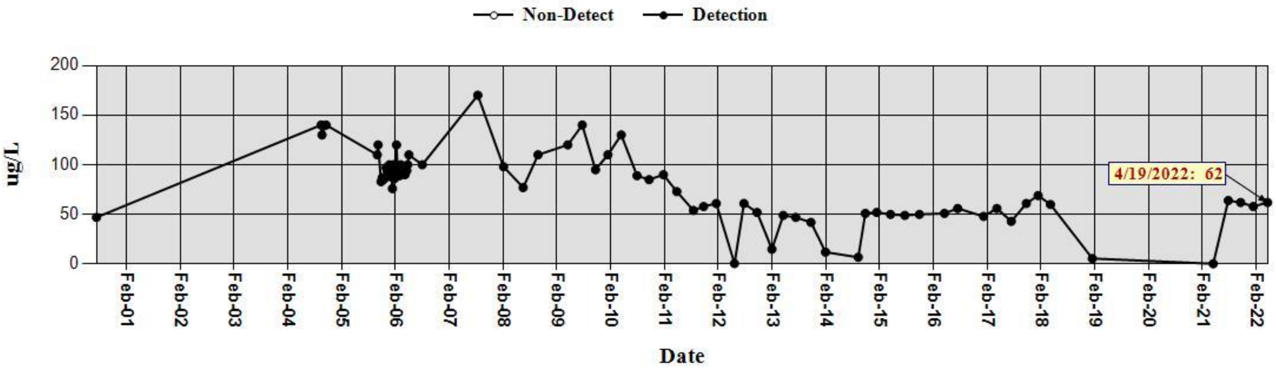
Analysis: 8260



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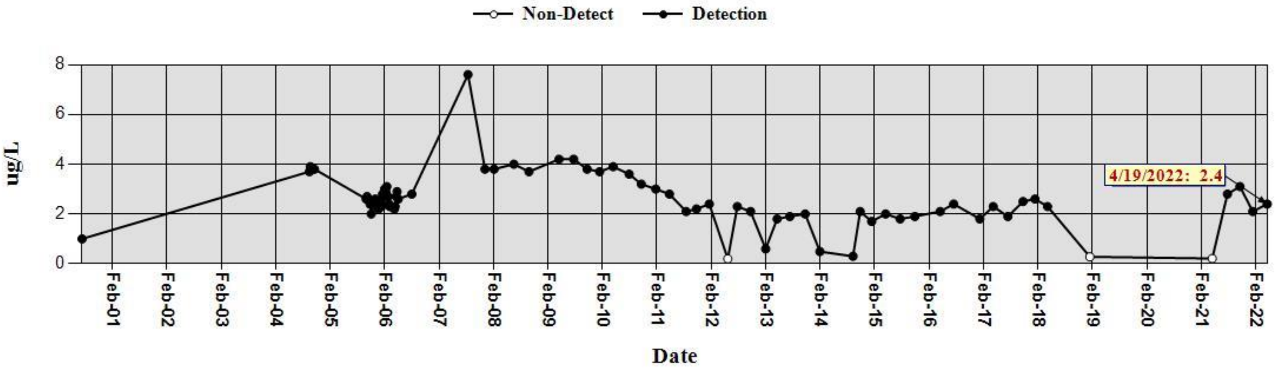
Analysis: 8260



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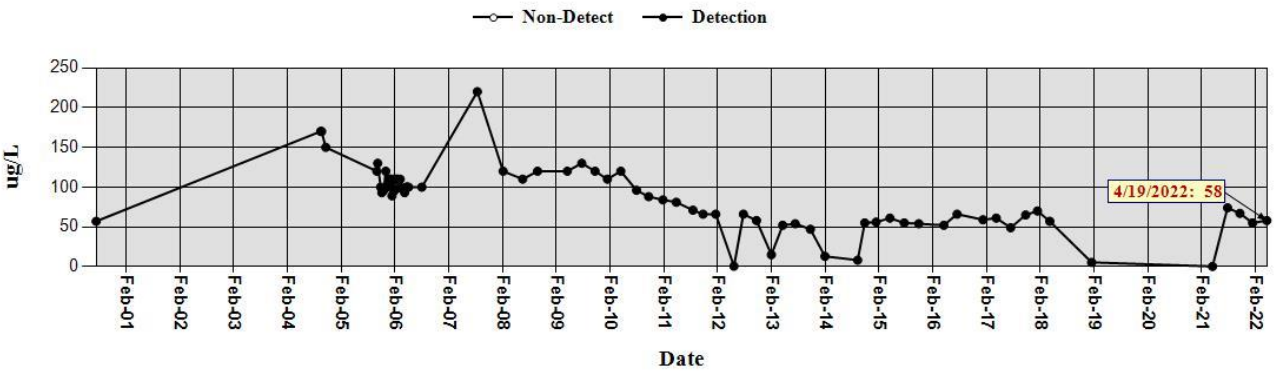
Analysis: 8260



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Analysis: 607

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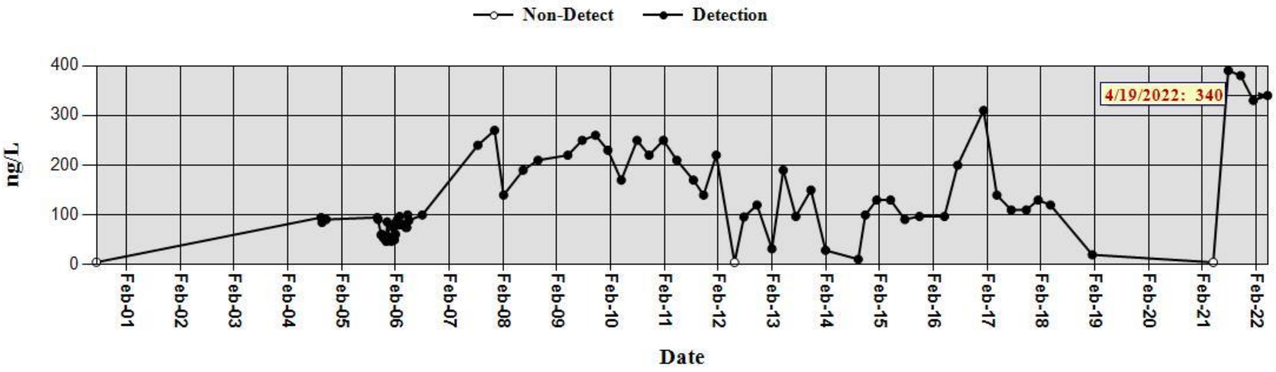

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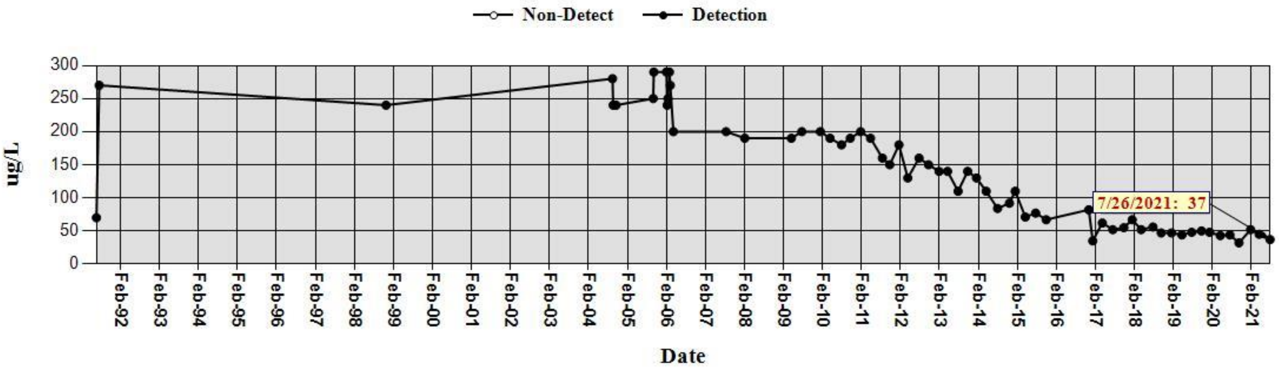

