National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
White Sands Test Facility
P.O. Box 20
Las Cruces, NM 88004-0020

March 15, 2022

Reply to Attn of: RE-22-032

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

Subject: Response to Approval with Modifications of NASA WSTF Periodic Monitoring Report – Second Quarter 2021

NASA White Sands Test Facility (WSTF) received NMED's February 21, 2022, *Approval with Modifications NASA WSTF Periodic Monitoring Report Second Quarter 2021*, in which NMED provided three comments related to NASA's July 28, 2021 *NASA WSTF Periodic Monitoring Report – Second Quarter 2021*. NMED directed NASA to respond to the Approval by April 15, 2022 with a response letter that cross-references where NMED's modifications were addressed, as well as respective replacement pages where changes were made.

Enclosure 1 provides a response table that addresses the modifications. Enclosure 2 provides printed replacement pages of the Periodic Monitoring Report for the Second Quarter 2021. Enclosure 3 provides an electronic copy of the response table, redline-strikeout version report, and the final report in PDF format on CD-ROM.

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.

TIMOTHY DAVIS

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Timothy J. Davis
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3 Enclosures

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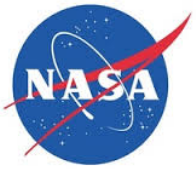
Comments for Approval with Modifications of the 2Q 2021 Periodic Monitoring Report (PMR)

NMED Comment Number	NMED Comments	NASA Revisions/Responses/Discussion
1. Section 6.0, Discussion and Conclusions, Page 11	**Permittee Statement:** "For per- and polyfluoroalkyl- substances [PFAS], all detections are noted as there are no regulatory cleanup levels or maximum contaminant levels with which to compare." **NMED Comment:** Groundwater sampling and evaluation of PFAS contaminants of concern was not completed during, nor required for, the 2021 second quarter event. Remove the statement from the PMR. Revise the PMR and provide a replacement page. In addition, note that NMED's November 2021 *Risk Assessment Guidance for Site Investigations and Remediation, Volume I,* (RA Guidance) contains screening levels for groundwater (i.e., RA Guidance, Table A-1, tap water screening levels).	NASA removed the sentence from the second paragraph of Section 6.0. NASA also notes that NMED's November 2021 *Risk Assessment Guidance for Site Investigations and Remediation, Volume I,* (RA Guidance) contains screening levels for groundwater (i.e., RA Guidance, Table A-1, tap water screening levels).
2. Section 6.2.2, Plume Front Treatment System [PFTS], Page 13	**Permittee Statement:** "The PFTS effluent met all DP-1255 discharge limits and Permit cleanup levels." **NMED Comment:** The PFTS effluent sample collected in April 2021 exceeded the cleanup level for N-nitrosodimethylamine (NDMA). Revise the PMR for accuracy and provide replacement pages.	NASA revised the statement to indicate that the NDMA concentration in the PFTS effluent exceeded the Permit cleanup level in April 2021.
3. Table 6.1, Status of Wells with Sampling Issues, Pages 57 and 58	**NMED Comment:** The following issues must be addressed as follows: a. The use of no-purge passive sampling techniques or technology is not appropriate for collection of groundwater samples at monitoring well 200-LV-150 or any groundwater monitoring wells at White Sands Test Facility. The reference to sampling with a HydraSleeve sampler at 200-LV-150 must be removed from the table. Revise the table accordingly and provide a replacement page. b. Information provided for monitoring wells 400-C-143, PL-3-453, 400-C-118, 300-C- 128, and BLM-1-435 indicates a decline in groundwater levels for the wells that	a. NASA removed the statement regarding the use of a no-purge sampling method for engineering purposes. b. NASA acknowledges the requirement to provide further discussion and provide resolutions for

NMED Comment Number	NMED Comments	NASA Revisions/Responses/Discussion
	has not allowed for groundwater sampling. The Permittee may continue to evaluate and report observed well conditions in PMRs; however, as information and data allow, the issues observed at the sampling locations must be further addressed in the 2022 update to the White Sands Test Facility (WSTF) Groundwater Monitoring Plan (2022 Plan). The 2022 Plan must include recommendations for replacement of these monitoring wells, which are critical to characterization of the nature and extent of contaminants of concern in groundwater at WSTF. No revisions to the PMR are required in response to this comment.	groundwater monitoring well issues in the 2022 update the Groundwater Monitoring Plan.

National Aeronautics and Space Administration



NASA WSTF Periodic Monitoring Report for Second Quarter 2021

NM8800019434

NASA WSTF Periodic Monitoring Report for Second Quarter 2021

Reporting Period: February 1, 2021 through April 30, 2021

Report Deadline: July 30, 2021

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.

TIMOTHY DAVIS Digitally signed by TIMOTHY DAVIS Date: 2022.03.15 07:41:52 -06'00'

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See Electronic Signature

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National Aeronautics and Space Administration

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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, 2021 and April 30, 2021. The data were processed through the WSTF data management system during the second calendar quarter of 2021.

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
HIS	Historical Information Summary
HWTL	Hazardous Waste Transmission Lines
IDW	Investigation-Derived Waste
in.	Inch(es)
IWP	Investigation Work Plan
JDMB	Jornada del Muerto Basin
JER	Jornada Experimental Range
kg	Kilogram
L	Liter
MDL	Method detection limit
mg/L	Milligrams per liter
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
NMED PSTB	New Mexico Environment Department Petroleum Storage Tank Bureau
PCE	Tetrachloroethene
Permit	NMED Hazardous Waste Permit
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 TDRSS Ground Terminal
SWMU	Solid Waste Management Unit

T-C	Time-concentration
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TDRSS	Tracking and Data Relay Satellite System
TP	Toxic Pollutants
UV	Ultraviolet
VOC	Volatile Organic Compound
WSTF	NASA Johnson Space Center White Sands Test Facility
yd^3	Cubic Yard

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 (JSC) 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 216 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, 2019b), the Groundwater Monitoring Plan (GMP; NASA, 2021b), and the Remediation System Monitoring Plan (RSMP; NASA, 2021l).

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 2021. Between February 1, 2021 and April 30, 2021, groundwater samples were collected at 115 groundwater monitoring wells or zones (115 sample events), seven PFTS sampling locations (11 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 88 of 89 days during the reporting period at an average flow rate of 554 gallons per minute (gpm) while running. Approximately 223 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 88 of 89 days during the reporting period, treating approximately 3.6 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 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, 2021b) identifies the specific samples that are to be collected at each groundwater monitoring well. The RSMP (NASA, 2021l) 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 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 the Groundwater monitoring wells (Appendix D.1), PFTS (Appendix D.2), and 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, 2021b).

3.0 Cleanup Levels

Cleanup levels for all hazardous constituents detected in WSTF groundwater are summarized in the GMP update (NASA, 2021b) for 2020, submitted to NMED on May 26, 2020. That document outlines the process for developing cleanup levels as specified in Attachment 15 of the Permit (NMED, 2019b).

3.1 Discharge Standards for PFTS and MPITS Effluent

The Ground Water Discharge Permit Renewal and Modification, DP-1255 (NMED, 2017) 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, 2019a). Table 3.1 includes the updated DP-1255 discharge standards for the four constituents. Please note that previous versions of the quarterly PMRs

included constituents that are not listed in the current version of DP-1255 (NMED, 2017). This PMR only lists the four constituents required by the current DP-1255 (NDMA, TCE, PCE, and chloroform).

3.2 New Detections

The GMP requires that NASA report new detections of hazardous constituents in groundwater (NASA, 2021b). 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). No detection monitoring was performed 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, 2021b). Table 3.4 lists the resampling date and the resolution of some of the unconfirmed detections reported in previous Periodic Monitoring Reports (PMR). 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 2021. 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. Depth to water 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 depth to water 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 26 to May 3, 2021 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.

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

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 2021 and detections are included in Appendix A.2.

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, 2019b). 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 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. As requested by NMED (NMED, 2013a), 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 2021, 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.

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 COC.

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®[2] 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 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 with the exception of one NDMA detection in the effluent sample from April. Effluent sample results will be closely monitored to ensure the UV Reactor continues to function properly.

5.1.3 Extraction and Injection Well Performance

Extraction and injection well performance for the reporting period is summarized below using applicable volumetric flow rates, extraction well drawdown, and water levels and injection well specific capacities to ensure that the wells are properly functioning. 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. Well PFE-2 was brought offline on March 21, 2019 due to a motor failure. PFE-2 was returned to service in April 2021. Well PFI-1 started producing excessive gravel during backflushing in March 2019. The well was taken offline in December 2019. Subcontractor driller services required for diagnosis and repair of PFI-1 are scheduled. Well PFE-1 has been inoperable since March 2020 due to a motor failure. Subcontractor driller services for submersible motor replacement at PFE-1 are scheduled.

5.1.3.1 Extraction and Injection Well Flow Rates and Specific Capacities

Specific capacities for extraction and injection wells were measured and monitored throughout this period. While in operation during the reporting period, specific capacities for wells PFI-3 and PFI-4 were operating within the design flow rate. Well PFI-2 was operating slightly below the design flow rate. Well PFI-1was shut down in December 2019 in order to investigate a suspected casing breach. Specific capacities for the PFE wells were within or slightly below expected ranges; however, flow rates while

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

operating were near and sometimes greater than design flow rates. Well PFE-1 was offline during the period due to motor failure. A replacement motor was procured and is pending installation. Without PFE-1, and PFI-1 online the overall production of the treatment and injection system has been 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 four PFI wells are monitored on a continual basis using dedicated pressure transducers that record the levels at 3-minute intervals. Specific well capacities are tracked daily. 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 more stable injection operation. This has lowered the initial design rates at the four 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 two 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 2021. 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, 2020 and April 30, 2021. During this 12-month period, the PFTS removed approximately 17 kilograms (kg) of TCE, 16 kg of trichlorofluoromethane (Freon®[3] 11), 537 grams (g) of PCE, and 116 g of NDMA.

The contaminant mass removal was calculated as follows:

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

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

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

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.

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 with the exception of one Freon 11 detection in the effluent sample from March. 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 will be 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 percent 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. NDMA was detected in the effluent samples from April, though the concentrations were below the system design parameters. Effluent sample results will be closely monitored to ensure the UV Reactor continues to function properly.

5.2.4 MPITS Extraction Well and Infiltration Basin Performance

MPE-1, MPE-8, MPE-9, MPE-10, and MPE-11 operated at various flow rates during the reporting period. Operational records indicate that the MPITS performed favorably during the report period and was online for 95% of February, 98% of March, and 99.9% of April 2021. Notable events during the report period included outages of 33.8 hrs. beginning on February 2, 2021 and 14.2 hrs. starting on March 26, 2021.

Both outages were the result of anomalous communication losses within the industrial control system used to monitor and automate groundwater extraction and treatment operations. Brief shutdowns occurred on March 11 and April 20, 2021 to replace a failed ultraviolet lamp and to adjust the air stripper damper, respectively. 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 report period. Extraction well MPE-11 went out of operation on April 27, 2021 due to a loose power line on the transformer providing electrical serve to the well. The loose connection was repaired on April 28, 2021 and MPE-11 was placed back into operation.

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. Routine work to remove weeds within the basin was completed during the report 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, 2020 and April 30, 2021. Approximately 3.02 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 generated during other groundwater investigations. The contaminant mass removal was calculated as follows:

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

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, 2020 to April 30, 2021. The table summarizes the cost of the labor and materials for operation and maintenance of the both systems, and includes the electrical costs associated with system operations.

6.0 Discussion and Conclusions

Routine groundwater monitoring is conducted at WSTF to support a variety of projects. The primary objectives of routine groundwater monitoring at WSTF are to delineate the extensive contaminant plume

resulting from historical contaminant releases at the facility, support the development and implementation of corrective actions, and monitor the impact of these corrective actions during implementation and operation. Groundwater sampling at WSTF is currently focused on the Plume Front and Mid-plume areas, both of which are critical to NASA's overall remediation efforts.

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

This section presents new occurrences of wells that could not be sampled during the reporting period (February 1, 2021 – April 30, 2021) because of mechanical or well performance issues only; it does not address wells not sampled due to resource limitations.

- In April, NASA was unable to collect groundwater samples from monitoring well 400-C-143 because the water level in the well was insufficient for sampling.

These new occurrences plus the current 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.

- NMED reviewed the *Well Completion Report for BLM-42* (5/4/2020) and issued an approval with modifications on May 6, 2021 (NMED, 2021j). NASA submitted a response to the approval with modifications of the BLM-42 well completion report on May 18, 2021 (NASA, 2021g).
- NMED reviewed the *Well Completion Report for Well PL-12* (5/4/2020) and issued an approval on May 6, 2021 (NMED, 2021h).

6.1.3 Westbay Well Reconfiguration

There was no physical Westbay well reconfiguration activity this quarter. The current status of reconfiguration is given below.

- NASA has reconfigured two Westbay wells (JP-3 and WW-2) to dual-zone dedicated low-flow bladder pumps.
- NASA has replaced two Westbay wells (BLM-37 and PL-5) with wells BLM-42 and PL-12, respectively. Each has dual-zone dedicated low-flow bladder pumps.
- Seven Westbay wells (BLM-32, JER-1, JER-2, ST-6, ST-7, WW-4, and WW-5) have been converted to multiport Water FLUTe sampling systems.
- NASA will plug and abandon well BLM-28. 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, 2021f). NMED issued a fee assessment for review of the BLM-28 well abandonment work plan on June 15, 2021 (NMED, 2021m). NASA will subsequently 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.
- NASA will plug, abandon, and replace well BLM-30. NMOSE approvals are in place for both plugging and drilling of replacement well BLM-43. The well completion report for BLM-43 is due November 30, 2021.
- Well BW-4 was not among the Westbay wells that NMED directed to be reconfigured in NMED's March 29, 2016 letter, *Approval NASA WSTF Periodic Monitoring Report Fourth Quarter 2015*. The Westbay sampling system was drilled out in February 2018. Upon further evaluation of the BW-4 borehole, NASA determined that the well can be reconfigured for continued use and submitted a well reconfiguration work plan for well BW-4 on June 29, 2021 (NASA, 2021m).
- NMED has also required reconfiguration of Westbay wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3. 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, 2021e). NMED issued a fee assessment for review of the work plan on June 15, 2021 (NMED, 2021n).

Historical information and full submittal history for well reconfiguration projects are provided in Appendix F.

6.1.4 Groundwater Monitoring Data Representativeness

Activities in the second quarter 2021 included the following:

- NMED reviewed the *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* (2/27/2020) and on June 3, 2021issued an Approval with Modifications (NMED, 2021k). This approval required a change to the investigation report indicating a need for an expanded investigation, and a subsequent work plan for the investigation.

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, 2021b). 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, 2021l) and DP-1255 (NMED, 2017). 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, but exceeded the Permit cleanup level for NDMA in April 2021. No other Permit cleanup levels were exceeded.

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, 2021l) and DP-1255 (NMED, 2017). Chemical analytical data from these sampling events were presented in Section 5.2.5 and Appendix A.6. Appendix D.3 includes any MPITS influent data that exceeded cleanup levels during the current analytical reporting period. The MPITS effluent met all DP-1255 discharge limits and Permit cleanup levels.

6.3 Contaminant Plume Evaluation

The plume evaluation for the second quarter of 2021 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 Plume Front Area this quarter. These included NDMA detections at wells at BLM-32 (2.7 ng/L), JER-1 (1.8 ng/L), and JER-2 (4 ng/L). Four exceedances of NDMA cleanup levels were observed in sentinel wells this quarter. These comprised NDMA detections at PL-7 (4.9 ng/L), PL-10 (5.7 ng/L), PL-11 (2.4 ng/L), and WW-5 (6.5 ng/L). VOCs were not detected at or above the cleanup level at these wells. The following quality exceptions exist:

- PL-7 was qualified with an “RB” data quality exception
- WW-5 was qualified with a “*” data quality exception.

“RB” indicates NDMA was detected in the reference blank. “*” indicates a user defined qualifier and to see the quality assurance narrative.

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 schedule as presented in this report. A detailed evaluation of the concentration trends shown in T-C plots that may develop 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 the GMP (NASA, 2021b; Table 5). T-C plots are generated using analytical data from each monitoring and remediation well. The analytical data for each well is reviewed by technical personnel in order to evaluate the latest trends over time. The concentration trends for four of the primary COC (Freon 11, TCE, PCE and NDMA) in groundwater are reviewed 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, results are presented for both EPA Method 607 and low-level laboratory analysis. T-C trend evaluation places greater emphasis on the most recent analytical results reported over the last several years. As a result, the current T-C interpretation may 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 determination of a trend for an anomalous COC concentration within a specific well requires the evaluation of analytical data collected over several sampling events (typically three to four) in conjunction with other potentially influencing factors (including hydrogeology, aquifer recharge conditions, monitoring well development activities, and 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 quickly revert back to former conditions.

A summary figure depicting the most recent interpreted T-C trend for each individual well is included in Appendix E. 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.

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 wells are all classified as ND.

100/600 Area Well Group: Monitoring wells in this group are located within the 100 Area and adjacent easternmost part 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, the wells typically show decreasing groundwater concentration trend for Freon 11, TCE, and PCE. This trend is applicable to both wells within the primary aquifer, and well 600-G-138 (T-C plot provided) that is screened across a localized perched groundwater horizon on the top of bedrock at the alluvial-bedrock interface. 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 contamination for the WSTF TCE and Freon 11 groundwater plume, with maximum concentrations identified in the late 1980s through mid-1990s. Over the last 30 years, 200 Area T-C plots have typically displayed a decreasing trend in contaminant concentrations for VOCs. As an example, well 200-D-240 (T-C plot provided) has decreased from 110 µg/L TCE in 1990 to 16 µg/L TCE in 2020. The declines are interpreted to 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. Wells that display more irregular concentrations with no distinct trend are typically associated with screened intervals with reduced hydraulic conductivity and groundwater flow.

300/400 Area Well Group: The T-C plots for monitoring wells show groundwater VOC concentration trends that have been either fluctuating (most notably wells installed recently in January 2017 within poorly fractured andesite bedrock as part of the 400 Area Closure investigation) or have declined over the long term following initial well installation. Declining concentrations are inferred to correlate to wells characterized by higher hydraulic conductivity and/or groundwater flow. 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 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 300 and 400 Area declines 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. A disparity reported between relatively higher and lower concentrations within adjacent bedrock monitoring wells (particularly for NDMA) is interpreted to be a result of both the limited number and connectivity of andesite bedrock fractures, and the position of the screened intervals relative to the alluvial-bedrock interface. Higher hydraulic conductivity, groundwater flow, and contaminant declines are characteristic of screened intervals within the alluvium.

Northern Boundary Well Group: The monitoring wells in this group are generally characterized by low-level contaminant concentrations that do not display any sustained T-C trends or are ND. Fluctuating low-

level NDMA is reported this quarter from the latest samples collected in four wells BLM-32 (2.7 ng/L), BLM-41-670 (1.5 ng/L) JER-1 (1.8 ng/L), and JER-2 (4.0 ng/L). All four 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: The monitoring wells in this group are predominantly 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 report a low fluctuating concentration of TCE (2.0 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, 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 plumes sources (Freon 11 and TCE originate from the 200 Area [predominant in upgradient well BLM-14-327], and NDMA originates from the 300 and 400 Areas [predominant in well upgradient BLM-15-305]). Contaminant concentrations in BLM-21-400 since installation in 1991 show a decreasing trend for Freon 11 (320 to 25 µg/L), TCE (220 to 9.2 µg/L), and NDMA (5.6 to 1.09 µg/L). This well is being monitored with respect to potential pumping-related migration related to 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 a "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 from the MPCA by continued operation of the extraction wells. Well BLM-5-527 is currently the only monitoring well on-site interpreted as "natural migration – increasing T-C" trend. Increases in this well are inferred to reflect the migration of contaminants into low conductivity bedrock of the extreme northwest section of the northwest arm not yet been impacted by the inception of MPITS pumping. Pumping activity within well BLM-5-527 between 4/6/20 and 5/5/20 as part of the targeted monitoring remediation pumping project at WSTF (13,350 gallons extracted) may also have impacted contaminant concentrations, and this well is being monitored carefully.

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. VOC 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 since early 2012. The latest groundwater sampling indicated that Freon 11 (detection limit 0.24 µg/L) and TCE (detection limit 0.20 µg/L) are both ND, and that low-level NDMA was also ND at a concentration of 0.38 ng/L. Well ST-7 is located west of PFTS extraction well, PFE-2, and south of extraction well PFE-7. NASA believes low level TCE (0.82 µg/L) has migrated northward to ST-7, due to continued pumping of well PFE-7. The fluctuating concentration 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, a fluctuating low-level NDMA detection was identified in one sentinel well (PL-7 [4.9 ng/L]).

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 have been identified in three of the sentinel wells (PL-10 [5.7 ng/L], PL-11 [2.4 ng/L], and WW-5 [6.5 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 and MPE-10 have displayed a generally increasing trend since 2013, under the influence of pumping-related plume migration. Wells MPE-1 (decreasing), MPE-9 (fluctuating), and MPE-11 (fluctuating) are also under the influence of 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 generally 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 no overall trend and a relatively elevated concentration of NDMA.

6.4 Summary of Source Area Investigations

This section summarizes the status of source area investigation planning, fieldwork, or reporting during the second calendar quarter of 2021, April 1, 2021 – June 30, 2021. Historical information, investigation status, and full submittal history for each potential source area are provided in Appendix F.

6.4.1 200 Area

NASA continues work associated with the investigation of two HWMUs and six SWMUs in the 200 Area. NASA recently 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 2021, activities related to this SWMU included:

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

6.4.2 300 Area

NASA performed routine groundwater sampling at the 300 Area and recommended a corrective measures study in conjunction with the 400 Area. There was activity at the 300 Area based on NMED's prior disapproval of the 300 Area *Supplemental Abbreviated Drilling Work Plan* (5/30/19) and resulting direction. See next Section and Appendix F, Section 2.2.

6.4.3 400 Area

During the second quarter of 2021, NASA continued response and revision to three documents based on NMED disapprovals received in the first quarter of 2021:

- The *300 Area Supplemental Abbreviated Drilling Work Plan* (5/30/19).
- The *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (5/28/19).
- The *400 Area Closure Investigation Report* (12/30/19; revised).

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 investigating the presence of additional perched groundwater beneath and adjacent to the 600 Area Closure. During the second quarter of 2021, activities related to this SWMU included:

- NASA continued extraction of perched groundwater from monitoring well 600-G-138 in accordance with NMED's March 1, 2013, *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Approximately 638 gallons of perched groundwater were removed from 600-G-138 from April 2021 through June 2021 and transported to the MPITS for treatment.
- NMED approved the Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 7 (5/26/20) on May 6, 2021 (NMED, 2021g).
- NASA submitted the Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 8 on April 29, 2021 (NASA, 2021d).
- NMED issued a fee assessment for review of the *600 Area Perched Groundwater Extraction Pilot Test Project Year 8* on June 15, 2021 (NMED, 2021l).

On May 18, NASA submitted a letter to NMED in partial response to NMED's December 22, 2020 Approval with Modifications of the *Synopsis of the Findings of the 600 Area Closure Geophysical Seismic Refraction Tomography and Reflection Surveys with Revised Soil Boring Locations* (12/19/2019). This letter (NASA, 2021h) addressed NMED's Comment 2 (Further Investigation) and proposed a different approach for collection of geophysical data up- and down-gradient of the 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 boreholes to the predicted depths from the geophysical survey before expanding the geophysical survey.

- Upon return to on-site work, NASA will drill boreholes at the 600 Area closure per NMED's *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020e) and submit the Investigation Report.

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 System (TDRSS) Ground Terminal (STGT). Activities during the second quarter of 2021 included:

- NMED is reviewing the WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report (NASA, 2020f).
- NMED is reviewing the NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report (NASA, 2019c).
- NMED is reviewing the NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report (NASA, 2019d).
- NMED is reviewing the *NASA White Sands Test Facility WSTF STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* (NASA, 2020j).

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. Activities during the second quarter of 2021 included the following:

- NASA is revising the HWTL investigation report (7/30/2018) in response to NMED's November 16, 2020 disapproval. This includes planning to resample along the HWTL as required by the disapproval.
- The revised IR is due August 30, 2021. On May 19, 2021, NASA requested that the IR due date be extended to November 30, 2021 (NASA, 2021j).

6.4.7 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 continues to work with NMED to address NMED comments on multiple iterations of the investigation report.

- NMED issued an Approval with Modifications of the Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report (12/1819) on May 6, 2021 (NMED, 2021i).

6.4.8 SWMUs 18–20 (700 Area High Energy Blast Facility, 800 Area Below Grade Storage Tank, and 800 Area Oxidizer Burner)

NASA performed investigation fieldwork at the 800 Area Below Grade Storage Tank (SWMU 19) in December 2015 and October 2017 and provided the results to NMED in an investigation report, which NMED disapproved twice.

- NASA submitted a November 9, 2020 Response to Approval with Modifications of Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report (NASA, 2020l). This response followed NMED's Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report on August 27, 2020 (NMED, 2020b).

6.4.9 SWMUs 21–27 (Septic Tanks)

Activities during the second quarter of 2021 included the following:

- NASA addressed six comments from NMED's January 29, 2021 disapproval of NASA's *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* (7/23/19; the revised IR) and submitted a revised IR on May 18, 2021 (NASA, 2021i).

6.4.10 SWMUs 29–31 (Small Arms Firing Ranges)

NASA performed initial corrective measures fieldwork at the three closed small arms firing ranges, summarized the results for NMED, and recommended additional fieldwork based on NMED feedback. NASA 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, 2020g). During the fourth quarter of 2020, activities related to these SWMUs included:

- NASA awaits a fee assessment for NMED's review of the disapproval response.

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

The *300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)* (NASA, 2020i) were submitted to the NMED HWB on August 17, 2020. NASA received and paid the NMED HWB Fee Assessment (NMED, 2020c; NASA, 2020k). During the fourth quarter of 2020, activities related to this SWMU included the following:

- NMED is reviewing the 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) IWP and HIS.

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 2021, activities related to this SWMU included the following:

- NASA addressed five comments from NMED's March 19, 2021 disapproval of NASA's *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* (11/21/19; the revised IWP) and submitted a response to this second disapproval and revised IWP on June 29, 2021 (NASA, 2021n).

6.4.13 SWMU 49 (700 Area Landfill)

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 2021 include the following:

- Fieldwork that had been in suspense due to the pandemic resumed. NASA completed ground penetrating radar and passive seismic surveys as described in the NMED-approved landfill investigation work plan.

- The Phase I field investigation report is due April 29, 2022.

6.4.14 SWMU 50 (First TDRSS 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 2021 include the following:

- NASA submitted a November 9, 2020, *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report* (NASA, 2020m). This response followed NMED's disapproval of the First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report on July 8, 2020 (NMED, 2020a).

6.4.15 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 WSTF personnel informed the NMED HWB of the release on August 17, 2020 in the *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification* (NASA, 2020h). In the first quarter of 2021, NASA had submitted the Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report to NMED HWB on February 18, 2021 (NASA, 2021da). NMED HWB issued a fee assessment for review of the report on April 8, 2021 (NMED, 2021f), and NASA remitted the fee on April 21, 2021 (NASA, 2021MMc). SWMU 52 related activities performed during the second quarter of 2021 included the following:

- Indoor and ambient outdoor air samples were taken May 3 and 4 to support worker risk assessment.
- NASA submitted the STGT UST Minimum Site Assessment Report to NMED Petroleum Storage Tank Bureau (PTSB) on June 25, 2021 (NASA, 2021k). The HWB was copied. The work conducted for the investigation and report had been under a PTSB-approved Minimum Site Investigation Work Plan (NMED 2021c).

6.4.16 Newly Identified SWMU

While researching documentation related to the Fuel Treatment Unit (FTU), NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. Activities during the second quarter of 2021 include the following:

- NMED is reviewing the Release Assessment Report issued on June 22, 2020 (NASA, 2020e).

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 Groundwater Monitoring

NASA plans to continue routine groundwater monitoring in accordance with the submitted and as yet not approved GMP for 2021 (NASA, 2021b).

7.1.2 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, 2021 through April 30, 2021) 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.

- Sampling failure issues were unresolved for monitoring well 400-C-143.
- Well 400-C-143 had insufficient water for sampling. The water level in this well will be monitored and the well samples if the water level recovers enough to obtain a representative sample.
- There were no prior period sampling failure issues resolved this quarter.

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.

7.1.4 Monitoring Well Installation

Planned well installations include well BLM-43 to replace well BLM-30 after it is plugged and abandoned, and a well to replace BLM-28.

7.2 Groundwater Remediation System Monitoring

The RSMP (NASA, 2021l) and DP-1255 (NMED, 2017) 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, 2021b).

8.0 References

NASA Johnson Space Center White Sands Test Facility. (2018, December 21). *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019a, March 14). *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019b, August 8). *Response to NMED Approval with Modifications SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019c, November 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019d, November 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020a, January 30). *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020b, February 27). *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020c, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020d, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020e, June 22). *500 Area Newly Identified SWMU Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020f, August 3). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020g, August 3). *Response to Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report and Risk Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020h, August 17). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020i, August 17). *NASA White Sands Test Facility (WSTF) 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020j, October 13). *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020k, October 28). *Fee Assessment for 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) IWP and HIS (NMED Invoice Number HWB-NASA-20-013)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020l, November 9). *Response to Approval with Modifications of Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020m, November 9). *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021a, February 18). *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021b, April 19). *NASA White Sands Test Facility (WSTF) Groundwater Monitoring Plan (GMP) Update for 2021*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021c, April 21). *Fee Assessment for STGT (SWMU 52) Release Assessment Report (NMED Invoice Number HWB-NASA-21-002)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021d, April 29). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 8*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021e, April 29). *NASA WSTF Westbay Well Reconfiguration Work Plan for Wells PL-7, PL-8, PL-10, ST-5, and WW-3*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021f, April 29). *Well Abandonment Work Plan for Well BLM-28*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021g, May 18). *Response to Approval with Modifications for NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021h, May 18). *Response to NMED Approval with Modifications for the 600 Area Closure Geophysical Survey Status Report – Comment 2 (Further Investigation)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021i, May 18). *Response to Second Disapproval of NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21–27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021j, May 19). *Request for Extension of Time for Submittal of Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021k, June 25). *Second TDRS UST Minimum Site Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021l, June 29). *NASA WSTF Remediation System Monitoring Plan Annual Update for 2021*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021m, June 29). *NASA WSTF Well Reconfiguration Work Plan for Well BW-4*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021n, June 29). *Response to Second Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NMED Hazardous Waste Bureau. (2013a, January 9). *NASA WSTF PMRs*. Email. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013b, March 1). *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Santa Fe, NM.

NMED Ground Water Quality Bureau. (2017, July 14). *Discharge Permit Renewal and Modification, DP-1255, NASA White Sands Testing Facility*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019a, June 19 [Revision 2]). *Risk Assessment Guidance for Investigations and Remediation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019b, December 11). *Fee Assessment Administrative Completeness and Fee Assessment Transmittal of Class I Permit Modification Without Prior Approval*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020a, July 8). *Disapproval First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020b, August 27). *Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020c, September 22). *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020d, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020e, December 22). *Approval with Modifications 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021a, January 29). *Disapproval Revised WSTF Septic Tanks (SWMUs 21-27) Investigation Report*. Santa Fe, NM.

NMED Petroleum Storage Tank Bureau. (2021b, February 4). *Technical Approval of Minimum Site Assessment Workplan for White Sand Complex NASA, 12600 NASA Road, Las Cruces, New Mexico.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021c, March 15). *Disapproval 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021d, March 19). *Disapproval 300 Area Supplemental Abbreviated Drilling Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021e, March 19). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan: Phase I*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021f, April 8). *Fee Assessment Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021g, May 6). *Approval Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 7*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021h, May 6). *Approval PL-12 Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021i, May 6). *Approval with Modifications 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021j, May 6). *Approval with Modification BLM-42 Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021k, June 3). *Approval with Modifications Groundwater Data Representativeness Phase I: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021l, June 15). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year Eight*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021m, June 15). *Fee Assessment Well Abandonment Work Plan for Well BLM-28*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021n, June 15). *Fee Assessment Well Reconfiguration Work Plan for Westbay Wells PL-7, PL-8, PL-10, ST-5, and WW-3*. Santa Fe, NM.

Figures

Figure 1.1 **WSTF Location Map**

(SEE NEXT PAGE)