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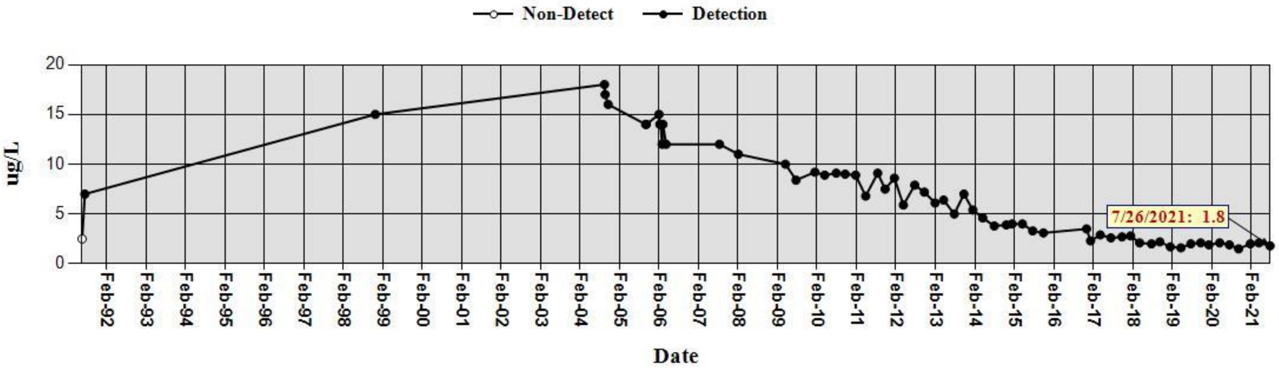
Analysis: 8260



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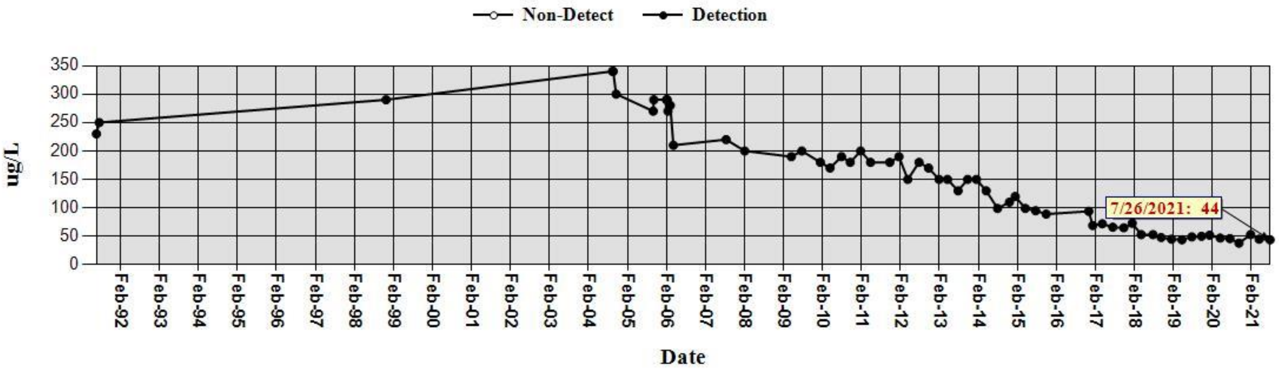

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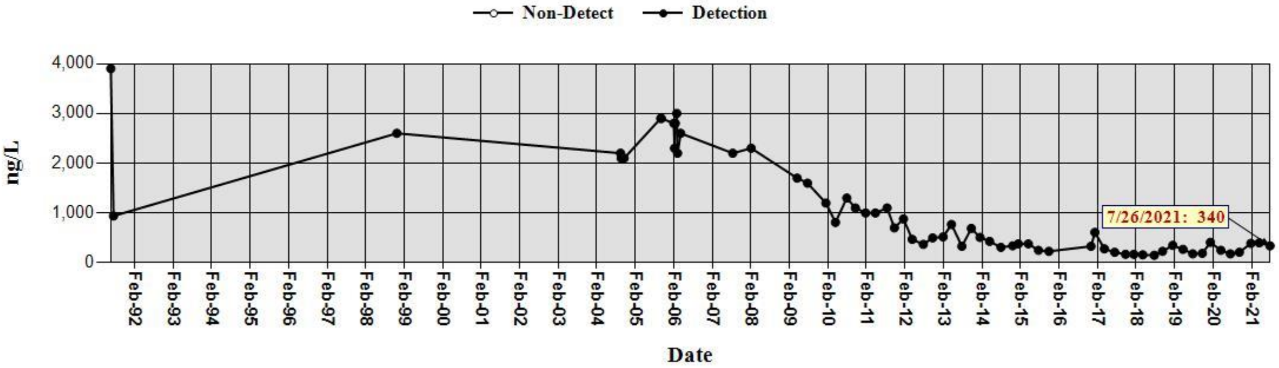
Analysis: 607

Results are Corrected for Extraction Efficiency



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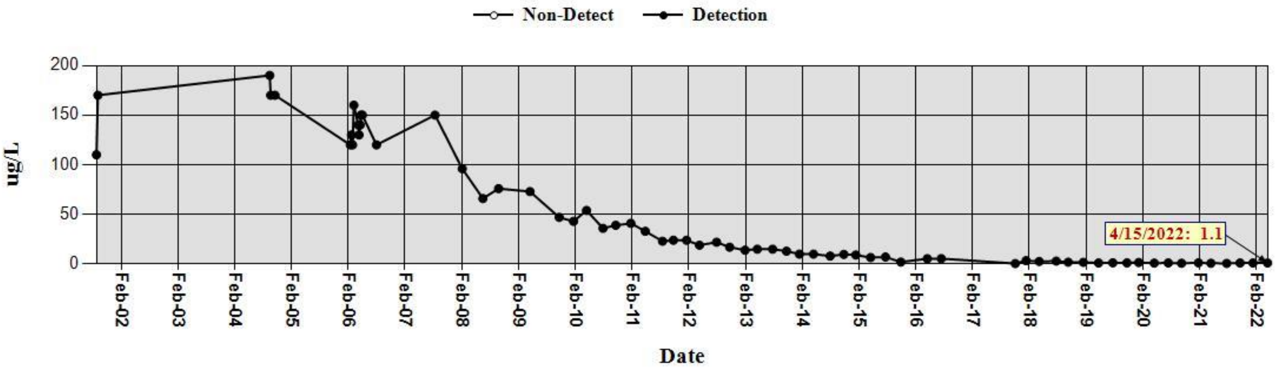

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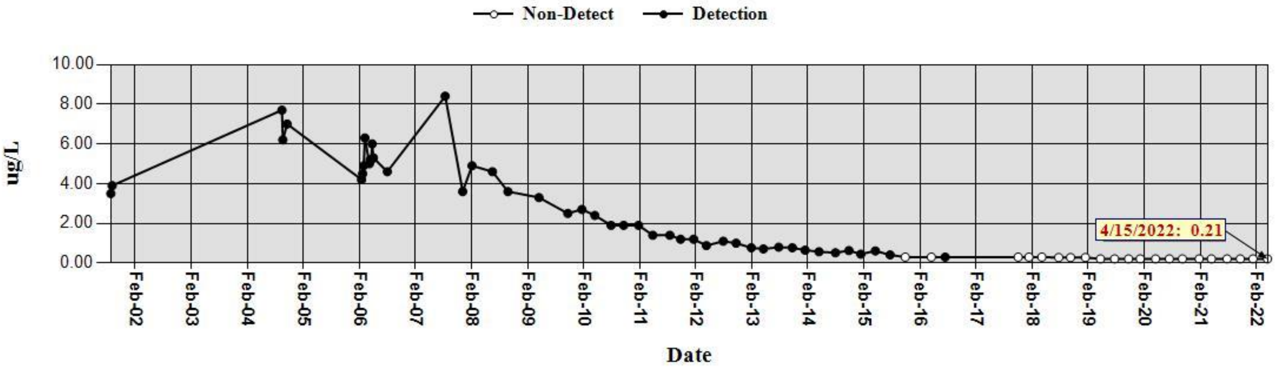
Analysis: 8260



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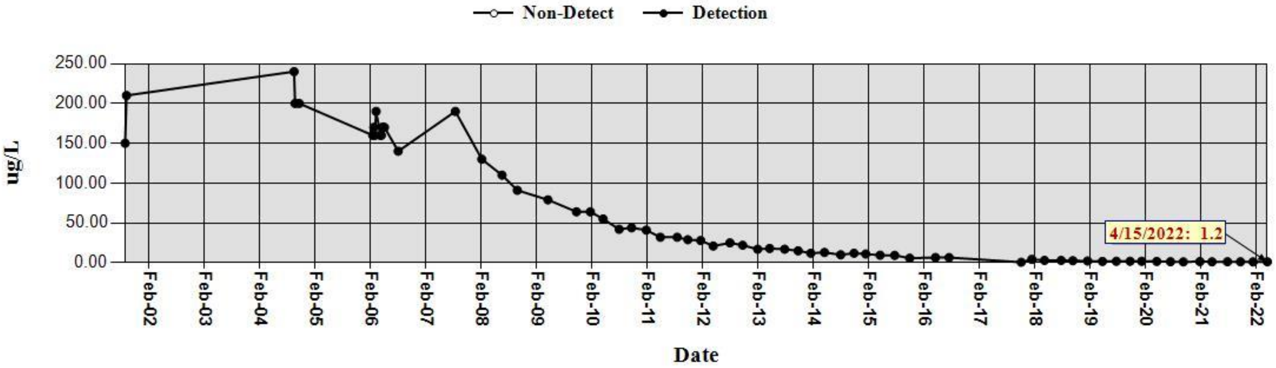

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Analysis: 607

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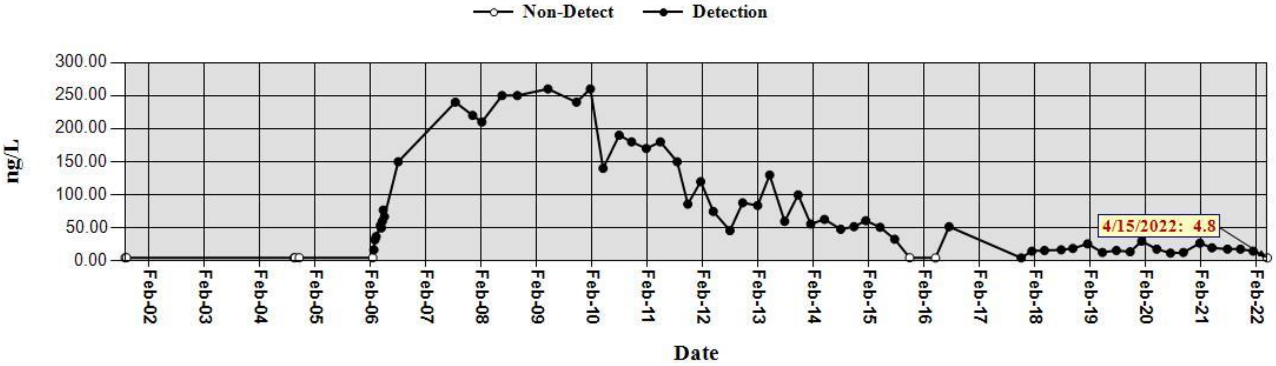

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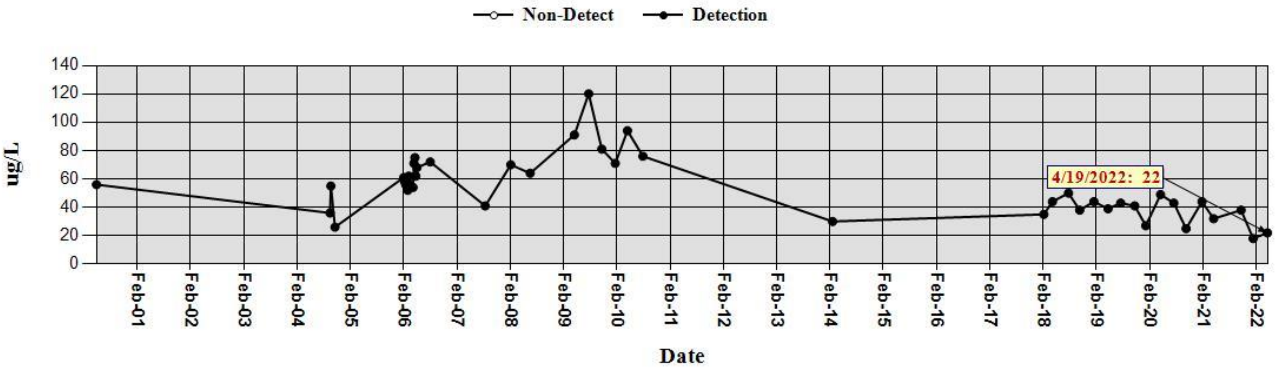

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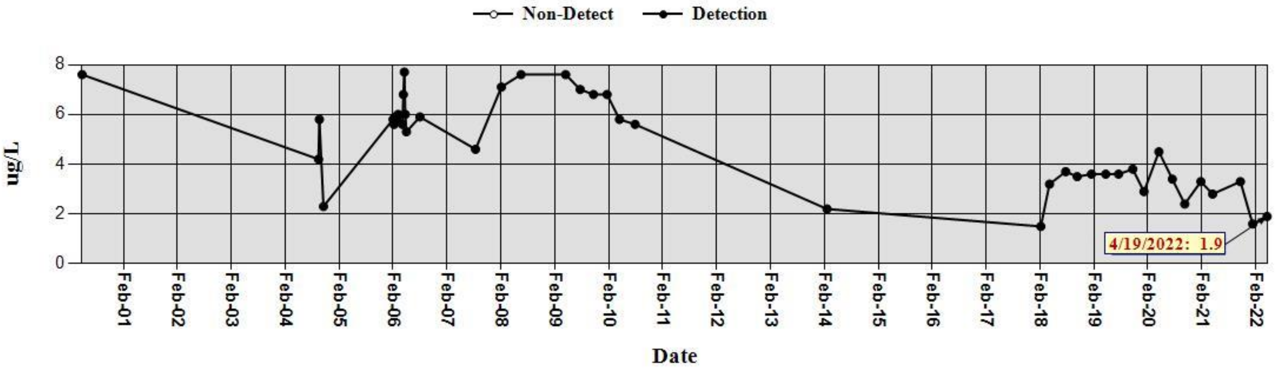
Analysis: 8260