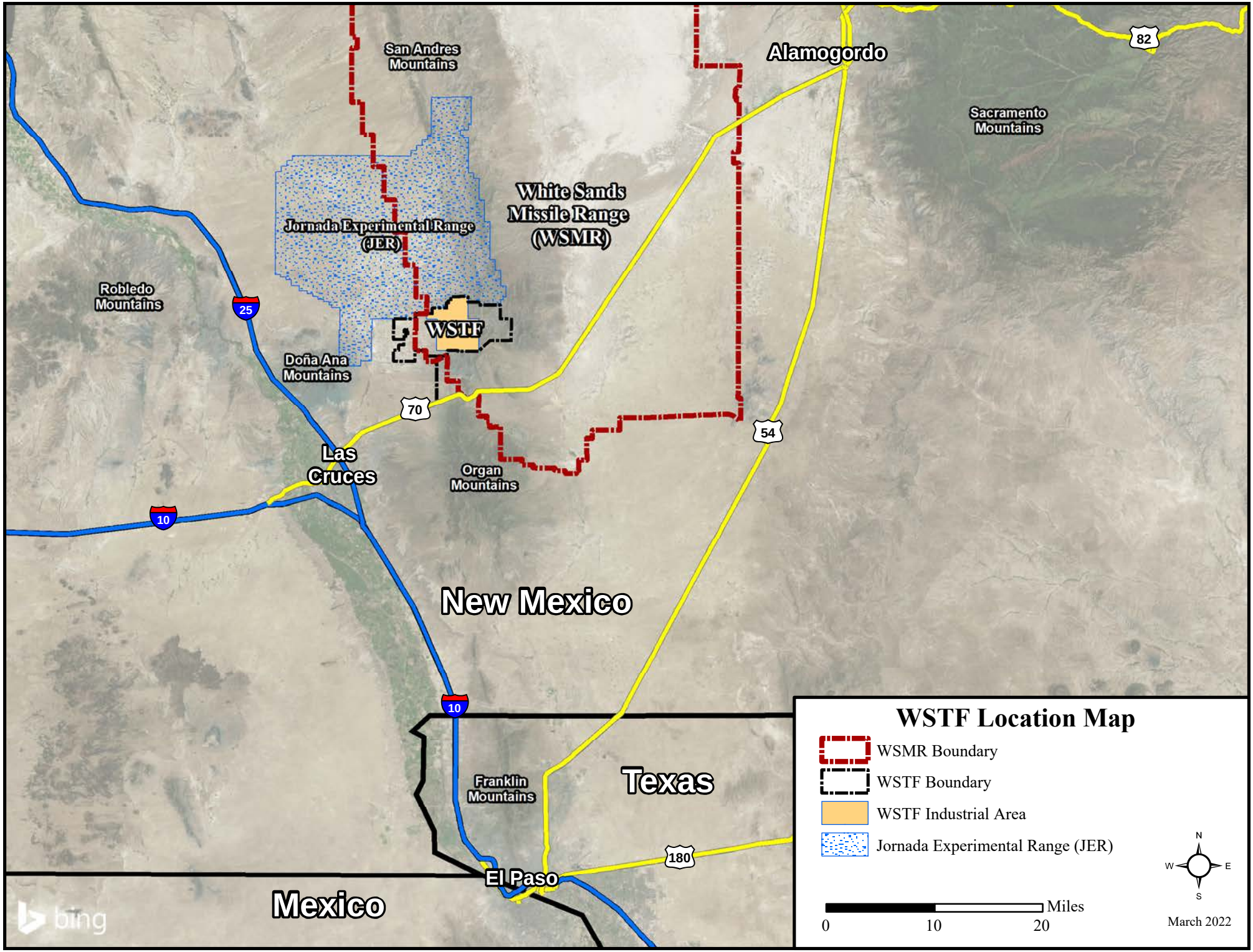
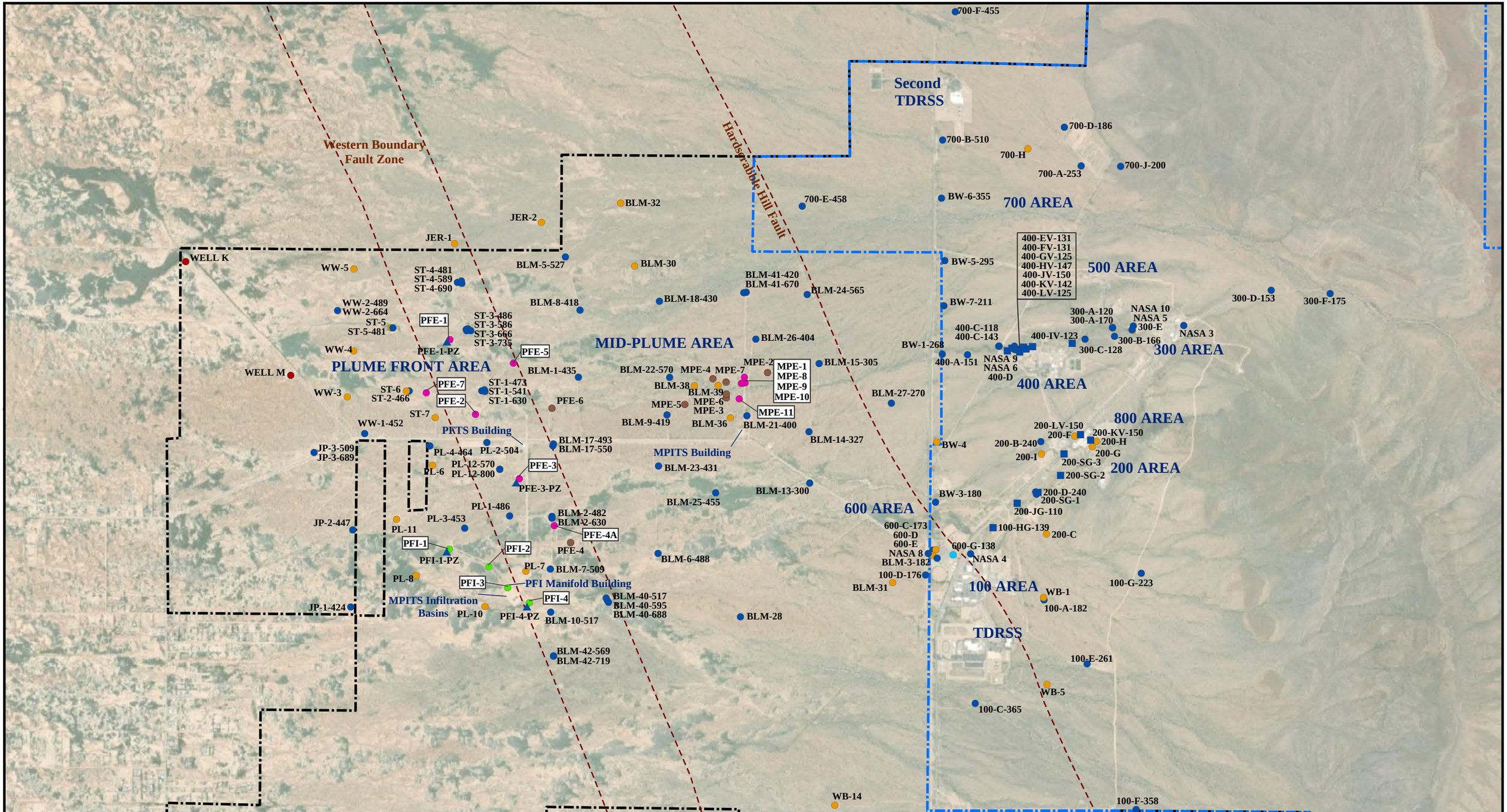

San Andres Mountains
Alamogordo
82
Sacramento Mountains
White Sands Missile Range (WSMR)
Jornada Experimental Range (JER)
Robledo Mountains
25
WSTF
Doña Ana Mountains
70
54
Las Cruces
Organ Mountains
10
New Mexico
10
Franklin Mountains
Texas
180
El Paso
Mexico
bing
WSTF Location Map
WSMR Boundary
WSTF Boundary
WSTF Industrial Area
Jornada Experimental Range (JER)
N
W
E
S
Miles
0
10
20
March 2022

Figure 1.2 **WSTF Well Location Map**

(SEE NEXT PAGE)



WSTF Well Location Map

- Multiport
- Conventional Well
- Perched Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Fault
- WSTF Boundary
- WSTF Industrial Area

0 2,500 5,000 7,500 Feet

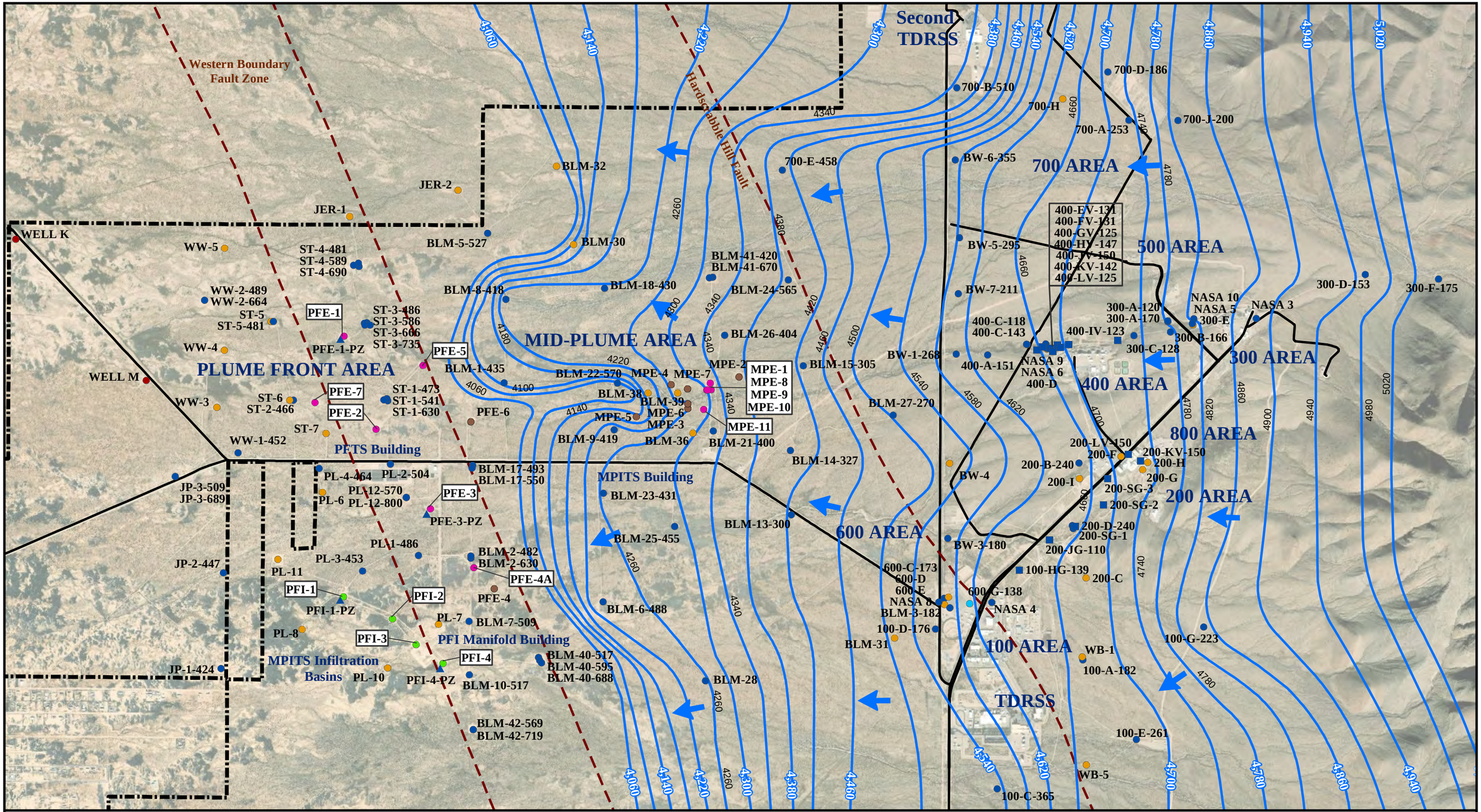
0 0.5 1 1.5 Miles

N W E S

March 2022

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

(SEE NEXT PAGE)

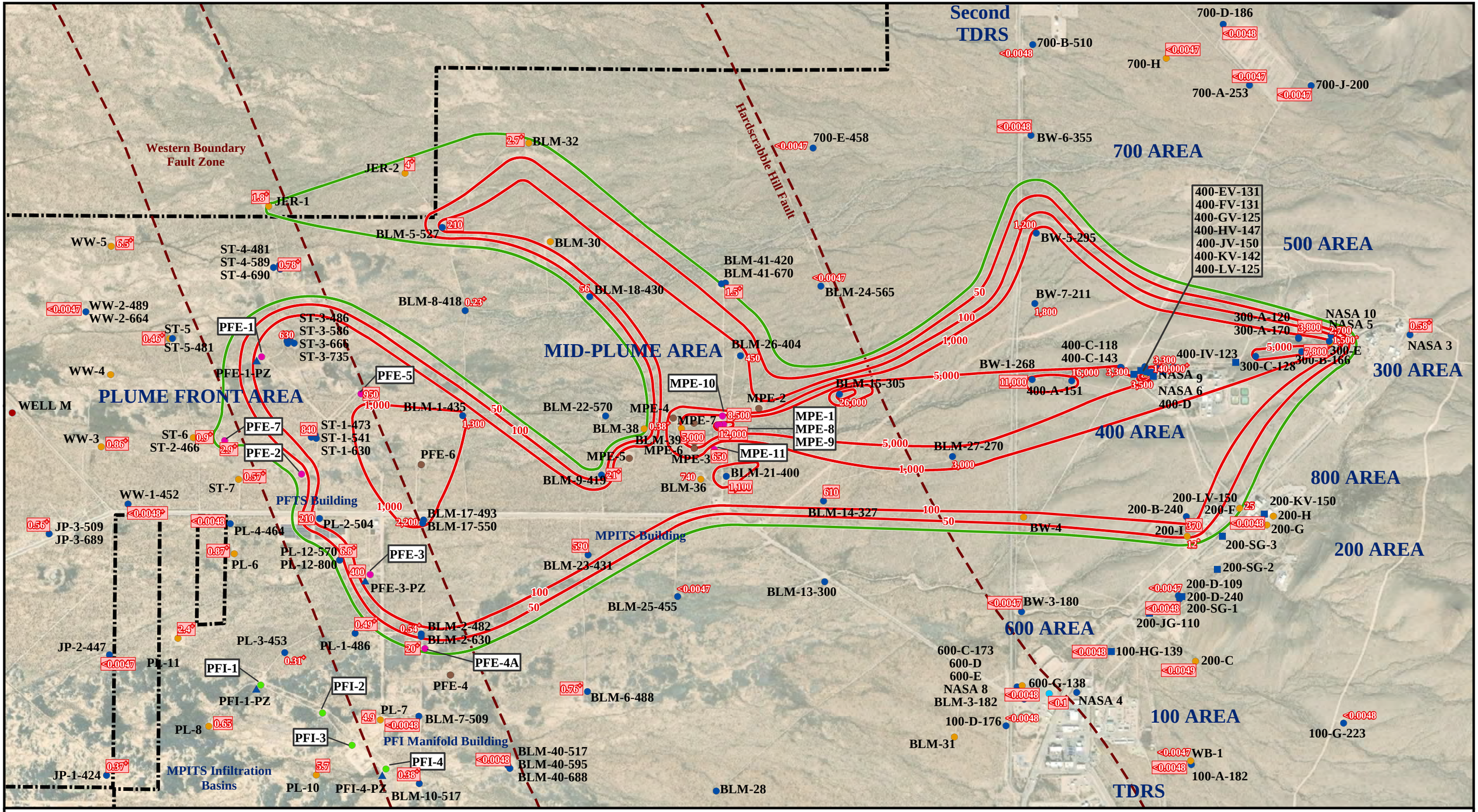


Site-Wide Groundwater Elevations for Second Quarter 2021

- 4064 Groundwater Elevation Contour (Feet)
- Groundwater Flow Direction
- Multiport
- Conventional Well
- Perched Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Main Road
- WSTF Boundary
- Faults

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

(SEE NEXT PAGE)



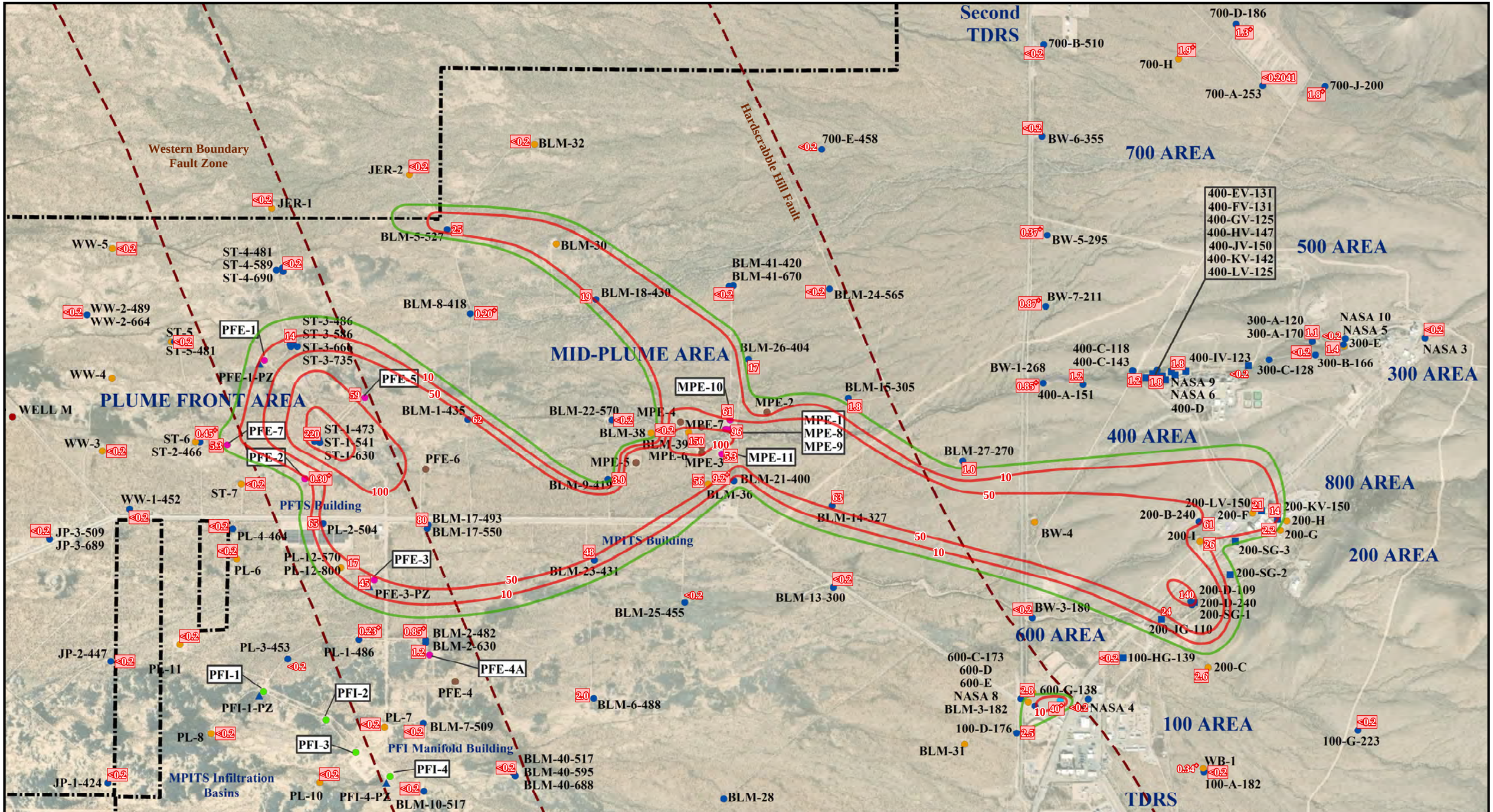
NDMA Maximum Concentrations in Groundwater for Second Quarter 2021

Note:
Method 607 NDMA results corrected for extraction efficiency.
* - The analytical batch LCS_01MAR21 laboratory control sample recoveries of NDMA (1.4%) were outside laboratory control limits; corrected detections were excluded for 2Q2021.
\+ - 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"
- No value indicates the well has not been sampled in the last year.