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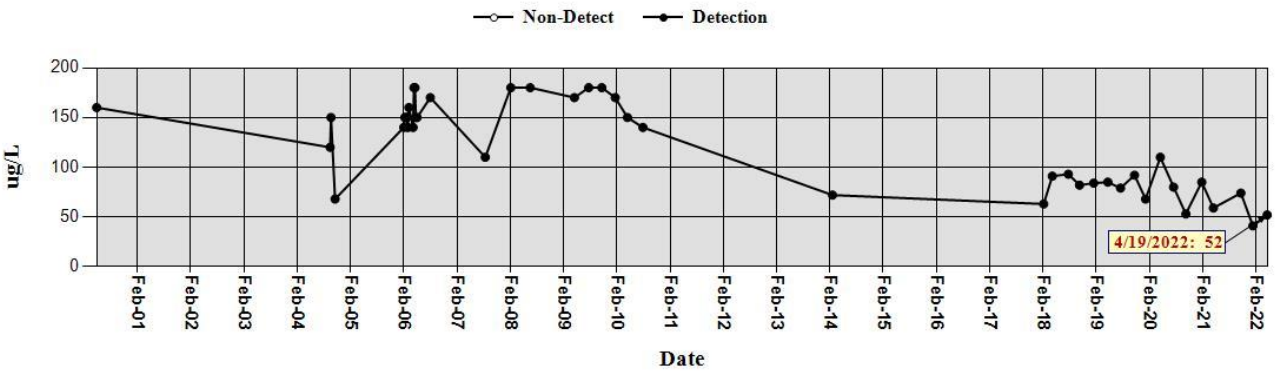
Analysis: 8260



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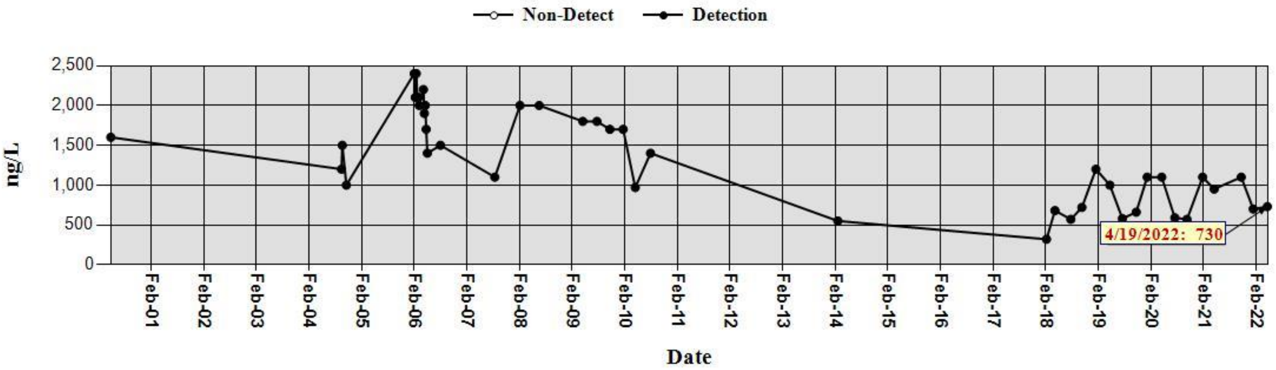
Analysis: 607

Results are Corrected for Extraction Efficiency



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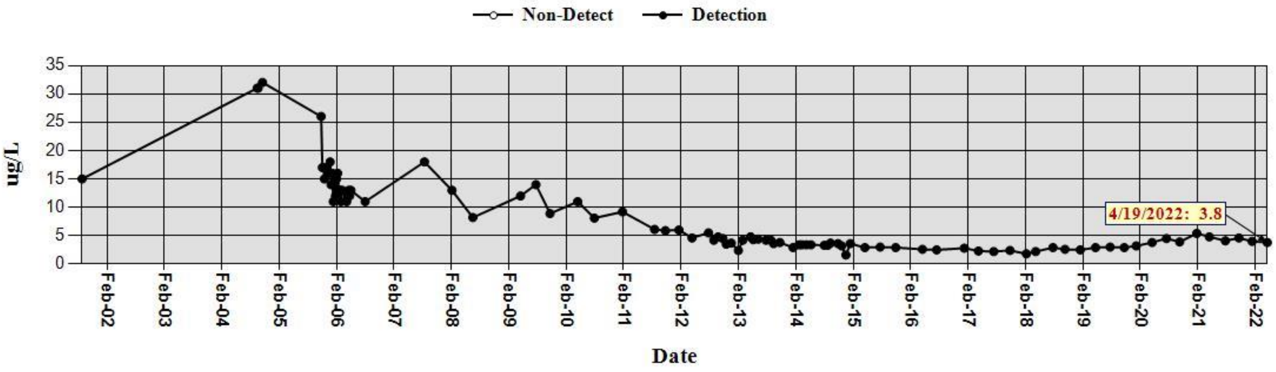
Analysis: 8260



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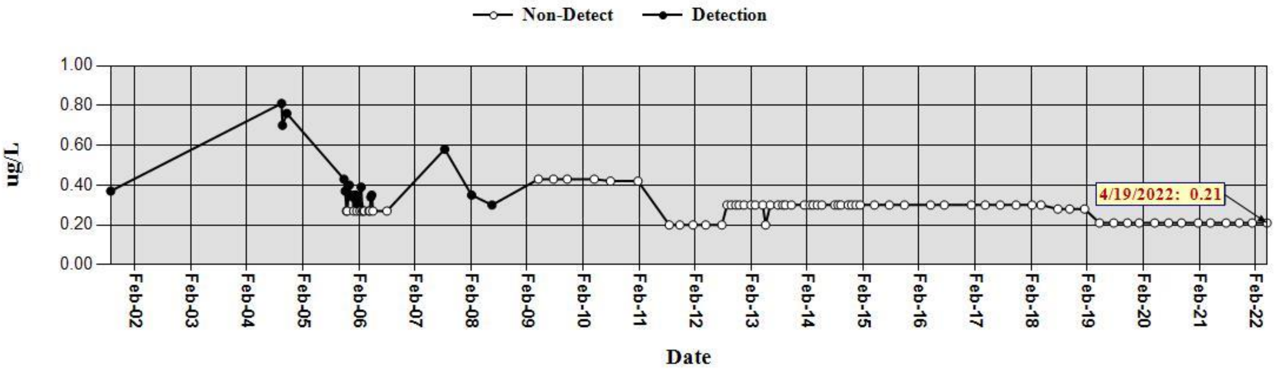
Analysis: 8260