March 2022

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

(SEE NEXT PAGE)



TCE Maximum Concentrations in Groundwater for Second Quarter 2021

- Equiconcentration Line (ug/L) — 10
- 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

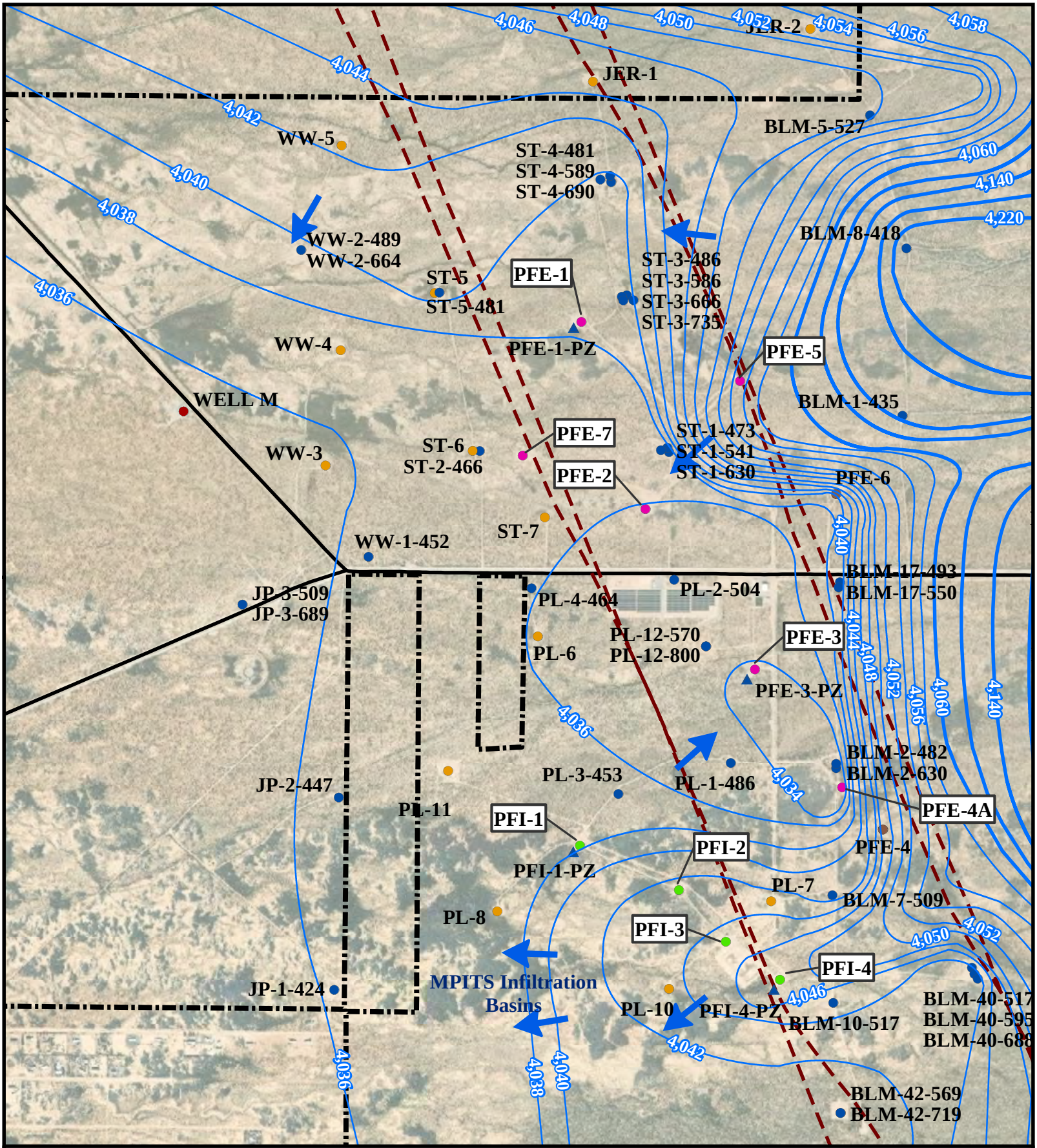
Note:
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit"
- No value indicates the well has not been sampled in the last year.

N W E S

March 2022

Figure 6.1 Plume Front Groundwater Elevations for the Reporting Period

(SEE NEXT PAGE)



Plume Front Groundwater Elevations for Second Quarter 2021

- 4060 40 Foot Contour
- 4048 2 Foot Contour
- Groundwater Flow Direction
- Multiport
- Conventional Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Western Boundary Fault Zone
- WSTF Boundary

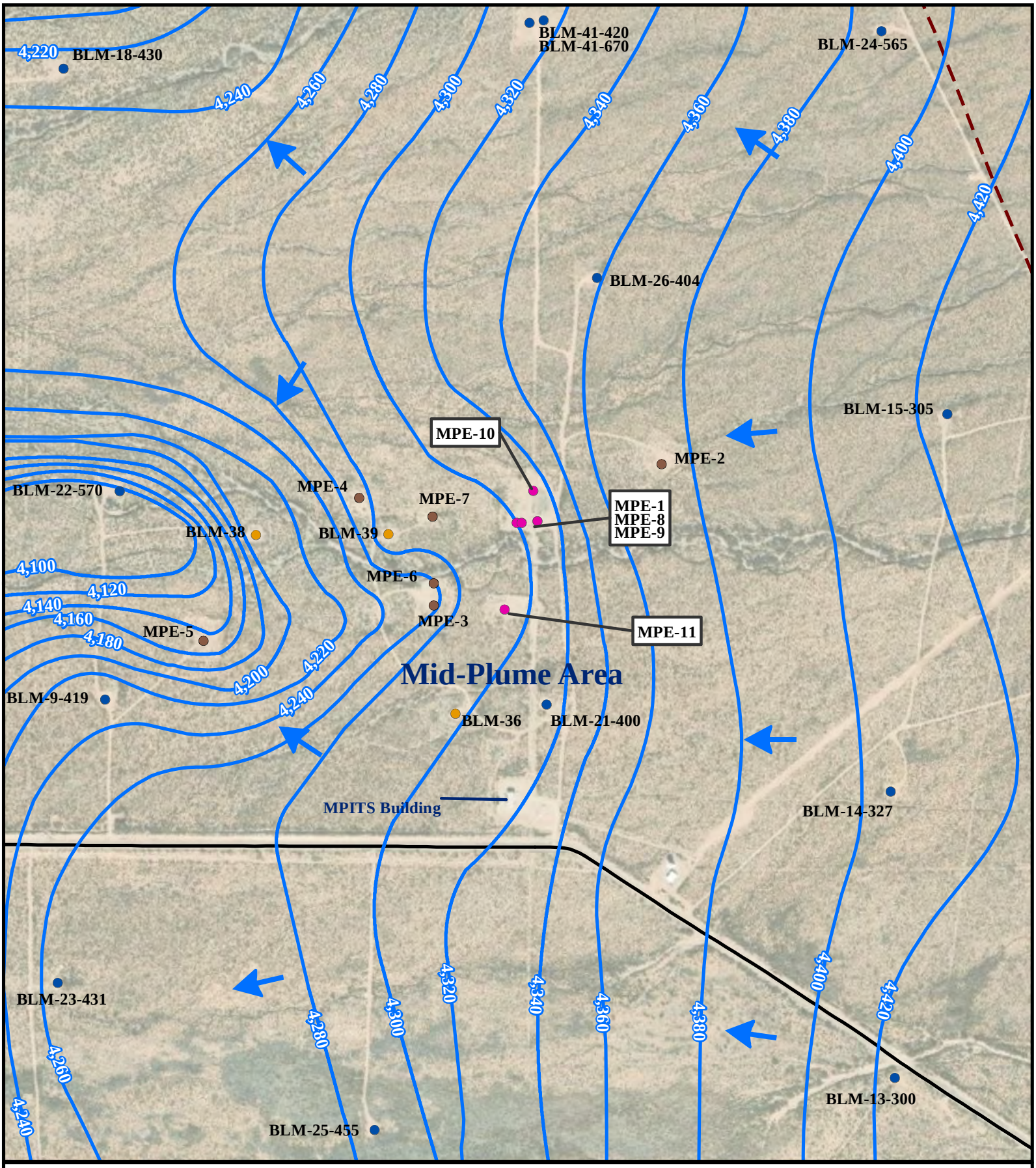
0 500 1,000 2,000 Feet

N W E S

March 2022

Figure 6.2 Mid-plume Groundwater Elevations for the Reporting Period

(SEE NEXT PAGE)



Mid-Plume Groundwater Elevations for Second Quarter 2021

-4,300- Groundwater Elevation 20 Feet Contour

Groundwater Flow Direction

- Conventional Well
- Multiport Well
- Extraction Well
- Exploration Well

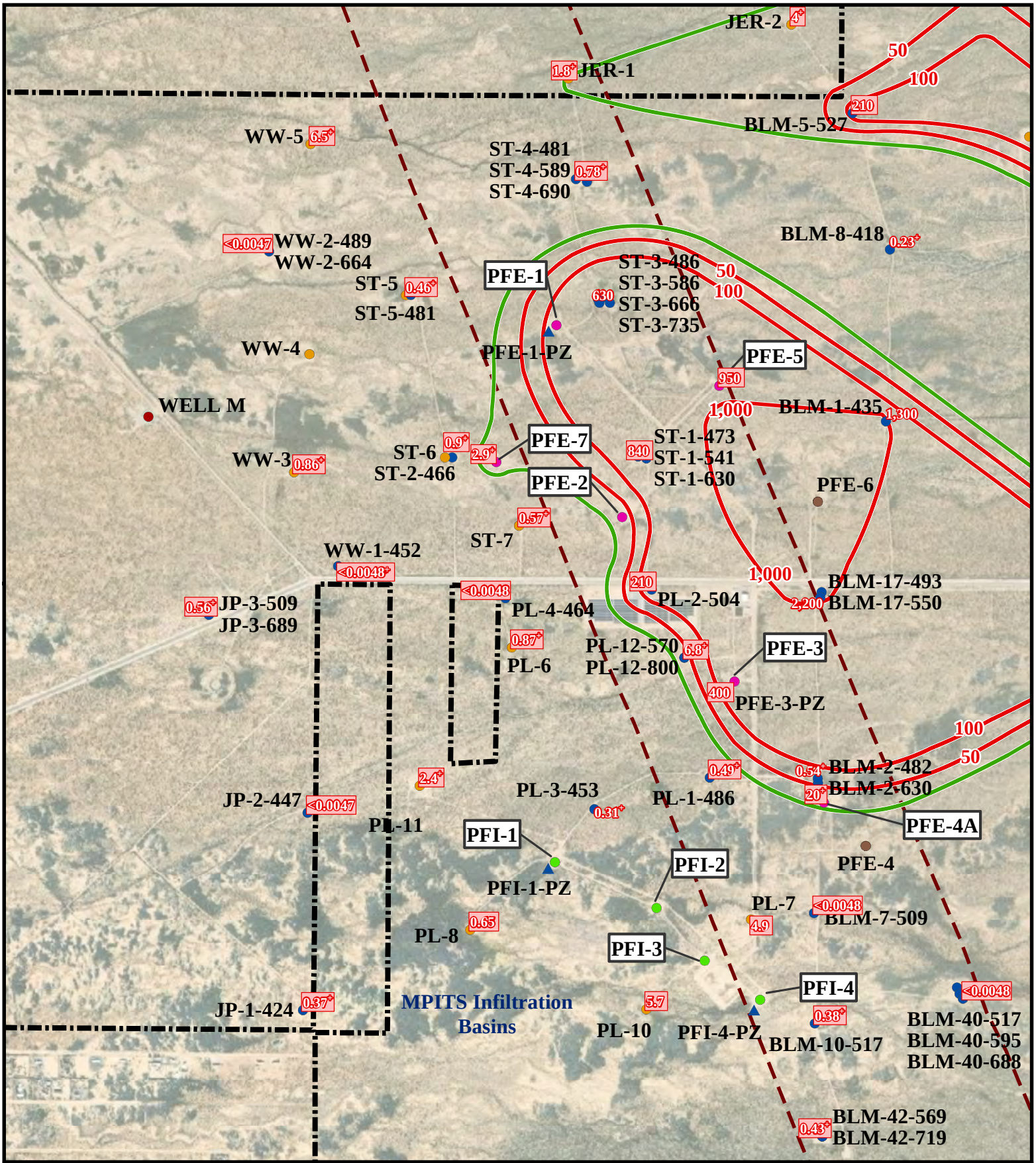
N
W E
S

0 625 1,250 Feet

March 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 2021

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

0 750 1,500 Feet

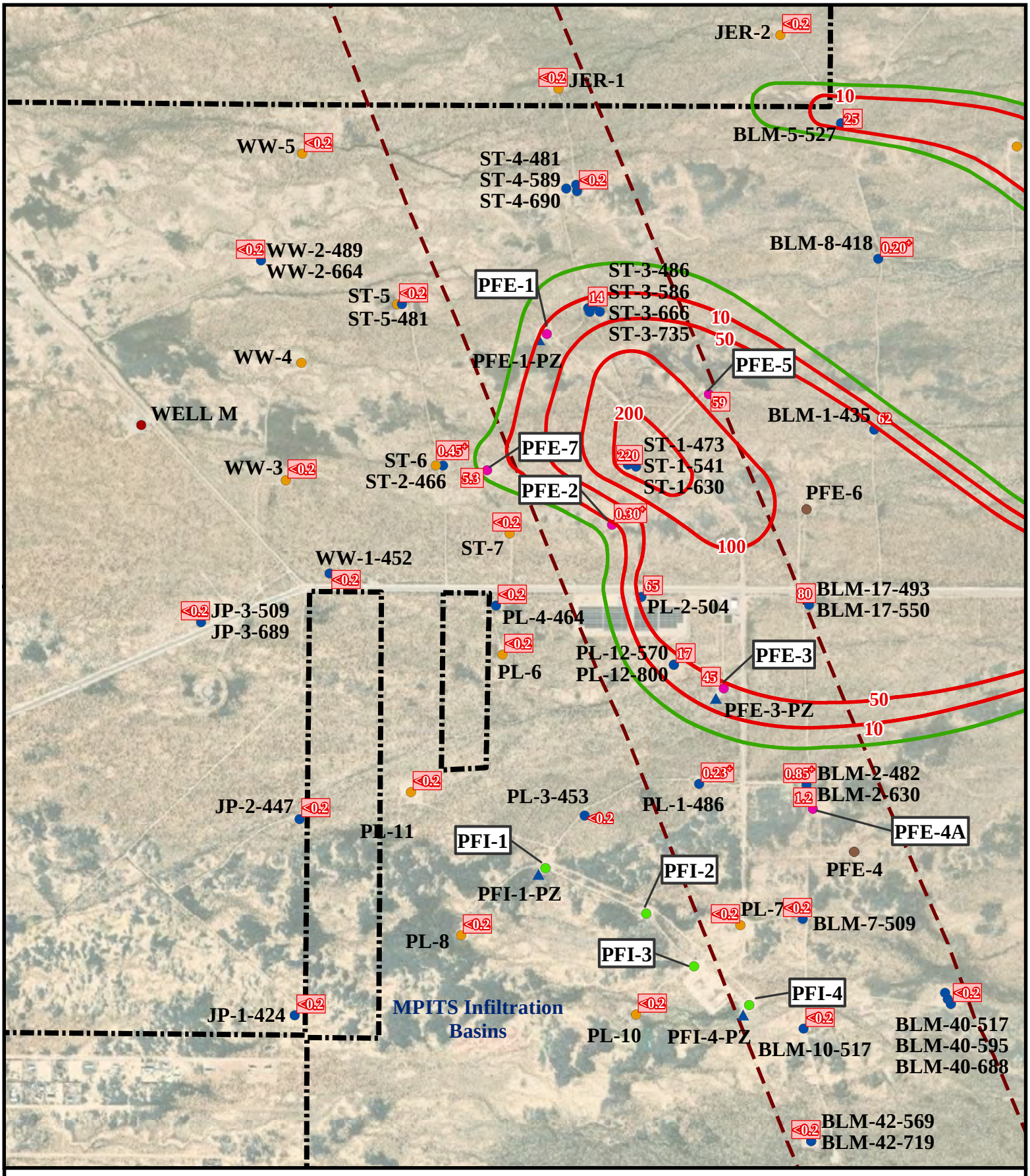
Note:
Method 607 NDMA results corrected for extraction efficiency.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit"
- No value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

N W E S

March 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 2021

10 Equiconcentration Line (ug/L)

TCE Cleanup Level (4.9 ug/L)

Multiport

Conventional Well

Extraction Well

Injection Well

Piezometer

Exploration Well

Production Well

Western Boundary Fault Zone

WSTF Boundary

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.

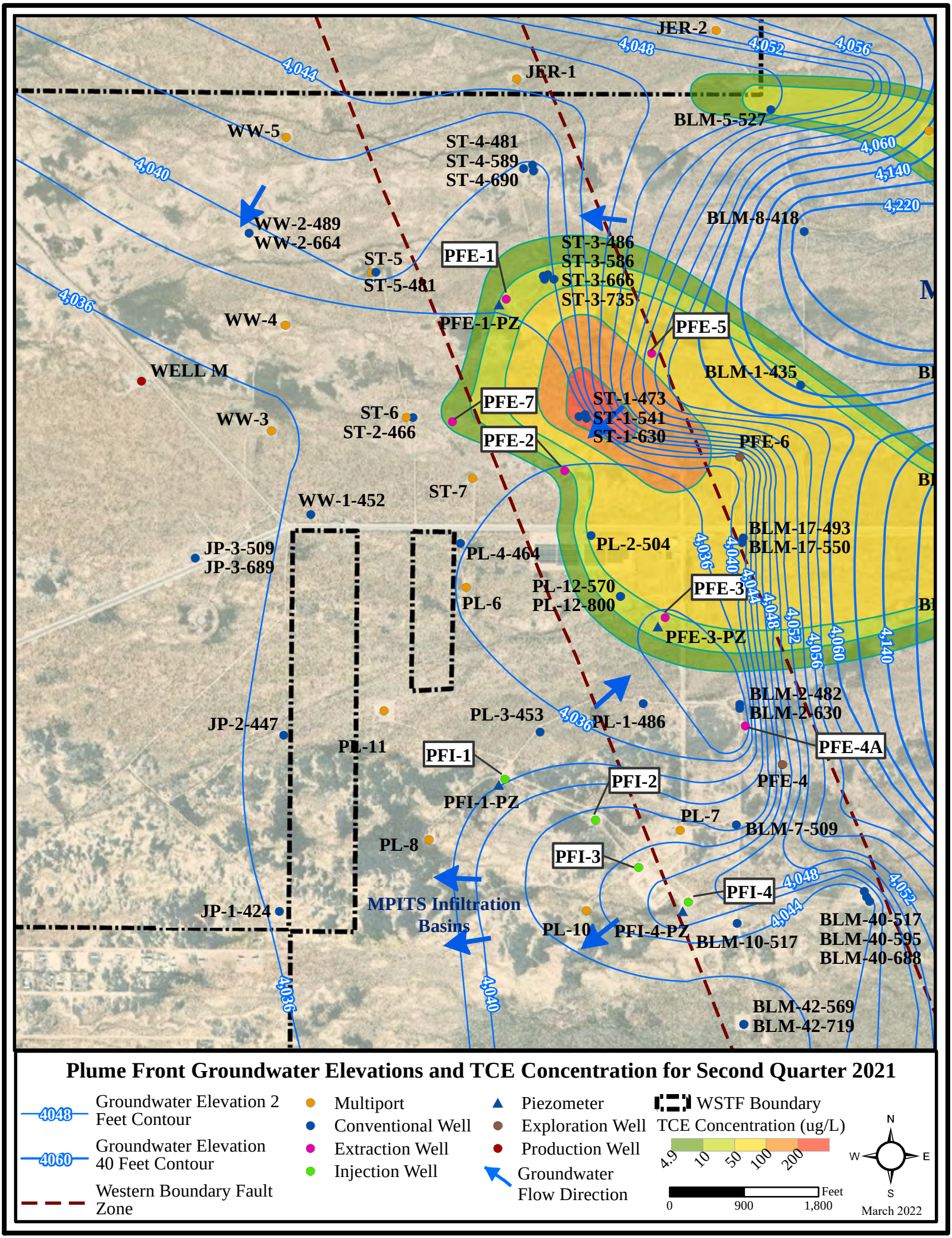
- Non-detect values displayed "<Detection Limit"

- No value indicates the well has not been sampled in the last year.