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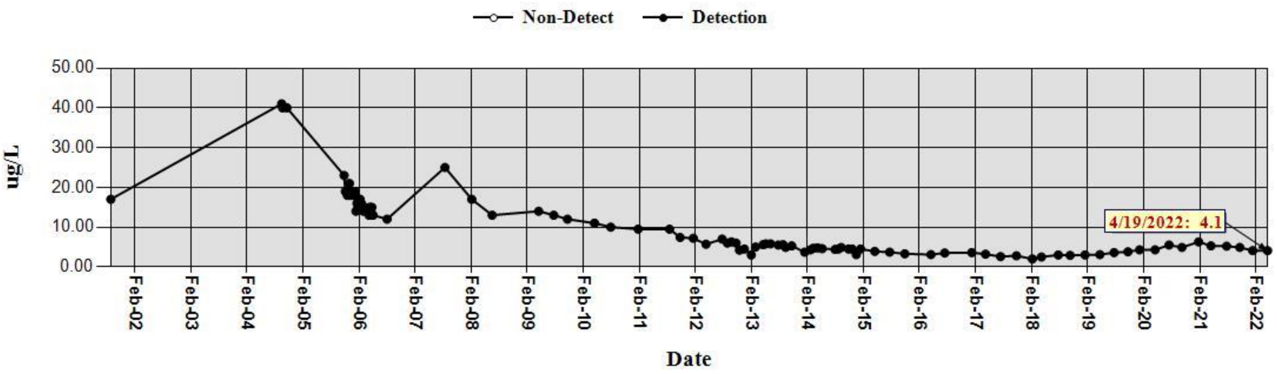
Analysis: 8260



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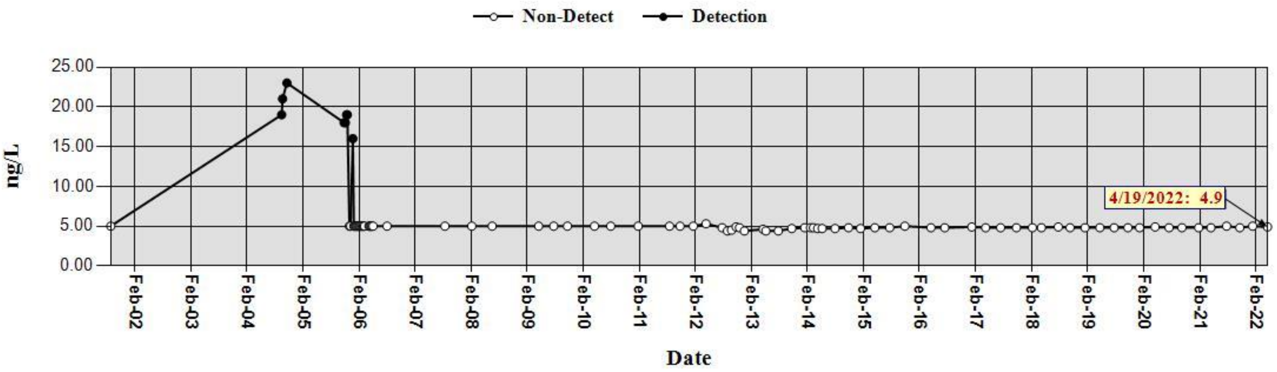
Analysis: 607

Results are Corrected for Extraction Efficiency



Appendix E
Time-Concentration Plots

Appendix F
Summary of Source Area Investigations

Summary of Groundwater Monitoring Projects and Source Area Investigations

1.0 Groundwater Monitoring Well Abandonment, Installation, and Reconfiguration

1.1 Well Abandonment and Replacement

There was no fieldwork related to well abandonment or replacement in the second quarter of 2022.

1.1.1 Wells BLM-42 and PL-12

In 2019, NASA plugged and abandoned (P&A) wells BLM-37 and PL-5 in accordance with the *Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42* (NASA, 2018a) and the *NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12* (NASA, 2017a). NASA replaced these wells with BLM-42 and PL-12, respectively. NASA submitted the *Well Completion Report for BLM-42* on May 4, 2020 (NASA, 2020e). NMED reviewed the report and issued an approval with modifications on May 6, 2021 (NMED, 2021l). NASA submitted a response to the approval with modifications of the BLM-42 well completion report on May 18, 2021 (NASA, 2021i). NASA also submitted the *Well Completion Report for Well PL-12* on May 4, 2020 (NASA, 2020f). NMED reviewed the report and issued an approval on May 6, 2021 (NMED, 2021j).

A comprehensive summary of activities and correspondence related to wells BLM-42 and PL-12 was provided in the Periodic Monitoring Report – Third Quarter 2021 (NASA, 2021z).

1.1.2 Well BLM-30

See Section 1.4.2.

1.1.3 Well BLM-28

NASA plans to abandon well BLM-28 and install replacement well 600C-001-GW. See also Section 1.4.1.

1.1.4 Well NASA 9

In June of 2020, NASA attempted to remove the dedicated low-flow bladder pump from well NASA 9 to extend the tubing and lower the pump intake due to declining water levels. During removal activities, the tubing bundle separated from the pump, and the pump then dropped into the 5-foot (ft) well sump. During attempts to recover the pump using special fishing tools, NASA discovered that the inside of the 2-inch stainless-steel casing was obstructed with small roots just above and below the static water level. Numerous attempts to lock onto the top of the pump with the fishing tool were unsuccessful and the bladder pump could not be retrieved. On November 15, 2021, NMED approved the 2021 Groundwater Monitoring Plan (GMP) with a modification that directed NASA to submit a work plan for abandoning and replacing well NASA 9 (NMED, 2021r). NASA prepared and submitted the *Work Plan for Abandonment of NASA WSTF NASA 9 and Replacement with Monitoring Well 400-001-GW* on April 29, 2022 (NASA, 2022h).

1.2 Well Abandonment

There was no fieldwork related to well abandonment in the second quarter of 2022. NASA continued project planning and procurement activities for the abandonment of several inactive monitoring wells.

1.2.1 200-SG Wells

On September 13, 2018, NMED approved NASA's April 24, 2018 GMP update for 2018 (NMED, 2018a; NASA, 2018b) with modifications, one of which required NASA to provide additional information on wells 200-SG-2 and 200-SG-3 and provide the rationale for not including them in the sampling schedule. NASA's December 3, 2018 response provided the required information and indicated that NASA would evaluate wells 200-SG-2 and 200-SG-3 for potential future sampling (NASA, 2018d). In April 2019, NASA evaluated the performance of the two wells, and determined that the groundwater levels in each are inadequate to allow for the collection of representative samples. NASA also determined that the relatively low concentrations of WSTF COC in these wells are not representative of groundwater within the Gardner Spring Arroyo in which monitoring well 200-D-109 is installed.

In their January 25, 2021 *Approval with Modifications of the NASA Groundwater Monitoring Plan 2020 Update*, NMED directed NASA to prepare and submit a work plan for abandonment of monitoring wells 200-SG-2 and 200-SG-3 and installation of replacement wells, to be submitted for review no later than November 30, 2021 (NMED, 2021b). NASA submitted the *Well Plugging Plan of Operations for Multiport Soil Vapor Groundwater Monitoring Wells 200-SG-2 and 200-SG-3* for NMED review on November 30, 2021 (NASA, 2021bb). NMED approved the work plan on January 10, 2022 (NMED, 2022a). NASA plans to plug and abandon these wells in the summer/fall of 2022 and does not intend to replace these wells.

1.3 Well Installation

There was no fieldwork related to well installation in the first quarter of 2022.

1.3.1 New Well 600C-001-GW

On April 25, 2022, NMED (NMED, 2022g) approved NASA's August 31, 2021 *Work Plan for Drilling and Installation of Monitoring Well 600C-001-GW* (NASA, 2021v, pp1-2). NASA performed project planning activities during the second quarter of 2022.

1.4 Westbay Well Reconfiguration

As of calendar Year 2020, NASA had reconfigured two Westbay wells (JP-3 and WW-2) to dual-zone dedicated low-flow bladder pumps and seven Westbay wells (BLM-32, JER-1, JER-2, ST-6, ST-7, WW-4, and WW-5) to multiport Water FLUTe sampling systems.

1.4.1 BLM-28

NASA submitted the *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon* on May 4, 2020 (NASA, 2020i). On November 19, 2020, NMED provided requirements for abandonment and replacement of the well (NMED, 2020k). The requirements were that after complete evaluation of all available data and information, NASA would then either submit a work plan for a replacement monitoring well or formally notify NMED that BLM-28 will not be replaced no later than January 31, 2022.

Following NMED's direction from the November 19, 2020 response for reconfiguring BLM-28, NASA submitted a work plan for abandonment of well BLM-28 on April 29, 2021 (NASA, 2021h). NASA then determined that a replacement well is necessary and developed and submitted the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600B-001-GW* on August 31, 2021 (NASA, 2021u, p1).

NMED approved the work plan with modifications on April 25, 2022 (NMED, 2022g). NASA performed project planning activities during the second quarter of 2022.

1.4.2 BLM-30

On November 5, 2020, NMED issued an approval with modifications (NMED, 2020i) of NASA's plan to P&A well BLM-30 and replace it with new well BLM-43. NMED directed NASA to perform geophysical logging and to provide a well completion report for BLM-43 no later than November 30, 2021. NASA submitted the *Response to Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43* on February 3, 2021 (NASA, 2021a) and corresponded with the New Mexico Office of the State Engineer (NASA, 2021d) on the plugging plan for well BLM-30 and application for a permit to drill well BLM-43 on March 15, 2021. On September 28, 2021, NASA submitted the *Request for Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Monitoring Well BLM-43* (NASA, 2021y). NMED approved the request on October 27, 2021, which extended the due date for submittal of the report to November 30, 2022 (NMED, 2021q). NASA submitted the *Request for Second Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Monitoring Well BLM-43* on April 26, 2022 (NASA, 2022e). NMED approved the request on June 6, 2022 (NMED, 2022i), extending the due date for submittal of the well completion report to April 28, 2023.

1.4.3 BW-4

NASA determined that the well BW-4 can be reconfigured for continued use and submitted a well reconfiguration work plan for well BW-4 on June 29, 2021 (NASA, 2021n, p5). NMED approved the work plan on January 28, 2022 (NMED, 2022b) with modifications and direction to submit a well reconfiguration report no later than March 30, 2023 and a revised work plan no later than March 11, 2022. NASA submitted the *Response to Approval with Modifications of NASA WSTF Well Reconfiguration Work Plan for Well BW-4* on March 8, 2022 (NASA, 2022c).

1.4.4 Data Representativeness and Westbay Well Reconfiguration Plan

The FLUTe Data Representativeness investigation took the form of isolation and serial sampling of four zones of well WW-4 with the FLUTe liner removed. NASA completed the groundwater data representativeness evaluation performed at groundwater monitoring well WW-4 and submitted the *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* to NMED on February 27, 2020 (NASA, 2020c, pp2-13). NMED reviewed the *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* (2/27/2020) and on June 3, 2021 issued an Approval with Modifications (NMED, 2021m). This approval required a change to the investigation report indicating a need for an expanded investigation, and a subsequent work plan for the investigation. NASA submitted a response to the approval with modifications on August 17, 2021 (NASA, 2021t, p14). NASA followed that with submittal of the *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 2: FLUTe Well Evaluation* on November 2, 2021 (NASA, 2021aa). NMED continued reviewing the work plan in the second quarter of 2022.

The Westbay Well Reconfiguration Plan required time extensions to allow NASA to evaluate data from FLUTe sampling systems currently in place at WSTF, in the form of data from Westbay wells converted to FLUTe, and from laboratory testing of the FLUTe sample components. Beginning in 2020, NMED approved an extension request to submit the well reconfiguration work plan no later than December 31, 2020 (NMED, 2020a). On November 30, 2020, NASA submitted a *Request for Fourth Extension of Time for Well Reconfiguration Work Plan* (NASA, 2020r). NMED approved the fourth extension request for submittal of the well reconfiguration work plan for wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3 on January 25, 2021 (NMED, 2021a). NASA submitted the *Westbay Well Reconfiguration Work Plan for Wells PL-7, PL-8, PL-10, ST-5, and WW-3* to NMED on April 29, 2021 (NASA, 2021g, pp2-4). NMED continued reviewing the work plan in the second quarter of 2022.

2.0 Source Area Investigations

2.1 200 Area

At the start of 2020, NMED approved a request for extension on January 16, 2020 for NASA to respond to 12 comments and submit a revised investigation report by February 3, 2020 (NMED, 2020b). NASA developed the required responses to the 12 comments in NMED's June 5, *2019 Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report* (NMED, 2019b) and submitted the *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report* on January 30, 2020 (NASA, 2020b). NMED continued reviewing the report in the second quarter of 2022.

2.2 300 Area

Work in the 300 Area is primarily related to investigation and closure of the adjacent 400 Area. Prior to 2020, NASA's May 30, 2019 *300 Area Supplemental Abbreviated Drilling Work Plan* (NASA, 2019f) was the first document submitted. NMED disapproved the work plan on March 19, 2021 (NMED, 2021f) and directed NASA to address four comments and submit a revised work plan no later than July 30, 2021. NASA submitted the *Response to Disapproval of 300 Area Supplemental Abbreviated Drilling Work Plan* on July 14, 2021 (NASA, 2021p). NMED continued reviewing the work plan in the second quarter of 2022.

2.3 400 Area

Prior to 2020, NASA's last submittal for the 400 Area was the December 30, 2019 400 *Area Closure Investigation Report* (NASA, 2019q; revised). NMED disapproved report on March 19, 2021 (NMED, 2021g) and directed NASA to address 17 comments and submit a revised report no later than July 30, 2021. NASA submitted the *NASA WSTF 400 Area Closure Investigation Report – NMED Third Disapproval Response* on July 27, 2021 (NASA, 2021s, Response Table). NASA also submitted the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on May 29, 2019 (NASA, 2019d) and the related *300 Area Supplemental Abbreviated Drilling Work Plan* (NASA, 2019f) for two additional multiport soil vapor and groundwater monitoring wells in the 300 Area. NMED disapproved the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on March 15, 2021 (NMED, 2021e), and NMED directed NASA to address three comments and submit a revised monitoring plan no later than July 30, 2021. NASA submitted the *Response to Disapproval of 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on July 14, 2021 (NASA, 2021q, Response Table). NMED continued reviewing the plans in the second quarter of 2022.

2.4 600 Area Perched Groundwater Investigations

2.4.1 600 Area Perched Groundwater Extraction

NASA initiated extraction of perched groundwater from monitoring well 600-G-138 on April 19, 2013 in accordance with the NMED-approved *600 Area Perched Groundwater Extraction Pilot Test Work Plan* (NASA, 2012). NASA has continued to extract groundwater in accordance with the plan and submit annual status reports. NASA submitted the Interim Status Report for *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 8* on April 29, 2021 (NASA, 2021f). NMED approved the report on December 8, 2021 (NMED, 2021s). NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 9* on April 26, 2022 (NASA, d).

2.4.2 600 Area Perched Groundwater Investigation.

At the start of 2020, a 600 Area Perched Groundwater investigation and report was scheduled in accordance with the *Abbreviated Investigation Work Plan for 600 Area Perched Groundwater* (NASA, 2016b). This work plan was subsequently changed per NASA's August 7, 2019 *Request to Remove Electrical Resistivity Component of the 600 Area Perched Groundwater Geophysical Survey based on Geophysical Subcontractor Input Received during the Procurement Process* (NASA, 2019j) and NMED's August 23, 2019 approval (NMED, 2019e).