March 2022

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

(SEE NEXT PAGE)


JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2-489
WW-2-664
ST-5
ST-5-481
PFE-1
ST-3-486
ST-3-586
ST-3-666
ST-3-735
BLM-8-418
WW-4
PFE-1-PZ
PFE-5
WELL M
BLM-1-435
PFE-7
ST-1-473
ST-1-541
ST-1-630
WW-3
ST-6
ST-2-466
PFE-2
PFE-6
ST-7
WW-1-452
BLM-17-493
BLM-17-550
JP-3-509
JP-3-689
PL-4-464
PL-2-504
PL-12-570
PL-12-800
PL-6
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
JP-2-447
PL-3-453
PL-1-486
PFE-4A
PL-11
PFI-1
PFI-2
PFE-4
PFI-1-PZ
PL-7
BLM-7-509
PL-8
PFI-3
PFI-4
MPITS Infiltration Basins
JP-1-424
PL-10
PFI-4-PZ
BLM-10-517
BLM-40-517
BLM-40-595
BLM-40-688
BLM-42-569
BLM-42-719
4,036
4,040
4,044
4,048
4,052
4,056
4,060
4,140
4,220
Plume Front Groundwater Elevations and TCE Concentration for Second Quarter 2021
4048 Groundwater Elevation 2 Feet Contour
4060 Groundwater Elevation 40 Feet Contour
Western Boundary Fault Zone
Multiport
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
0
900
1,800
Feet
N
W
E
S
March 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 2020 GMP update (NASA, 2021b).

[2] Cleanup Level based on Maximum Contaminant Levels found in 40 Code of Federal Regulations Parts 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-14-327	7439-89-6	Iron, Total
200-KV-150	7439-96-5	Manganese, Total

Table 3.3 Unconfirmed New Detections – Resolution Pending

Well ID	CAS Number	Analyte	Scheduled Resample Date
BLM-36-800	314-40-9	Bromacil	5/3/2021
PL-7-480	314-40-9	Bromacil	5/11/2021
ST-1-541	7440-47-3	Chromium, Total	5/11/2021
BLM-38-620	7440-02-0	Nickel, Total	5/12/2021
NASA 4	78-93-3	2-Butanone (MEK)	5/20/2021
NASA 4	67-64-1	Acetone	5/20/2021
PL-8-455	123-91-1	1,4-Dioxane	6/2/2021
PL-3-453	314-40-9	Bromacil	6/4/2021
ST-3-486	7440-50-8	Copper, Total	6/15/2021
700-E-458	314-40-9	Bromacil	7/22/2021
BLM-18-430	314-40-9	Bromacil	7/25/2021
BLM-32-632	314-40-9	Bromacil	8/6/2021
ST-4-589	314-40-9	Bromacil	8/13/2021
200-H-331	314-40-9	Bromacil	8/18/2021
BW-1-268	7429-90-5	Aluminum, Total	9/9/2021
PL-8-605	314-40-9	Bromacil	9/9/2021
PL-11-470	314-40-9	Bromacil	9/15/2021
PL-11-980	314-40-9	Bromacil	9/17/2021
WW-4-948	314-40-9	Bromacil	9/18/2021
700-D-186	314-40-9	Bromacil	9/23/2021
WW-5-909	117-81-7	Bis(2-ethylhexyl) Phthalate	10/22/2021
BLM-2-630	7440-02-0	Nickel, Total	11/9/2021
200-I-795	314-40-9	Bromacil	11/18/2021
200-I-795	62-75-9	N-Nitrosodimethylamine	11/18/2021
PL-6-1195	7440-47-3	Chromium, Total	1/6/2022
PL-6-1335	4164-28-7	N-Nitrodimethylamine	1/7/2022
100-F-358	12672-29-6	Aroclor 1248	1/20/2022
100-F-358	314-40-9	Bromacil	1/20/2022
ST-2-466	314-40-9	Bromacil	2/2/2022
BLM-13-300	314-40-9	Bromacil	3/4/2022
BLM-40-517	314-40-9	Bromacil	4/1/2022
BLM-14-327	7429-90-5	Aluminum, Total	4/15/2022
BLM-40-595	14797-73-0	Perchlorate	4/12/2023

Table 3.4 Unconfirmed Detections Resolved This Reporting Period

Well ID	CAS Number	Analyte	Scheduled Resample Date	Resolution
100-C-365	314-40-9	Bromacil	2/22/2021	Unconfirmed
200-F-370	314-40-9	Bromacil	2/22/2021	Unconfirmed
NASA 3	7429-90-5	Aluminum, Total	2/24/2021	Unconfirmed
WW-2-489	314-40-9	Bromacil	3/7/2021	Confirmed
PL-8-965	314-40-9	Bromacil	3/11/2021	Unconfirmed
BLM-18-430	7429-90-5	Aluminum, Total	3/17/2021	Confirmed
PL-4-464	314-40-9	Bromacil	3/18/2021	Unconfirmed
PL-8-780	314-40-9	Bromacil	3/20/2021	Unconfirmed
BW-6-355	314-40-9	Bromacil	3/21/2021	Unconfirmed
PL-10-813	314-40-9	Bromacil	4/1/2021	Unconfirmed
PL-6-725	314-40-9	Bromacil	4/8/2021	Confirmed
JP-2-447	314-40-9	Bromacil	4/11/2021	Confirmed

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

Well Name	Event Date	Well Group
100-A-182	02/03/21	100/600
100-C-365	02/22/21	S. Boundary
100-HG-139	03/11/21	100/600
200-B-240	03/15/21	200
200-C-170	02/18/21	200
200-C-225	02/18/21	200
200-C-270	02/17/21	200
200-D-240	03/16/21	200
200-F-225	02/23/21	200
200-F-370	02/22/21	200
200-F-420	02/22/21	200
200-KV-150	03/10/21	200
300-A-170	02/18/21	300/400
300-B-166	02/03/21	300/400
300-E-138	02/23/21	300/400
300-E-183	02/24/21	300/400
400-EV-131	02/01/21	300/400
400-FV-131	04/21/21	300/400
400-GV-125	02/01/21	300/400
400-HV-147	04/21/21	300/400
400-JV-150	02/02/21	300/400
600-E-280	02/04/21	100/600
600-G-138	04/27/21	100/600
700-A-253	03/22/21	N. Boundary
700-D-186	03/23/21	N. Boundary
700-H-350	03/23/21	N. Boundary
700-H-535	03/22/21	N. Boundary
700-H-670	03/22/21	N. Boundary
700-J-200	03/22/21	N. Boundary
BLM-10-517	04/01/21	Plume Front
BLM-13-300	03/04/21	S. Boundary
BLM-14-327	03/15/21	Mid-plume
BLM-21-400	02/08/21	Mid-plume
BLM-23-431	02/04/21	Mid-plume
BLM-32-543	02/02/21	N. Boundary
BLM-32-571	02/02/21	N. Boundary
BLM-32-632	02/02/21	N. Boundary
BLM-39-385	04/07/21	Mid-plume
BLM-39-560	04/07/21	Mid-plume
BLM-40-517	04/01/21	S. Boundary
BLM-40-595	04/12/21	S. Boundary
BLM-40-688	04/14/21	S. Boundary
BLM-41-420	04/20/21	N. Boundary
BLM-41-670	04/20/21	N. Boundary
BLM-42-569	03/10/21	Sentinel
BLM-42-709	03/10/21	Sentinel
BLM-5-527	03/15/21	Mid-plume
BLM-6-488	04/14/21	S. Boundary
BLM-7-509	03/01/21	Plume Front
BLM-9-419	03/02/21	Mid-plume
BW-1-268	03/09/21	300/400
BW-3-180	04/19/21	100/600
BW-6-355	03/11/21	N. Boundary
JER-1-483	04/08/21	N. Boundary
JER-1-563	04/08/21	N. Boundary
JER-1-683	04/08/21	N. Boundary
JER-2-504	04/20/21	N. Boundary
JER-2-584	04/20/21	N. Boundary
JER-2-684	04/20/21	N. Boundary
JP-1-424	04/13/21	Sentinel
JP-2-447	04/13/21	Sentinel
JP-3-509	04/15/21	Sentinel
JP-3-689	04/15/21	Sentinel
NASA 3	03/17/21	Upgradient
PL-10-484	04/06/21	Sentinel
PL-10-592	04/05/21	Sentinel
PL-10-813	04/01/21	Sentinel
PL-10-962	04/05/21	Sentinel
PL-11-470	03/02/21	Sentinel
PL-11-530	03/02/21	Sentinel
PL-11-710	03/02/21	Sentinel
PL-11-820	03/04/21	Sentinel
PL-11-980	03/04/21	Sentinel
PL-12-570	02/08/21	In Plume
PL-12-800	02/08/21	In Plume
PL-1-486	04/19/21	In Plume
PL-2-504	03/15/21	In Plume
PL-4-464	03/11/21	Plume Front
PL-6-545	04/08/21	Plume Front
PL-6-725	04/08/21	Plume Front
PL-7-480	02/03/21	Plume Front
PL-7-560	02/02/21	Plume Front
PL-7-630	02/02/21	Plume Front
PL-8-455	03/04/21	Sentinel

Well Name	Event Date	Well Group
PL-8-605	03/03/21	Sentinel
PL-8-780	03/08/21	Sentinel
PL-8-965	03/03/21	Sentinel
ST-1-473	04/12/21	In Plume
ST-2-466	02/02/21	Plume Front
ST-4-481	03/03/21	Plume Front
ST-4-589	02/04/21	Plume Front
ST-4-690	03/02/21	Plume Front
ST-5-481	02/17/21	Plume Front
ST-5-485	02/01/21	Plume Front
ST-5-655	02/01/21	Plume Front

Well Name	Event Date	Well Group
ST-6-528	03/09/21	Plume Front
ST-6-568	03/09/21	Plume Front
ST-6-678	03/09/21	Plume Front
ST-6-824	03/11/21	Plume Front
ST-6-970	03/11/21	Plume Front
ST-7-453	04/06/21	Plume Front
ST-7-544	04/06/21	Plume Front
ST-7-779	04/06/21	Plume Front
ST-7-970	04/06/21	Plume Front
WW-1-452	03/01/21	Plume Front
WW-2-489	03/08/21	Sentinel

Well Name	Event Date	Well Group
WW-2-664	03/08/21	Sentinel
WW-3-469	03/02/21	Sentinel
WW-3-569	03/01/21	Sentinel
WW-3-710	03/01/21	Sentinel
WW-3-978	03/02/21	Sentinel
WW-5-459	04/13/21	Sentinel
WW-5-579	04/13/21	Sentinel
WW-5-809	04/13/21	Sentinel
WW-5-909	04/13/21	Sentinel

Plume Front	
Well Name	**Event Date**
B650-EFF-1	02/09/21
B650-EFF-1	03/05/21
B650-EFF-1	04/14/21
B650-INF-1	02/09/21
B650-INF-1	03/05/21
B650-INF-1	04/14/21

Plume Front	
Well Name	**Event Date**
PFE-2	04/15/21
PFE-3	04/15/21
PFE-4A	04/15/21
PFE-5	04/15/21
PFE-7	04/15/21

Mid-plume	
Well Name	**Event Date**
B655-EFF-2	02/09/21
B655-EFF-2	03/05/21
B655-EFF-2	04/14/21
B655-INF-2	02/09/21
B655-INF-2	03/05/21
B655-INF-2	04/14/21

Mid-plume	
Well Name	**Event Date**
MPE-1	02/10/21
MPE-10	02/10/21
MPE-11	02/10/21
MPE-8	02/10/21
MPE-9	02/10/21

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	4,669.41	4/26/2021
100-C-365	391	365	386	4,534.70	4/26/2021
100-D-176	201	176	196	4,570.48	4/26/2021
100-E-261	277	261	271	4,682.73	4/26/2021
100-F-358	378	358	368	4,713.25	4/26/2021
100-G-223	238	223	233	4,851.44	4/26/2021
100-HG-139	165	139	159	4,647.53	4/26/2021
200-B-240	255	240	250	4,646.73	4/26/2021
200-C(170)[i]	290	N/A	N/A	4,674.68	5/3/2021
200-G(220)[i]	515	N/A	N/A	4,720.31	5/3/2021
200-H(331)[i]	458	N/A	N/A	4,734.74	5/3/2021
200-I(300)[i]	815	N/A	N/A	4,650.94	5/3/2021
200-KV-150	175	150	170	4,726.31	4/26/2021
200-LV-150	175	150	170	4,725.87	4/26/2021
200-SG-1	138	123	138	4,655.55	4/26/2021
300-A-120	151	120	146	4,781.30	4/26/2021
300-B-166	181	165	176	4,772.80	4/26/2021
300-C-128	160	128	154	4,731.37	4/26/2021
300-D-153	179	153	174	4,949.49	4/26/2021
300-E(138)[i]	395	N/A	N/A	4,804.54	5/3/2021
300-F-175	195	175	185	5,043.47	4/26/2021
400-A-151	187	151	176	4,636.45	4/26/2021
400-C-143	159	143	153	4,668.18	4/26/2021
400-D(275)[i]	380	N/A	N/A	4,662.32	5/3/2021
600-C-173	199	172	193	4,569.80	4/26/2021
600-E(280)[i]	690	N/A	N/A	4,554.08	5/3/2021
700-A-253	269	253	263	4,716.44	4/26/2021
700-B-510	536	510	531	4,344.02	4/26/2021
700-D-186	202	168	196	4,710.37	4/26/2021
700-E-458	484	458	479	4,411.21	4/26/2021
700-H(350)[i]	695	N/A	N/A	4,635.18	5/3/2021
700-J-200	230	200	220	4,828.62	4/26/2021
BLM-10-517	532	517	527	4,044.17	4/26/2021
BLM-13-300	316	300	310	4,422.32	4/26/2021
BLM-14-327	343	327	337	4,400.62	4/26/2021
BLM-1-435	451	435	446	4,145.86	4/26/2021
BLM-15-305	321	305	315	4,424.20	4/26/2021
BLM-17-493	519	493	513	4,039.31	4/26/2021
BLM-18-430	456	430	451	4,226.10	4/26/2021

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
BLM-22-570	597	570	592	4,093.91	4/26/2021
BLM-23-431	447	431	441	4,262.61	4/26/2021
BLM-24-565	590	565	585	4,385.45	4/26/2021
BLM-25-455	470	455	465	4,284.21	4/26/2021
BLM-2-630	498	482	493	4,033.59	4/26/2021
BLM-26-404	420	404	414	4,358.48	4/26/2021
BLM-27-270	286	270	280	4,500.75	4/26/2021
BLM-28 (Borehole)[i]	555	N/A	N/A	4,258.63	4/26/2021
BLM-3-182	208	182	203	4,569.23	4/26/2021
BLM-40-517	532	517	527	4,043.35	4/26/2021
BLM-41-420	435	420	430	4,318.08	4/26/2021
BLM-5-527	560	527	538	4,046.63	4/26/2021
BLM-6-488	503	488	498	4,231.45	4/26/2021
BLM-7-509	525	509	520	4,039.92	4/26/2021
BLM-8-418	434	418	428	4,223.99	4/26/2021
BLM-9-419	445	419	440	4,227.76	4/26/2021
BW-1-268	294	268	289	4,607.39	4/26/2021
BW-3-180	205	180	200	4,565.78	4/26/2021
BW-5-295	311	295	305	4,581.81	4/26/2021
BW-6-355	381	355	376	4,573.38	4/26/2021
BW-7-211	225	211	222	4,608.54	4/26/2021
JP-1-424	440	424	434	4,036.53	4/26/2021
JP-2-447	462	446	457	4,037.72	4/26/2021
MPE-2	600	400	580	4,370.19	4/26/2021
MPE-5	590	450	570	4,145.79	4/26/2021
NASA 10	135	110	130	4,823.51	4/26/2021
NASA 3	144	119	139	4,888.77	4/26/2021
NASA 4	171	146	166	4,638.28	4/26/2021
NASA 5	135	110	130	4,812.12	4/26/2021
NASA 6	153	128	148	4,690.53	4/26/2021
NASA 8	197	172	192	4,568.47	4/26/2021
PFE-1-PZ	609	588	598	4,038.01	4/26/2021
PFE-3-PZ	620	590	600	4,032.51	4/26/2021
PFE-4	877	397	876	4,046.60	4/26/2021
PFE-6	539	434	534	4,039.70	4/26/2021
PL-10(484)[ii]	1000	479	489	4,062.74	5/3/2021
PL-1-486	502	486	496	4,035.77	4/26/2021
PL-2-504	520	504	514	4,035.18	4/26/2021
PL-3-453	469	453	464	4,037.19	4/26/2021

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
PL-4-464	480	464	474	4,037.56	4/26/2021
PL-6(545)[ii]	1860	540	550	4,035.19	5/3/2021
PL-7(480)[ii]	655	475	485	4,044.32	5/3/2021
PL-8(455)[ii]	1000	448	458	4,035.41	5/3/2021
ST-1-473	488	473	483	4,037.18	4/26/2021
ST-2-466	481	466	476	4,037.48	4/26/2021
ST-3-486	502	486	496	4,039.01	4/26/2021
ST-4-481	497	481	491	4,039.93	4/26/2021
ST-5-481	497	481	491	4,040.63	4/26/2021
WB-14(520)[i]	545	N/A	N/A	4,427.01	5/3/2021
WB-5(250)[i]	400	N/A	N/A	4,667.75	5/3/2021
WW-1-452	468	452	462	4,037.84	4/26/2021
WW-3(469)[ii]	1014	464	474	4,035.44	5/3/2021

[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-21	27 of 28	529	68.6	27 of 28	9.6	1.08
Mar-21	31 of 31	538	74.5	31 of 31	9.8	1.39
Apr-21	30 of 30	594	79.5	30 of 30	10	1.17

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			
2/27/21	3/1/21	Unplanned	The system shut down automatically because of a UV wiper fault.
2/27/21	3/1/21	Unplanned	The system shut down automatically because of a UV wiper fault.
3/16/21	3/16/21	Unplanned	The system shut down automatically because of a disruption in the off-site electrical power supply.
3/20/21	3/20/21	Unplanned	The system shut down automatically because of a communication loss.
4/13/21	4/13/21	Planned	NASA shut the system down to perform several required repairs.
4/14/21	4/14/21	Unplanned	The system shut down automatically due to a low UV irradiance alarm while reactivating extraction well PFE-2.
4/22/21	4/23/21	Unplanned	The system shut down automatically as a result of water detected within a section of secondary containment piping associated with extraction well PFE-2.
Mid-plume Interception and Treatment System Shutdowns			
2/14/21	2/16/21	Unplanned	The system shut down automatically because of a communication loss.
3/11/21	3/11/21	Unplanned	They system shut down automatically because of a transmissivity lamp failure.
3/26/21	3/27/21	Unplanned	The system shut down automatically because of a communication loss.
4/20/21	4/20/21	Planned	NASA shut down the system to adjust the air stripper damper.
4/26/21	4/27/21	Planned	NASA shut the system down to remove mineral scale buildup from the piping between the blower piping and air stripper.