In 2019, a seismic reflection and reflection survey was completed in accordance with the AIWP and work scope modification (NASA, 2019o). NASA provided the *Synopsis of the Findings of the 600 Area Closure Geophysical Seismic Refraction Tomography and Reflection Surveys with Revised Soil Boring Locations Submitted for NMED Approval* on December 19, 2019 (NASA, 2019p). Because of an indeterminate review period for that status report and the start of drilling dependent on approval of the boring locations recommended therein, NASA had submitted a *Request for Extension of Time for Submittal of the 600 Area Perched Groundwater Investigation Report* on March 24, 2020 (NASA, 2020d). NMED approved the extension on July 1, 2020 to 150 days after NMED provides comments (NMED, 2020e).

On December 22, 2020, NMED issued its *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020l) and established a due date for the 600 Area Perched Groundwater Investigation Report of December 31, 2021. On May 18, 2021, NASA provided the *Response to NMED Approval with Modifications for the 600 Area Closure Geophysical Survey Status Report – Comment 2 (Further Investigation)* (NASA, 2021j) in which NASA proposed a different approach for collection of geophysical data up- and down-gradient of the 600 Area Closure. The accuracy of the 600 Area geophysical survey would be assessed by comparing the actual bedrock depths from six NMED-approved perched groundwater investigation borings to the predicted depths from the geophysical survey before expanding the geophysical survey. NMED concurred with the approach on July 6, 2021 (NMED, 2021n). During the remainder of 2021, NASA performed planning and procurement activities in preparation for investigation fieldwork, which was initiated in January 2022 as described in Section 6.4.4 of the report.

NASA suspended extraction of perched groundwater from monitoring well 600-G-138 for much of January 2022 to reduce the impact on the perched groundwater aquifer and maximize the potential of locating perched groundwater during the perched groundwater investigation. NASA completed soil boring installation field activities for the perched groundwater investigation in accordance with NMED's *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020m). The off-site subcontract drilling company installed all six soil borings between January 4 and January 27, 2022 in the vicinity of the 600 Area Closure to depths of approximately 145 to 180 feet bgs. The soil borings were located in potential bedrock lows identified using the geophysical seismic survey performed previously as part of the investigation. The soil borings transcended the alluvial overburden into the top of the andesite bedrock in search of perched groundwater on the alluvial-bedrock interface. NASA identified perched groundwater at one location adjacent to the north corner of the Closure and installed groundwater well 600A-001-GW. NASA also installed a conventional monitoring well 600A-002-GW downgradient to the west of the Closure in andesite bedrock. This boring encountered the deeper fractured bedrock aquifer at the projected total depth of the soil boring and was subsequently drilled deeper than the planned depth to facilitate installation of the groundwater monitoring well. The remaining four soil borings did not encounter perched groundwater and were plugged and abandoned in accordance with the NMED-approved work plan. NASA performed colloidal borescope evaluations at the two new wells 600A-001-

GW and 600A-002-GW, existing perched groundwater monitoring well 600-G-138, and 12 other conventional wells in the fractured bedrock aquifer with significant locations relative to the evaluation of regional flow. Fieldwork continued in the second quarter of 2022 includes well development, surveying, and sampling.

2.5 SWMUs 2, 8, and 34 and Area of Concern (AOC) 51 (Wastewater Lagoons)

2.5.1 Interim Status Reports and Investigation Reports

2.5.1.1 100 Area Lagoons

On May 29, 2019, NASA submitted the *NASA WSTF (White Sands Test Facility) 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report* (NASA, 2019e). NMED responded to that report on May 14, 2020 (NMED, 2020d) and informed NASA that comments would be incorporated into the SWMU 2 Investigation Report. NASA submitted the *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report on* August 3, 2020 (NASA, 2020j). NMED continued review of the report in the second quarter of 2022.

2.5.1.2 200 Area Lagoons

NASA submitted the *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* to NMED on November 25, 2019 (NASA, 2019n). NMED disapproved the report on June 6, 2022.

2.5.1.3 600 Area Lagoons

NASA submitted the *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* to NMED on November 26, 2019 (NASA, 20190). NMED disapproved the report on June 16, 2022.

2.5.1.4 STGT Lagoons

In February 2020, NASA and a subcontracted drilling company completed installation of the five remaining soil borings at the STGT Wastewater Lagoons. NASA collected and managed samples of subsurface soil and shipped them to the off-site laboratories for analysis. This activity completed soil sampling described in the NMED-approved work plan. NASA conducted soil vapor sampling at the STGT Wastewater Lagoons in March 2020. This completed all investigation fieldwork described in the NMED-approved work plan. *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* on October 13, 2020 (NASA, 2020o, p42). NMED continued review of the report in the second quarter of 2022.

2.6 SWMU 10 (200 Area Hazardous Waste Transmission Lines)

NASA provided the *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* to NMED on July 30, 2019 (NASA, 2019i). On November 16, 2020, NMED disapproved the revised report (NMED, 2020j) and directed NASA to address 16 comments and perform resampling along the HWTL by August 30, 2021. On May 19, 2021, NASA requested that the due date for submittal of a revised report be extended from August 30, 2021 to November 30, 2021 (NASA, 2021l). NMED approved this extension on July 6, 2021 (NMED, 2021o). NASA completed the collection of replacement soil samples for the analysis of volatile organic compounds along the HWTL on August 31, 2021. NASA installed 12 soil vapor implants at the sampling locations nearest the 200 Area occupied buildings and collected soil vapor samples using 1-liter SUMMA canisters on September 23, 2021. Due to ongoing drilling and laboratory contractor backlog due to COVID, on September 14, 2021, NASA then requested a second extension to submit the revised IR by January 31, 2022 (NASA, 2021w). NMED approved the request on January 25, 2022 (NMED, 2022c), extending the due date for submittal of the report to February 28, 2022. NASA submitted the *Response* to *Second Disapproval of NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report and Risk Assessment Report* on March 4, 2022 (NASA, 2022a) and the *Response to Second Disapproval of NASA WSTF 200 Area HWTL (SWMU 10) IR Risk Assessment Report* on March 4, 2022 (NASA, 2022b).

2.7 SWMU 16 (600 Area Bureau of Land Management [BLM] Off-Site Soil Pile)

Preliminary investigation fieldwork was performed at the 600 Area BLM Off-Site Soil Pile in November and December 2015. NASA submitted the *NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on February 25, 2016 (NASA, 2016a). NMED disapproved three revisions of the report prior to 2020. NMED provided the *Approval with Modifications 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report* on May 6, 2021 (NMED, 2021k). The Approval with Modifications required submittal of an Accelerated Corrective Measures work plan no later than September 30, 2021. NASA submitted the *Response to Approval with Modifications of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on July 20, 2021 (NASA, 2021r) and then submitted the *Accelerated Corrective Measures Work Plan for the NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile)* on September 28, 2021 (NASA, 2021x, p9). NMED continued reviewing the work plan in the second quarter of 2022.

2.8 SWMUs 18–20 (700 Area High Energy Blast Facility, 800 Area Below Grade Storage Tank, and 800 Area Oxidizer Burner)

NMED reviewed the *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* (NASA, 2019g) and issued the *Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report* on August 27, 2020 (NMED, 2020h).

2.9 SWMUs 21–27 (Septic Tanks)

NMED disapproved NASA's July 23, 2019, *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* (NASA, 2019h, the revised IR) on January 29, 2021 and directed NASA to address six comments no later than May 30, 2021 (NMED 2021c). NASA addressed the six comments and submitted the *Response to Second Disapproval of NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21–27) Investigation Report* on May 18, 2021 (NASA, 2021k, Response Table). NMED continued reviewing the revised report in the second quarter of 2022.