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

	Analyte	Unit	Design	Feb-21	Mar-21	Apr-21
Air Stripper Influent Concentrations	TCE	µg/L	130	17	17	14
	PCE	µg/L	0.66	0.48 J	0.83 J	0.58 J
	Freon 11	µg/L	860	11	15	13
	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	195[a]	160[b]	90[c]
UV Reactor Effluent Concentrations	NDMA[4]	ng/L	< 2.0	<0.33[2]	<0.33[2]	3.5

NS – Not sampled during the reporting period.[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 MDL (provided).

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 40%[a], 40%[b], 50%[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	NA	NA	NA	NA
	PFE-2	224	232	144	104%	64%
	PFE-3	213	230	197	108%	92%
	PFE-4A	200	165	140	83%	70%
	PFE-5	5.5	4.3	3.5	79%	63%
	PFE-7	125	153	131	122%	105%
Injection Wells (gpm)	**PFI-1**	269	N/A	N/A	N/A	N/A
	PFI-2	269	237	203	88%	75%
	PFI-3	344	240	205	70%	60%
	PFI-4	194	232	199	120%	102%

[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.

NA - The value/result was either not analyzed for or not applicable.

Table 5.5 Comparison of Specific Capacities for the Plume Front Wells

Well Name	Specific Capacity at Installation	Specific Capacity Jul-20	Specific Capacity Oct-20	Specific Capacity Jan-21	Specific Capacity Apr-21
PFE-1	8.3	NA[1]	NA[1]	NA[1]	NA[1]
PFE-2	5.7	NA[1]	NA[1]	NA[1]	6.4
PFE-3	19.4	11.8	10.3	11.6	10.6
PFE-4A	3.1	2.6	2.3	2.3	2.3
PFE-5	0.14	0.1	<0.1	<0.1	<0.1
PFE-7	6	6.4	6.0	6.3	5.9
Well Name	**Specific Capacity at Installation (Ideal Range)**	**Specific Capacity Jul-20**	**Specific Capacity Oct-20**	**Specific Capacity Jan-21**	**Specific Capacity Apr-21**
PFI-1	2.8–5	NA[2]	NA[2]	NA[2]	NA[2]
PFI-2	2.8–7	1.8	2.3	2.9	2.3
PFI-3	2–4	2.0	1.9	2.4	2.3
PFI-4	2.3–3.5	1.6	1.6	2.0	2.3

NA[1] – Not Applicable due to well being inoperative during reporting period.
NA[2] – Not Applicable due to questionable transducer readings during reporting period.
Note: Specific capacities are used to measure well performances and have units of gallons per minute per foot of drawdown.

Table 5.6 Plume Front Mass Removal[1]

Date	TCE (kg)	Freon 11 (kg)	Chloroform(g)	PCE (g)	NDMA (g)
May-20	1.6	1.6	ND	66	9.3
Jun-20	1.8	1.8	ND	54	5.6
Jul-20	2.1	2.0	ND	66	8.1
Aug-20	1.6	1.4	ND	37	8.0
Sep-20	1.8	2.1	ND	60	8.6
Oct-20	1.0	1.0	ND	43	4.7
Nov-20	<0.1	<0.1	ND	<0.1	<0.1
Dec-20	1.5	1.1	ND	38	14
Jan-21	1.7	1.5	ND	57	18
Feb-21	1.4	0.91	ND	23	16
Mar-21	1.5	1.4	ND	57	15
Apr-21	1.4	1.3	ND	36	8.5
Total[2]	**17**	**16**	**ND**	**537**	**116**

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-21	Mar-21	Apr-21
Air Stripper Influent Concentrations (MPE Wells)	TCE	µg/L	140	53	44	44
	PCE	µg/L	6.4	2.5	2.1	2.1
	Freon 11	µg/L	240	110	84	95
	Chloroform	µg/L	NA[2]	<0.24[1]	<0.24[1]	<0.24[1]
Air Stripper Influent Concentrations (Well 600-G-138)	TCE	µg/L	140	NS	NS	40 Q
	PCE	µg/L	6.4	NS	NS	<0.21[1] Q
	Freon 11	µg/L	240	NS	NS	0.48 J Q
	Chloroform	µg/L	NA[2]	NS	NS	0.51 J
Air Stripper Effluent Concentrations	TCE	µg/L	1.0	< 0.20[1]	< 0.20[1]	< 0.20[1]
	PCE	µg/L	1.0	< 0.21[1]	< 0.21[1]	< 0.21[1]
	Freon 11	µg/L	50	< 0.24[1]	0.31 J	< 0.24[1]
	Chloroform	µg/L	NA[2]	< 0.24[1]	< 0.24[1]	< 0.24[1]
UV Reactor Influent Concentrations (MPE Wells)	NDMA[3]	ng/L	25,500	5,500[a]	4,000[b]	3,600[c]
UV Reactor Influent Concentrations (Well 600-G-138)	NDMA	ng/L	25,500	NS	NS	< 278[d]
UV Reactor Effluent Concentrations[4]	NDMA[4]	ng/L	< 2.0	< 0.33	< 0.34	0.38 J * FB

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.

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, 2021b). Analytical data are provided in this table when available.

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

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

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 40%[a], 40%[b], 50%[c], 36%[d]

[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-20	76	180	ND	4.0	3.9
Jun-20	79	180	ND	4.1	4.0
Jul-20	71	170	ND	3.7	3.6
Aug-20	82	180	0.01	4.1	3.6
Sep-20	87	190	0.01	4.4	3.8
Oct-20	77	170	0.01	3.9	2.7
Nov-20	69	130	ND	3.2	9.4
Dec-20	72	140	ND	3.4	9.8
Jan-21	66	130	ND	3.1	9.0
Feb-21	94	190	0.01	4.0	11
Mar-21	120	190	0.01	5.2	14
Apr-21	100	210	0.01	4.4	12
Total[2]	**993**	**2,060**	**0.06**	**47.5**	**86.8**

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-20	19,483,810	$68,003	$32,997	$5.18	$12,064	$0.62	$113,063	$5.80
Jun-20	26,159,906	$121,143	$87,747	$7.99	$28,268[3]	$1.08	$237,158	$9.07
Jul-20	25,924,307	$100,952	$70,171	$6.60	$34,799[3]	$1.34	$205,923	$7.94
Aug-20	24,188,238	$141,333	$84,184	$9.32	$30,617[3]	$1.27	$256,134	$10.59
Sep-20	25,417,256	$125,181	$134,111	$10.20	$27,120[3]	$1.07	$286,412	$11.27
Oct-20	21,912,518	$96,914	$41,441	$6.31	$27,556[3]	$1.26	$165,911	$7.57
Nov-20	378,947	$60,571	$86,828	$388.97	$5,714	$15.08	$153,113	$404.05
Dec-20	13,448,852	$60,571	$69,775	$9.69	$10,076	$0.75	$140,422	$10.44
Jan-21	25,292,665	$60,571	$66,177	$5.01	$26,323	$0.40	$153,071	$5.41
Feb-21	22,918,654	$60,571	$62,487	$5.37	$23,938	$1.04	$152,996	$6.41
Mar-21	24,723,395	$60,571	$89,304	$6.06	$21,923	$0.89	$171,798	$6.95
Apr-21	26,173,206	$48,457	$56,956	$4.03	$24,106	$0.92	$129,519	$4.95
12-Month Total	256,021,754	$1,004,839	$882,178	$7.37[2]	$272,504	$1.06[2]	$2,165,521	$8.46[2]

Notes:
1) Gallons treated reflects amount of water extracted during power reporting period.
2) 12-month cost.
3) 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				
NASA 3	Feb-21	Unable to collect groundwater sample because the water level in the well was insufficient for sampling.	Yes / Aug-21 (semi-annually for NDMA, VOCs; annually for others)	Resolved within this reporting period. Sampled in March 2021.
400-C-143	Apr-21	Unable to collect groundwater sample because the water level in the well was insufficient for sampling.	Yes / Apr-22 (annually)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
Unresolved Issues				
PL-3-453	Dec-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	Yes / Jun-21 (quarterly for NDMA, VOC; annual for others)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
400-C-118	Nov-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	No / May-21 (annually)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
400-IV-123	Nov-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	Yes / May-21 (quarterly for VOC; annually for others)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
300-C-128	Aug-20	Could not be sampled - the water level in the well has dropped below the bottom of the screened interval.	Yes / when water level recovers	Monitor the water level in this well and sample when the water level has recovered enough to obtain a representative sample.
NASA 9	Oct-20	Could not be sampled - intrusion of roots into the well casing and screen.	No / Oct-21 (annually)	NASA is evaluating the potential future of this monitoring well.
200-LV-150	Nov-19	Insufficient recharge	No / Nov-21 (annually)	NASA will evaluate well 200-LV-150 by assessing recovery rate and volume of water

Well	Date of Discovery	Description	Scheduled for Sampling this Qtr? / Next Sampling Date per GMP	Description of Future Plan or Resolution
				in the well after recovery. If not viable, NASA will submit a work plan for the P&A of this well. NASA will then propose to sample the most proximal groundwater well, 200-F, as part of the GMP.
WW-4	Jul-19 (FLUTe removal)	Water FLUTe sampling system removed *Data Representativeness Phase 1: Water FLUTe Well Evaluation.*	No / TBD (quarterly)	FLUTe system to be reinstalled and sampled following return to site work (COVID-19).
BLM-1-435	Apr-20	Sampling failed, as there was not enough water in the screen to fill the sample bottles. Failed again, Apr-21.	Yes / Oct-21 (semiannually)	Well is a poor producer. It is typically purged dry the first day, then sampled the following day. The condition of the well is being evaluated.
Issues Resolved this Quarter (will not appear in future Periodic Monitoring Reports)				
None.				

Appendix A
Indicator Parameters and Analytical Data

Appendix A.1: Monitor Well Indicator Parameters
Appendix A.2: Monitor Well Analytical Data
Appendix A.3: PFTS Indicator Parameters
Appendix A.4: PFTS Analytical Data
Appendix A.5: MPITS Indicator Parameters
Appendix A.6: MPITS 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** 2/3/2021

Sample	Parameter	Result	Units
2102030955C	Conductivity	1292	µS/cm
2102030955C	DO	3.83	mg/L
2102030955C	DTW	177.25	ft
2102030955C	ORP	199	mV
2102030955C	pH	6.96	NA
2102030955C	Temperature	20.51	ºC
2102030955C	Turbidity	0.97	NTU
2102030957C	Conductivity	1284	µS/cm
2102030957C	DO	3.76	mg/L
2102030957C	DTW	178.50	ft
2102030957C	ORP	197	mV
2102030957C	pH	6.95	NA
2102030957C	Temperature	20.54	ºC
2102030957C	Turbidity	1.08	NTU
2102030959C	Conductivity	1288	µS/cm
2102030959C	DO	3.70	mg/L
2102030959C	DTW	178.50	ft
2102030959C	ORP	198	mV
2102030959C	pH	6.94	NA
2102030959C	Temperature	20.48	ºC
2102030959C	Turbidity	1.10	NTU

Well ID	100-C-365	Event Date	2/22/2021	
Sample	**Parameter**		**Result**	**Units**
2102220940B	Conductivity		851	µS/cm
2102220940B	DO		4.15	mg/L
2102220940B	DTW		285.75	ft
2102220940B	ORP		-10	mV
2102220940B	pH		8.23	NA
2102220940B	Temperature		19.85	ºC
2102220940B	Turbidity		0.74	NTU
2102220941B	Conductivity		855	µS/cm
2102220941B	DO		4.02	mg/L
2102220941B	DTW		285.75	ft
2102220941B	ORP		-10	mV
2102220941B	pH		8.24	NA
2102220941B	Temperature		19.87	ºC
2102220941B	Turbidity		0.68	NTU
2102220942B	Conductivity		849	µS/cm
2102220942B	DO		3.92	mg/L
2102220942B	DTW		285.75	ft
2102220942B	ORP		-10	mV
2102220942B	pH		8.25	NA
2102220942B	Temperature		19.87	ºC
2102220942B	Turbidity		0.81	NTU

Well ID	100-HG-139	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111415B	Conductivity		1139	µS/cm
2103111415B	DTW		127.50	ft
2103111415B	pH		7.92	NA
2103111415B	Temperature		20.2	ºC
2103111415B	Turbidity		1.75	NTU
2103111418B	Conductivity		1146	µS/cm
2103111418B	DTW		128.53	ft
2103111418B	pH		7.90	NA
2103111418B	Temperature		20.3	ºC
2103111418B	Turbidity		1.49	NTU
2103111421B	Conductivity		1149	µS/cm
2103111421B	DTW		128.53	ft
2103111421B	pH		7.86	NA
2103111421B	Temperature		20.5	ºC
2103111421B	Turbidity		1.24	NTU

Well ID 200-B-240 **Event Date** 3/15/2021

Sample	Parameter	Result	Units
2103151000C	Conductivity	1260	µS/cm
2103151000C	DO	4.22	mg/L
2103151000C	DTW	195.36	ft
2103151000C	ORP	-9	mV
2103151000C	pH	8.66	NA
2103151000C	Temperature	21.44	ºC
2103151000C	Turbidity	1.03	NTU
2103151001C	Conductivity	1253	µS/cm
2103151001C	DO	4.18	mg/L
2103151001C	DTW	195.55	ft
2103151001C	ORP	-9	mV
2103151001C	pH	8.65	NA
2103151001C	Temperature	21.22	ºC
2103151001C	Turbidity	1.25	NTU
2103151002C	Conductivity	1257	µS/cm
2103151002C	DO	4.15	mg/L
2103151002C	DTW	195.55	ft
2103151002C	ORP	-9	mV
2103151002C	pH	8.66	NA
2103151002C	Temperature	21.30	ºC
2103151002C	Turbidity	1.09	NTU

Well ID 200-C-170 **Event Date** 2/18/2021

Sample	Parameter	Result	Units
2102181500Y	Atmospheric Pressure	12.58	psia
2102181500Y	Conductivity	1320	µS/cm
2102181500Y	DTW	149.00	ft
2102181500Y	Formation Pressure	29.90	psia
2102181500Y	pH	7.14	NA
2102181500Y	Temperature	18.4	ºC
2102181500Y	Turbidity	1.31	NTU
2102181545Y	Atmospheric Pressure	12.55	psia
2102181545Y	Conductivity	1498	µS/cm
2102181545Y	DTW	149.20	ft
2102181545Y	pH	7.05	NA
2102181545Y	Temperature	14.4	ºC
2102181545Y	Turbidity	0.72	NTU

Well ID 200-C-225 **Event Date** 2/18/2021

Sample	Parameter	Result	Units
2102181050Y	Atmospheric Pressure	12.60	psia
2102181050Y	Conductivity	1485	µS/cm
2102181050Y	DTW	148.70	ft
2102181050Y	Formation Pressure	53.70	psia
2102181050Y	pH	7.96	NA
2102181050Y	Temperature	19.8	ºC
2102181050Y	Turbidity	0.43	NTU
2102181350Y	Atmospheric Pressure	12.62	psia
2102181350Y	Conductivity	1358	µS/cm
2102181350Y	DTW	149.00	ft
2102181350Y	pH	7.90	NA
2102181350Y	Temperature	15.1	ºC
2102181350Y	Turbidity	0.27	NTU

Well ID 200-C-270 **Event Date** 2/17/2021

Sample	Parameter	Result	Units
2102171530Y	Atmospheric Pressure	12.38	psia
2102171530Y	Conductivity	1492	µS/cm
2102171530Y	DTW	148.37	ft
2102171530Y	Formation Pressure	73.03	psia
2102171530Y	pH	7.90	NA
2102171530Y	Temperature	18.8	ºC
2102171530Y	Turbidity	0.64	NTU
2102180923Y	Atmospheric Pressure	12.59	psia
2102180923Y	Conductivity	1534	µS/cm
2102180923Y	DTW	148.70	ft
2102180923Y	pH	7.65	NA
2102180923Y	Temperature	14.4	ºC
2102180923Y	Turbidity	0.50	NTU

Well ID	200-D-240	Event Date	3/16/2021	
Sample	**Parameter**		**Result**	**Units**
2103161000C	Conductivity		1345	µS/cm
2103161000C	DO		3.75	mg/L
2103161000C	ORP		-39	mV
2103161000C	pH		8.60	NA
2103161000C	Temperature		20.01	ºC
2103161000C	Turbidity		2.25	NTU
2103161005C	Conductivity		1335	µS/cm
2103161005C	DO		3.76	mg/L
2103161005C	ORP		-39	mV
2103161005C	pH		8.53	NA
2103161005C	Temperature		19.53	ºC
2103161005C	Turbidity		2.11	NTU
2103161010C	Conductivity		1335	µS/cm
2103161010C	DO		3.79	mg/L
2103161010C	ORP		-39	mV
2103161010C	pH		8.59	NA
2103161010C	Temperature		19.69	ºC
2103161010C	Turbidity		2.06	NTU

Well ID	200-F-225	Event Date	2/23/2021	
Sample	**Parameter**		**Result**	**Units**
2102231010Y	Atmospheric Pressure		12.48	psia
2102231010Y	Conductivity		1387	µS/cm
2102231010Y	DTW		176.06	ft
2102231010Y	Formation Pressure		42.62	psia
2102231010Y	pH		7.67	NA
2102231010Y	Temperature		20.0	ºC
2102231010Y	Turbidity		4.03	NTU
2102231106Y	Atmospheric Pressure		12.50	psia
2102231106Y	Conductivity		1371	µS/cm
2102231106Y	DTW		176.17	ft
2102231106Y	pH		7.45	NA
2102231106Y	Temperature		20.9	ºC
2102231106Y	Turbidity		2.92	NTU

Well ID 200-F-370 **Event Date** 2/22/2021

Sample	Parameter	Result	Units
2102220945Y	Atmospheric Pressure	12.60	psia
2102220945Y	Conductivity	1492	µS/cm
2102220945Y	DTW	175.72	ft
2102220945Y	Formation Pressure	104.91	psia
2102220945Y	pH	7.36	NA
2102220945Y	Temperature	20.4	ºC
2102220945Y	Turbidity	2.08	NTU
2102221031Y	Atmospheric Pressure	12.58	psia
2102221031Y	Conductivity	1475	µS/cm
2102221031Y	DTW	175.87	ft
2102221031Y	pH	7.27	NA
2102221031Y	Temperature	20.7	ºC
2102221031Y	Turbidity	1.51	NTU

Well ID 200-F-420 **Event Date** 2/22/2021

Sample	Parameter	Result	Units
2102221505Y	Atmospheric Pressure	12.53	psia
2102221505Y	Conductivity	1593	µS/cm
2102221505Y	DTW	175.87	ft
2102221505Y	Formation Pressure	126.92	psia
2102221505Y	pH	7.51	NA
2102221505Y	Temperature	22.3	ºC
2102221505Y	Turbidity	7.22	NTU
2102230845Y	Atmospheric Pressure	12.57	psia
2102230845Y	Conductivity	1605	µS/cm
2102230845Y	DTW	176.06	ft
2102230845Y	pH	7.37	NA
2102230845Y	Temperature	21.7	ºC
2102230845Y	Turbidity	4.41	NTU

Well ID	200-KV-150	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103101430C	Conductivity		1175	µS/cm
2103101430C	DO		1.03	mg/L
2103101430C	DTW		159.50	ft
2103101430C	ORP		49	mV
2103101430C	pH		7.68	NA
2103101430C	Temperature		22.34	ºC
2103101430C	Turbidity		5.79	NTU
2103101431C	Conductivity		1170	µS/cm
2103101431C	DO		1.01	mg/L
2103101431C	DTW		159.60	ft
2103101431C	ORP		43	mV
2103101431C	pH		7.74	NA
2103101431C	Temperature		22.35	ºC
2103101431C	Turbidity		5.08	NTU
2103101432C	Conductivity		1155	µS/cm
2103101432C	DO		1.04	mg/L
2103101432C	DTW		159.60	ft
2103101432C	ORP		37	mV
2103101432C	pH		7.79	NA
2103101432C	Temperature		22.30	ºC
2103101432C	Turbidity		5.02	NTU

Well ID	300-A-170	Event Date	2/18/2021	
Sample	**Parameter**		**Result**	**Units**
2102181015B	Conductivity		974	µS/cm
2102181015B	DO		4.27	mg/L
2102181015B	ORP		96	mV
2102181015B	pH		7.67	NA
2102181015B	Temperature		20.94	ºC
2102181015B	Turbidity		4.71	NTU
2102181016B	Conductivity		981	µS/cm
2102181016B	DO		4.24	mg/L
2102181016B	ORP		96	mV
2102181016B	pH		7.62	NA
2102181016B	Temperature		21.03	ºC
2102181016B	Turbidity		4.77	NTU
2102181017B	Conductivity		978	µS/cm
2102181017B	DO		4.13	mg/L
2102181017B	ORP		96	mV
2102181017B	pH		7.62	NA
2102181017B	Temperature		20.99	ºC
2102181017B	Turbidity		4.83	NTU

Well ID	300-B-166	Event Date	2/3/2021	
Sample	**Parameter**		**Result**	**Units**
2102031450C	Conductivity		850	µS/cm
2102031450C	DO		4.78	mg/L
2102031450C	DTW		163.55	ft
2102031450C	ORP		171	mV
2102031450C	pH		7.43	NA
2102031450C	Temperature		20.67	ºC
2102031450C	Turbidity		1.25	NTU
2102031451C	Conductivity		849	µS/cm
2102031451C	DO		4.55	mg/L
2102031451C	DTW		163.60	ft
2102031451C	ORP		175	mV
2102031451C	pH		7.44	NA
2102031451C	Temperature		20.71	ºC
2102031451C	Turbidity		1.29	NTU
2102031452C	Conductivity		836	µS/cm
2102031452C	DO		4.62	mg/L
2102031452C	DTW		163.60	ft
2102031452C	ORP		174	mV
2102031452C	pH		7.40	NA
2102031452C	Temperature		20.69	ºC
2102031452C	Turbidity		1.39	NTU

Well ID	300-E-138	Event Date	2/23/2021	
Sample	**Parameter**		**Result**	**Units**
2102231435Y	Atmospheric Pressure		12.40	psia
2102231435Y	Conductivity		1489	µS/cm
2102231435Y	DTW		138.30	ft
2102231435Y	Formation Pressure		22.49	psia
2102231435Y	pH		8.04	NA
2102231435Y	Temperature		20.7	ºC
2102231435Y	Turbidity		1.71	NTU
2102240840Y	Atmospheric Pressure		12.49	psia
2102240840Y	Conductivity		1506	µS/cm
2102240840Y	DTW		138.36	ft
2102240840Y	pH		7.86	NA
2102240840Y	Temperature		20.3	ºC
2102240840Y	Turbidity		1.12	NTU

Well ID 300-E-183 **Event Date** 2/24/2021

Sample	Parameter	Result	Units
2102241000Y	Atmospheric Pressure	12.47	psia
2102241000Y	Conductivity	1067	µS/cm
2102241000Y	DTW	138.36	ft
2102241000Y	Formation Pressure	42.03	psia
2102241000Y	pH	7.94	NA
2102241000Y	Temperature	19.4	ºC
2102241000Y	Turbidity	1.44	NTU
2102241041Y	Atmospheric Pressure	12.49	psia
2102241041Y	Conductivity	1036	µS/cm
2102241041Y	DTW	138.52	ft
2102241041Y	pH	8.01	NA
2102241041Y	Temperature	19.9	ºC
2102241041Y	Turbidity	1.07	NTU

Well ID 400-EV-131 **Event Date** 2/1/2021

Sample	Parameter	Result	Units
2102011455C	Conductivity	1460	µS/cm
2102011455C	DO	4.66	mg/L
2102011455C	DTW	142.70	ft
2102011455C	ORP	56	mV
2102011455C	pH	8.02	NA
2102011455C	Temperature	19.88	ºC
2102011455C	Turbidity	5.63	NTU
2102011456C	Conductivity	1470	µS/cm
2102011456C	DO	4.79	mg/L
2102011456C	DTW	142.70	ft
2102011456C	ORP	56	mV
2102011456C	pH	8.02	NA
2102011456C	Temperature	19.87	ºC
2102011456C	Turbidity	5.76	NTU
2102011457C	Conductivity	1460	µS/cm
2102011457C	DO	4.63	mg/L
2102011457C	DTW	172.70	ft
2102011457C	ORP	56	mV
2102011457C	pH	8.02	NA
2102011457C	Temperature	19.87	ºC
2102011457C	Turbidity	5.83	NTU

Well ID 400-FV-131 **Event Date** 4/21/2021

Sample	Parameter	Result	Units
2104210925C	Conductivity	1510	µS/cm
2104210925C	DO	3.13	mg/L
2104210925C	DTW	130.00	ft
2104210925C	ORP	113	mV
2104210925C	pH	8.46	NA
2104210925C	Temperature	18.95	ºC
2104210925C	Turbidity	2.15	NTU
2104210928C	Conductivity	1500	µS/cm
2104210928C	DO	2.81	mg/L
2104210928C	DTW	130.55	ft
2104210928C	ORP	109	mV
2104210928C	pH	8.50	NA
2104210928C	Temperature	19.07	ºC
2104210928C	Turbidity	1.92	NTU
2104210931C	Conductivity	1530	µS/cm
2104210931C	DO	2.57	mg/L
2104210931C	DTW	130.61	ft
2104210931C	ORP	107	mV
2104210931C	pH	8.53	NA
2104210931C	Temperature	19.21	ºC
2104210931C	Turbidity	1.78	NTU

Well ID 400-GV-125 **Event Date** 2/1/2021

Sample	Parameter	Result	Units
2102011015C	Conductivity	1500	µS/cm
2102011015C	DO	4.53	mg/L
2102011015C	ORP	71	mV
2102011015C	pH	7.67	NA
2102011015C	Temperature	18.80	ºC
2102011015C	Turbidity	0.71	NTU
2102011016C	Conductivity	1500	µS/cm
2102011016C	DO	4.01	mg/L
2102011016C	ORP	71	mV
2102011016C	pH	7.71	NA
2102011016C	Temperature	18.79	ºC
2102011016C	Turbidity	0.68	NTU
2102011017C	Conductivity	1490	µS/cm
2102011017C	DO	4.16	mg/L
2102011017C	ORP	71	mV
2102011017C	pH	7.71	NA
2102011017C	Temperature	18.81	ºC
2102011017C	Turbidity	0.73	NTU

Well ID 400-HV-147 **Event Date** 4/21/2021

Sample	Parameter	Result	Units
2104211400C	Conductivity	1960	µS/cm
2104211400C	DO	2.07	mg/L
2104211400C	DTW	139.84	ft
2104211400C	ORP	-7	mV
2104211400C	pH	9.05	NA
2104211400C	Temperature	21.95	ºC
2104211400C	Turbidity	0.90	NTU
2104211403C	Conductivity	1980	µS/cm
2104211403C	DO	1.98	mg/L
2104211403C	DTW	140.43	ft
2104211403C	ORP	-4	mV
2104211403C	pH	9.05	NA
2104211403C	Temperature	22.02	ºC
2104211403C	Turbidity	0.84	NTU
2104211406C	Conductivity	1980	µS/cm
2104211406C	DO	1.92	mg/L
2104211406C	DTW	140.49	ft
2104211406C	ORP	-3	mV
2104211406C	pH	9.08	NA
2104211406C	Temperature	22.09	ºC
2104211406C	Turbidity	0.72	NTU

Well ID 400-JV-150 **Event Date** 2/2/2021

Sample	Parameter	Result	Units
2102020950C	Conductivity	2070	µS/cm
2102020950C	DO	2.55	mg/L
2102020950C	ORP	4	mV
2102020950C	pH	8.08	NA
2102020950C	Temperature	20.66	ºC
2102020950C	Turbidity	1.03	NTU
2102020951C	Conductivity	2060	µS/cm
2102020951C	DO	2.47	mg/L
2102020951C	ORP	3	mV
2102020951C	pH	8.09	NA
2102020951C	Temperature	20.69	ºC
2102020951C	Turbidity	0.71	NTU
2102020952C	Conductivity	2070	µS/cm
2102020952C	DO	2.38	mg/L
2102020952C	ORP	3	mV
2102020952C	pH	8.10	NA
2102020952C	Temperature	20.71	ºC
2102020952C	Turbidity	0.69	NTU

Well ID 600-E-280 **Event Date** 2/4/2021

Sample	Parameter	Result	Units
2102041250Y	Atmospheric Pressure	12.45	psia
2102041250Y	Conductivity	1688	µS/cm
2102041250Y	DTW	261.09	ft
2102041250Y	Formation Pressure	52.85	psia
2102041250Y	pH	8.62	NA
2102041250Y	Temperature	22.2	ºC
2102041250Y	Turbidity	1.67	NTU
2102041331Y	Atmospheric Pressure	12.47	psia
2102041331Y	Conductivity	1694	µS/cm
2102041331Y	DTW	261.25	ft
2102041331Y	pH	8.40	NA
2102041331Y	Temperature	22.5	ºC
2102041331Y	Turbidity	1.34	NTU

Well ID 600-G-138 **Event Date** 4/27/2021

Sample	Parameter	Result	Units
2104270810B	Conductivity	2420	µS/cm
2104270810B	DTW	145.00	ft
2104270810B	pH	7.76	NA
2104270810B	Temperature	20.1	ºC
2104270810B	Turbidity	17.6	NTU
2104270840B	Conductivity	2440	µS/cm
2104270840B	DTW	145.61	ft
2104270840B	pH	7.68	NA
2104270840B	Temperature	19.8	ºC
2104270840B	Turbidity	8.75	NTU

Well ID	700-A-253	Event Date	3/22/2021	
Sample	**Parameter**		**Result**	**Units**
2103221000B	Conductivity		1111	µS/cm
2103221000B	DO		2.24	mg/L
2103221000B	DTW		195.85	ft
2103221000B	ORP		8	mV
2103221000B	pH		7.88	NA
2103221000B	Temperature		21.07	ºC
2103221000B	Turbidity		0.34	NTU
2103221005B	Conductivity		1110	µS/cm
2103221005B	DO		2.21	mg/L
2103221005B	DTW		195.85	ft
2103221005B	ORP		10	mV
2103221005B	pH		7.92	NA
2103221005B	Temperature		21.10	ºC
2103221005B	Turbidity		0.36	NTU
2103221010B	Conductivity		1111	µS/cm
2103221010B	DO		2.23	mg/L
2103221010B	DTW		195.85	ft
2103221010B	ORP		12	mV
2103221010B	pH		7.94	NA
2103221010B	Temperature		21.08	ºC
2103221010B	Turbidity		0.38	NTU

Well ID	700-D-186	Event Date	3/23/2021	
Sample	**Parameter**		**Result**	**Units**
2103230915B	Conductivity		1384	µS/cm
2103230915B	DO		3.61	mg/L
2103230915B	DTW		178.74	ft
2103230915B	ORP		25	mV
2103230915B	pH		8.84	NA
2103230915B	Temperature		20.23	ºC
2103230915B	Turbidity		0.17	NTU
2103230916B	Conductivity		1381	µS/cm
2103230916B	DO		3.74	mg/L
2103230916B	DTW		179.34	ft
2103230916B	ORP		25	mV
2103230916B	pH		8.73	NA
2103230916B	Temperature		20.11	ºC
2103230916B	Turbidity		0.20	NTU
2103230917B	Conductivity		1388	µS/cm
2103230917B	DO		3.69	mg/L
2103230917B	DTW		179.34	ft
2103230917B	ORP		25	mV
2103230917B	pH		8.74	NA
2103230917B	Temperature		20.22	ºC
2103230917B	Turbidity		0.35	NTU

Well ID	700-H-350	Event Date	3/23/2021	
Sample	**Parameter**		**Result**	**Units**
2103231440Y	Atmospheric Pressure		12.27	psia
2103231440Y	Conductivity		858	µS/cm
2103231440Y	DTW		255.44	ft
2103231440Y	Formation Pressure		64.56	psia
2103231440Y	pH		8.85	NA
2103231440Y	Temperature		21.3	ºC
2103231440Y	Turbidity		0.73	NTU
2103241315Y	Atmospheric Pressure		12.31	psia
2103241315Y	Conductivity		874	µS/cm
2103241315Y	DTW		255.63	ft
2103241315Y	pH		8.67	NA
2103241315Y	Temperature		20.8	ºC
2103241315Y	Turbidity		0.60	NTU

Well ID 700-H-535 **Event Date** 3/22/2021

Sample	Parameter	Result	Units
2103221355Y	Atmospheric Pressure	12.32	psia
2103221355Y	Conductivity	638	µS/cm
2103221355Y	DTW	255.27	ft
2103221355Y	Formation Pressure	144.35	psia
2103221355Y	pH	8.81	NA
2103221355Y	Temperature	20.9	ºC
2103221355Y	Turbidity	3.16	NTU
2103231035Y	Atmospheric Pressure	12.30	psia
2103231035Y	Conductivity	657	µS/cm
2103231035Y	DTW	255.44	ft
2103231035Y	pH	8.70	NA
2103231035Y	Temperature	19.5	ºC
2103231035Y	Turbidity	2.26	NTU