2.10 SWMUs 29-31 (Small Arms Firing Ranges)

Leading up to 2020, NASA completed additional fieldwork required to respond to NMED's February 21, 2019, *Second Disapproval of Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report.* NMED (NMED, 2019a) approved NASA's October 28, 2019 request to extend the due date for submittal of the disapproval response and revised remedy completion report from December 31, 2019 to February 28, 2020 (NASA, 2019l). NASA determined that additional time was required to complete the planned human and ecological health risk assessment for the three SWMUs and submitted the *Second Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Response to Second Disapproval Remedy Completion Report* on January 29, 2020 (NASA, 2020a). NMED approved the request on March 21, 2020 (NMED, 2020c), extending the due date for submittal of the report from February 28, 2020 to April 24, 2020. NASA prepared the response to NMED's February 21, 2019 *Second*

Disapproval of Small Arms Firing Ranges (SWMUs 29–31) Remedy Completion Report (March 30, 2018) and submitted the *Response to Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report and Risk Assessment Report* on August 3, 2020 (NASA, 2020k). NMED continued reviewing the reports in the second quarter of 2022.

2.11 SWMU 33 (300 Area Test Stand 302 Cooling Water Pond)

Anticipating closure of Test Stand 302 apart from a full closure, NASA submitted the *300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)* (NASA, 2020k) on August 17, 2020. NMED disapproved the work plan on May 9, 2022 (NMED, 2022h).

2.12 SWMU 47 (500 Area Fuel Storage Area)

NASA submitted the 500 Area Fuel Storage (SWMU 47) Investigation Work Plan on September 26, 2018 (NASA, 2018c). NMED disapproved the work plan on August 8, 2019 (NMED, 2019d) and directed NASA to address 14 comments and submit a revised work plan by November 25, 2019. NASA submitted the *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* on November 21, 2019 (NASA, 2019m). NMED disapproved the revised work plan on March 19, 2021 and directed NASA to address five comments and submit a revised IWP no later than July 31, 2021 (NMED, 2021h). NASA addressed NMED's comments and submitted the *Response to Second Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan* on June 29, 2021 (NASA, 2021o, Response Table). NMED continued reviewing the revised work plan in the second quarter of 2022.

2.13 SWMU 49 (700 Area Landfill)

NASA submitted the *NASA White Sands Test Facility (WSTF) SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (IWP) and Historical Information Summary (HIS)* on December 28, 2017 (NASA, 2017b). NMED disapproved the work plan (NMED, 2018b) and directed NASA to address eight comments and submit a revised work plan by May 31, 2019. NASA submitted the *Response to NMED Disapproval SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary* on March 28, 2019 (NASA, 2019b). NMED approved the work plan with modification on June 6, 2019 (NMED, 2019c). The planned investigation includes Phase 1A and Phase 1B soil vapor sampling and surface geophysics. In November 2019 and December 2019, NASA deployed 159 passive soil vapor samplers and completed the Phase 1A soil vapor survey. NASA and the subcontracted geophysics firm performed the EMI and magnetic gradient field surveys between February 24 and 28, 2020.

Because of project delays created by the COVID-19 pandemic, NASA submitted a *Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on May 4, 2020 (NASA, 2020g). NMED approved the request on July 1, 2020 (NMED, 2020f), extending the date for submittal of the Phase 1 investigation report to March 31, 2021. Meanwhile, NASA completed procurement of the ground penetrating radar and passive seismic surveys as described in the NMED-approved landfill investigation work plan. Due to the ongoing pandemic, NASA submitted a *Second Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on February 3, 2021 (NASA, 2021b). NMED approved the request on March 15, 2021 (NMED, 2021d), extending the due date for submittal of the Phase 1 investigation report to April 29, 2022. NASA submitted the *700 Area Landfill Closure (SWMU 49) Phase I Investigation Report* on April 29, 2022 (NASA, 2022g).

2.14 SWMU 50 (First TDRSS Diesel Release)

NASA submitted the *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report* on March 14, 2019 (NASA, 2019a). NMED disapproved the report on July 8, 2020 (NMED, 2020g) and directed NASA to address 17 NMED comments and submit a revised report no later than October 30, 2020. NASA submitted the *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report* on November 9, 2020 (NASA, 2020p). NMED continued reviewing the report in the second quarter of 2022.

2.15 SWMU 52 (Second TDRSS UST)

On August 11, 2020, NASA discovered a diesel fuel leak in the area of the SWMU 52 Underground Storage Tank (UST), which is located north of WSTF at the White Sands Complex. NASA initiated a preliminary investigation and confirmed that the leak originated from a puncture in the return fuel line between emergency generator and the UST. NASA informed the NMED HWB of the release via email on August 13, 2020 and in writing in the August 17, 2020 *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification* (NASA, 2020m). NASA submitted the *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* to NMED HWB on February 18, 2021 (NASA, 2021c).

Parallel activities are performed with notifications and approvals provided to the NMED Petroleum Storage Tank Bureau (PSTB). During August and September 2020, White Sands Complex personnel coordinated corrective action for this release through the NMED PSTB. On September 21, 2020, NASA submitted the *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Update* (NASA, 2020n. p7). The update summarized corrective action performed to date, including the removal of 32 yd^3 of diesel-contaminated soil from the area of the leak. NASA then submitted the *Second TDRSS UST Minimum Site Assessment Work Plan* (NASA, 2020q) to the PSTB on November 18, 2020. The work plan described an investigation to determine the extent and magnitude of soil contamination caused by the diesel release. On February 4, 2021 (NMED PSTB, 2021), the NMED PSTB approved NASA's *Second TDRSS UST Minimum Site Assessment Work Plan* of November 18, 2020 (NASA, 2020r, pp3-6). NASA submitted the *Second TDRSS UST Minimum Site Assessment Report* to the NMED PSTB on June 25, 2021 (NASA, 2021m). The HWB was copied. The work conducted for the investigation and report had been under a PSTB-approved Minimum Site Investigation Work Plan (NMED PSTB, 2021).

In December 2020, NASA completed shipping the remaining petroleum contaminated soil previously removed from the release location soil to the Valencia Regional Landfill and Recycling Facility for bioremediation and disposal. In total, approximately 214 yd^3 of contaminated soil was removed from the release area. NASA drilled five boreholes for characterization of the release from March 22 through March 26, 2021 in accordance with the work plan.

The NMED HWB disapproved the Second TDRSS UST Minimum Site Assessment Report on March 1, 2022 and directed NASA to address four NMED comments and submit a revised report no later than May 6, 2022 (NMED, 2022d). NASA submitted the *Response to Disapproval of NASA WSTF Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* on April 26, 2022 (NASA, 2022f).

2.16 Newly Identified SWMU

NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. On October 16, 2019, NASA submitted the *Fifteen-Day Notification of a Newly Identified SWMU within the WSTF 500*

Area (NASA, 2019k). NMED acknowledged receipt of NASA's fifteen-day notification on November 13, 2019 (NMED, 2019f) and directed NASA to provide a Release Assessment Report no later than May 29, 2020. NASA researched historical information on the newly identified SWMU and submitted the *500 Area Newly Identified SMWU Release Assessment Report* on June 22, 2020 (NASA, 2020h, p4). NMED approved the report on December 20, 2021 and directed NASA to prepare and submit an investigation work plan for the unit no later than August 31, 2022 (NMED, 2021t).

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