Well ID 700-H-670 **Event Date** 3/22/2021

Sample	Parameter	Result	Units
2103220950Y	Atmospheric Pressure	12.33	psia
2103220950Y	Conductivity	714	µS/cm
2103220950Y	DTW	255.10	ft
2103220950Y	Formation Pressure	202.55	psia
2103220950Y	pH	8.67	NA
2103220950Y	Temperature	19.5	ºC
2103220950Y	Turbidity	2.67	NTU
2103221110Y	Atmospheric Pressure	12.31	psia
2103221110Y	Conductivity	730	µS/cm
2103221110Y	DTW	255.27	ft
2103221110Y	pH	8.51	NA
2103221110Y	Temperature	19.8	ºC
2103221110Y	Turbidity	1.80	NTU

Well ID	700-J-200	Event Date	3/22/2021	
Sample	**Parameter**		**Result**	**Units**
2103220840B	Conductivity		1275	µS/cm
2103220840B	DO		4.94	mg/L
2103220840B	DTW		121.84	ft
2103220840B	ORP		40	mV
2103220840B	pH		7.77	NA
2103220840B	Temperature		20.83	ºC
2103220840B	Turbidity		0.57	NTU
2103220845B	Conductivity		1278	µS/cm
2103220845B	DO		4.92	mg/L
2103220845B	DTW		121.84	ft
2103220845B	ORP		38	mV
2103220845B	pH		7.74	NA
2103220845B	Temperature		20.76	ºC
2103220845B	Turbidity		0.64	NTU
2103220850B	Conductivity		1274	µS/cm
2103220850B	DO		4.91	mg/L
2103220850B	DTW		121.84	ft
2103220850B	ORP		39	mV
2103220850B	pH		7.76	NA
2103220850B	Temperature		20.80	ºC
2103220850B	Turbidity		0.48	NTU

Well ID	BLM-10-517	Event Date	4/1/2021	
Sample	**Parameter**		**Result**	**Units**
2104011340B	Conductivity		1119	µS/cm
2104011340B	DO		4.82	mg/L
2104011340B	DTW		494.90	ft
2104011340B	ORP		170	mV
2104011340B	pH		6.97	NA
2104011340B	Temperature		20.12	ºC
2104011340B	Turbidity		2.17	NTU
2104011342B	Conductivity		1123	µS/cm
2104011342B	DO		4.78	mg/L
2104011342B	DTW		494.92	ft
2104011342B	ORP		173	mV
2104011342B	pH		6.95	NA
2104011342B	Temperature		20.19	ºC
2104011342B	Turbidity		0.68	NTU
2104011344B	Conductivity		1119	µS/cm
2104011344B	DO		4.82	mg/L
2104011344B	DTW		494.92	ft
2104011344B	ORP		170	mV
2104011344B	pH		6.98	NA
2104011344B	Temperature		20.14	ºC
2104011344B	Turbidity		1.27	NTU

Well ID	BLM-13-300	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040900C	Conductivity		1283	µS/cm
2103040900C	DO		5.74	mg/L
2103040900C	DTW		247.89	ft
2103040900C	ORP		-32	mV
2103040900C	pH		8.10	NA
2103040900C	Temperature		20.12	ºC
2103040900C	Turbidity		0.24	NTU
2103040902C	Conductivity		1280	µS/cm
2103040902C	DO		5.76	mg/L
2103040902C	DTW		248.39	ft
2103040902C	ORP		-31	mV
2103040902C	pH		8.09	NA
2103040902C	Temperature		20.15	ºC
2103040902C	Turbidity		0.27	NTU
2103040904C	Conductivity		1281	µS/cm
2103040904C	DO		5.75	mg/L
2103040904C	DTW		248.42	ft
2103040904C	ORP		-31	mV
2103040904C	pH		8.11	NA
2103040904C	Temperature		20.11	ºC
2103040904C	Turbidity		0.26	NTU

Well ID	BLM-14-327	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103151500C	Conductivity		1328	µS/cm
2103151500C	DO		6.25	mg/L
2103151500C	DTW		277.95	ft
2103151500C	ORP		-25	mV
2103151500C	pH		8.85	NA
2103151500C	Temperature		20.31	ºC
2103151500C	Turbidity		3.03	NTU
2103151501C	Conductivity		1330	µS/cm
2103151501C	DO		5.80	mg/L
2103151501C	DTW		277.95	ft
2103151501C	ORP		-25	mV
2103151501C	pH		8.85	NA
2103151501C	Temperature		20.27	ºC
2103151501C	Turbidity		2.95	NTU
2103151502C	Conductivity		1337	µS/cm
2103151502C	DO		5.72	mg/L
2103151502C	DTW		277.95	ft
2103151502C	ORP		-25	mV
2103151502C	pH		8.87	NA
2103151502C	Temperature		20.38	ºC
2103151502C	Turbidity		2.87	NTU

Well ID	BLM-21-400	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102080900C	Conductivity		1120	µS/cm
2102080900C	DTW		336.74	ft
2102080900C	pH		7.85	NA
2102080900C	Temperature		17.5	ºC
2102080900C	Turbidity		1.39	NTU
2102080902C	Conductivity		1116	µS/cm
2102080902C	DTW		336.89	ft
2102080902C	pH		7.92	NA
2102080902C	Temperature		17.7	ºC
2102080902C	Turbidity		1.14	NTU
2102080904C	Conductivity		1110	µS/cm
2102080904C	DTW		336.89	ft
2102080904C	pH		7.96	NA
2102080904C	Temperature		18.0	ºC
2102080904C	Turbidity		1.12	NTU

Well ID	BLM-23-431	Event Date	2/4/2021	
Sample	**Parameter**		**Result**	**Units**
2102041301C	Conductivity		1384	µS/cm
2102041301C	DTW		330.90	ft
2102041301C	pH		7.35	NA
2102041301C	Temperature		20.0	ºC
2102041301C	Turbidity		1.09	NTU
2102041320C	Conductivity		1383	µS/cm
2102041320C	DTW		330.95	ft
2102041320C	pH		7.37	NA
2102041320C	Temperature		21.6	ºC
2102041320C	Turbidity		0.99	NTU

Well ID	BLM-32-543	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102020945A	Conductivity		1009	µS/cm
2102020945A	pH		8.20	NA
2102020945A	Temperature		17.9	ºC
2102020945A	Turbidity		1.43	NTU
2102021440A	Conductivity		1017	µS/cm
2102021440A	pH		7.80	NA
2102021440A	Temperature		20.5	ºC
2102021440A	Turbidity		0.37	NTU

Well ID	BLM-32-571	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021000A	Conductivity		970	µS/cm
2102021000A	pH		8.40	NA
2102021000A	Temperature		18.7	ºC
2102021000A	Turbidity		0.39	NTU
2102021045A	Conductivity		1008	µS/cm
2102021045A	pH		8.01	NA
2102021045A	Temperature		19.4	ºC
2102021045A	Turbidity		0.22	NTU

Well ID	BLM-32-632	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021009A	Conductivity		965	µS/cm
2102021009A	pH		8.56	NA
2102021009A	Temperature		18.0	ºC
2102021009A	Turbidity		0.69	NTU
2102021018A	Conductivity		967	µS/cm
2102021018A	pH		8.03	NA
2102021018A	Temperature		19.3	ºC
2102021018A	Turbidity		0.40	NTU

Well ID **BLM-39-385** **Event Date** **4/7/2021**

Sample	Parameter	Result	Units
2104071405Y	Atmospheric Pressure	12.24	psia
2104071405Y	Conductivity	1139	µS/cm
2104071405Y	DTW	368.25	ft
2104071405Y	Formation Pressure	25.06	psia
2104071405Y	pH	8.33	NA
2104071405Y	Temperature	23.4	ºC
2104071405Y	Turbidity	4.68	NTU
2104071501Y	Atmospheric Pressure	12.21	psia
2104071501Y	Conductivity	1127	µS/cm
2104071501Y	DTW	368.33	ft
2104071501Y	pH	8.39	NA
2104071501Y	Temperature	23.7	ºC
2104071501Y	Turbidity	3.31	NTU

Well ID **BLM-39-560** **Event Date** **4/7/2021**

Sample	Parameter	Result	Units
2104070945Y	Atmospheric Pressure	12.20	psia
2104070945Y	Conductivity	694	µS/cm
2104070945Y	DTW	368.10	ft
2104070945Y	Formation Pressure	97.35	psia
2104070945Y	pH	8.23	NA
2104070945Y	Temperature	21.3	ºC
2104070945Y	Turbidity	2.06	NTU
2104071050Y	Atmospheric Pressure	12.21	psia
2104071050Y	Conductivity	680	µS/cm
2104071050Y	DTW	368.25	ft
2104071050Y	pH	8.12	NA
2104071050Y	Temperature	21.5	ºC
2104071050Y	Turbidity	1.60	NTU

Well ID	BLM-40-517	Event Date	4/1/2021	
Sample	**Parameter**		**Result**	**Units**
2104011020C	Conductivity		957	µS/cm
2104011020C	DTW		523.69	ft
2104011020C	pH		8.71	NA
2104011020C	Temperature		10.5	ºC
2104011020C	Turbidity		0.80	NTU
2104011025C	Conductivity		957	µS/cm
2104011025C	DTW		523.69	ft
2104011025C	pH		8.63	NA
2104011025C	Temperature		10.8	ºC
2104011025C	Turbidity		0.92	NTU
2104011030C	Conductivity		958	µS/cm
2104011030C	DTW		523.69	ft
2104011030C	pH		8.50	NA
2104011030C	Temperature		10.9	ºC
2104011030C	Turbidity		0.84	NTU

Well ID	BLM-40-595	Event Date	4/12/2021	
Sample	**Parameter**		**Result**	**Units**
2104121400C	Conductivity		619	µS/cm
2104121400C	DO		4.80	mg/L
2104121400C	DTW		521.73	ft
2104121400C	ORP		33	mV
2104121400C	pH		7.96	NA
2104121400C	Temperature		20.95	ºC
2104121400C	Turbidity		0.61	NTU
2104121403C	Conductivity		617	µS/cm
2104121403C	DO		4.50	mg/L
2104121403C	DTW		522.73	ft
2104121403C	ORP		33	mV
2104121403C	pH		7.99	NA
2104121403C	Temperature		20.85	ºC
2104121403C	Turbidity		0.63	NTU
2104121406C	Conductivity		613	µS/cm
2104121406C	DO		4.34	mg/L
2104121406C	DTW		522.73	ft
2104121406C	ORP		34	mV
2104121406C	pH		8.01	NA
2104121406C	Temperature		20.89	ºC
2104121406C	Turbidity		0.50	NTU

Well ID	BLM-40-688	Event Date	4/14/2021	
Sample	**Parameter**		**Result**	**Units**
2104141055C	Conductivity		800	µS/cm
2104141055C	DO		3.98	mg/L
2104141055C	DTW		509.96	ft
2104141055C	ORP		1	mV
2104141055C	pH		8.21	NA
2104141055C	Temperature		20.80	ºC
2104141055C	Turbidity		0.81	NTU
2104141058C	Conductivity		794	µS/cm
2104141058C	DO		3.80	mg/L
2104141058C	DTW		510.21	ft
2104141058C	ORP		0	mV
2104141058C	pH		8.17	NA
2104141058C	Temperature		20.86	ºC
2104141058C	Turbidity		0.78	NTU
2104141101C	Conductivity		788	µS/cm
2104141101C	DO		3.64	mg/L
2104141101C	DTW		510.21	ft
2104141101C	ORP		-2	mV
2104141101C	pH		8.15	NA
2104141101C	Temperature		20.93	ºC
2104141101C	Turbidity		0.72	NTU

Well ID	BLM-41-420	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201410C	Conductivity		1119	µS/cm
2104201410C	DO		3.56	mg/L
2104201410C	DTW		353.04	ft
2104201410C	ORP		68	mV
2104201410C	pH		8.92	NA
2104201410C	Temperature		21.83	ºC
2104201410C	Turbidity		1.59	NTU
2104201413C	Conductivity		1108	µS/cm
2104201413C	DO		3.38	mg/L
2104201413C	DTW		353.90	ft
2104201413C	ORP		67	mV
2104201413C	pH		8.95	NA
2104201413C	Temperature		21.91	ºC
2104201413C	Turbidity		1.28	NTU
2104201416C	Conductivity		1102	µS/cm
2104201416C	DO		3.22	mg/L
2104201416C	DTW		353.90	ft
2104201416C	ORP		64	mV
2104201416C	pH		8.96	NA
2104201416C	Temperature		22.03	ºC
2104201416C	Turbidity		1.23	NTU

Well ID	BLM-41-670	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104200915C	Conductivity		1056	µS/cm
2104200915C	DO		2.29	mg/L
2104200915C	DTW		392.31	ft
2104200915C	ORP		-398	mV
2104200915C	pH		8.44	NA
2104200915C	Temperature		20.81	ºC
2104200915C	Turbidity		4.46	NTU
2104200918C	Conductivity		1051	µS/cm
2104200918C	DO		2.11	mg/L
2104200918C	DTW		392.66	ft
2104200918C	ORP		-400	mV
2104200918C	pH		8.49	NA
2104200918C	Temperature		20.87	ºC
2104200918C	Turbidity		3.82	NTU
2104200921C	Conductivity		1043	µS/cm
2104200921C	DO		2.00	mg/L
2104200921C	DTW		392.66	ft
2104200921C	ORP		-403	mV
2104200921C	pH		8.53	NA
2104200921C	Temperature		20.94	ºC
2104200921C	Turbidity		3.18	NTU

Well ID	BLM-42-569	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103100850B	Conductivity		649	µS/cm
2103100850B	DO		3.71	mg/L
2103100850B	ORP		62	mV
2103100850B	pH		8.04	NA
2103100850B	Temperature		20.38	ºC
2103100850B	Turbidity		0.51	NTU
2103100855B	Conductivity		645	µS/cm
2103100855B	DO		3.63	mg/L
2103100855B	ORP		61	mV
2103100855B	pH		8.01	NA
2103100855B	Temperature		20.47	ºC
2103100855B	Turbidity		0.53	NTU
2103100859B	Conductivity		638	µS/cm
2103100859B	DO		3.50	mg/L
2103100859B	ORP		62	mV
2103100859B	pH		7.96	NA
2103100859B	Temperature		20.55	ºC
2103100859B	Turbidity		0.44	NTU

Well ID	BLM-42-709	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103101020B	Conductivity		655	µS/cm
2103101020B	DO		3.36	mg/L
2103101020B	ORP		34	mV
2103101020B	pH		8.34	NA
2103101020B	Temperature		20.90	ºC
2103101020B	Turbidity		0.30	NTU
2103101024B	Conductivity		659	µS/cm
2103101024B	DO		3.30	mg/L
2103101024B	ORP		34	mV
2103101024B	pH		8.32	NA
2103101024B	Temperature		21.06	ºC
2103101024B	Turbidity		0.26	NTU
2103101028B	Conductivity		664	µS/cm
2103101028B	DO		3.20	mg/L
2103101028B	ORP		32	mV
2103101028B	pH		8.31	NA
2103101028B	Temperature		21.13	ºC
2103101028B	Turbidity		0.32	NTU

Well ID	BLM-5-527	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103151335B	Conductivity		1061	µS/cm
2103151335B	DTW		509.05	ft
2103151335B	pH		7.84	NA
2103151335B	Temperature		20.6	ºC
2103151335B	Turbidity		0.64	NTU
2103151338B	Conductivity		1053	µS/cm
2103151338B	DTW		509.05	ft
2103151338B	pH		7.81	NA
2103151338B	Temperature		20.7	ºC
2103151338B	Turbidity		0.60	NTU
2103151341B	Conductivity		1050	µS/cm
2103151341B	DTW		509.05	ft
2103151341B	pH		7.79	NA
2103151341B	Temperature		20.7	ºC
2103151341B	Turbidity		0.56	NTU

Well ID	BLM-6-488	Event Date	4/14/2021	
Sample	**Parameter**		**Result**	**Units**
2104141415C	Conductivity		1520	µS/cm
2104141415C	DO		3.19	mg/L
2104141415C	DTW		360.04	ft
2104141415C	ORP		-30	mV
2104141415C	pH		8.42	NA
2104141415C	Temperature		21.01	ºC
2104141415C	Turbidity		1.68	NTU
2104141418C	Conductivity		1530	µS/cm
2104141418C	DO		3.03	mg/L
2104141418C	DTW		360.10	ft
2104141418C	ORP		-34	mV
2104141418C	pH		8.41	NA
2104141418C	Temperature		21.13	ºC
2104141418C	Turbidity		1.58	NTU
2104141421C	Conductivity		1580	µS/cm
2104141421C	DO		2.89	mg/L
2104141421C	DTW		360.10	ft
2104141421C	ORP		-39	mV
2104141421C	pH		8.38	NA
2104141421C	Temperature		21.19	ºC
2104141421C	Turbidity		1.47	NTU

Well ID	BLM-7-509	Event Date	3/1/2021	
Sample	**Parameter**		**Result**	**Units**
2103010930C	Conductivity		1144	µS/cm
2103010930C	DO		3.89	mg/L
2103010930C	DTW		495.57	ft
2103010930C	ORP		34	mV
2103010930C	pH		8.46	NA
2103010930C	Temperature		29.52	ºC
2103010930C	Turbidity		0.68	NTU
2103010932C	Conductivity		1141	µS/cm
2103010932C	DO		3.86	mg/L
2103010932C	DTW		495.71	ft
2103010932C	ORP		33	mV
2103010932C	pH		8.41	NA
2103010932C	Temperature		20.51	ºC
2103010932C	Turbidity		0.63	NTU
2103010934C	Conductivity		1143	µS/cm
2103010934C	DO		3.88	mg/L
2103010934C	DTW		495.71	ft
2103010934C	ORP		33	mV
2103010934C	pH		8.40	NA
2103010934C	Temperature		20.52	ºC
2103010934C	Turbidity		0.62	NTU

Well ID	BLM-9-419	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021310C	Conductivity		998	µS/cm
2103021310C	DO		5.20	mg/L
2103021310C	DTW		378.18	ft
2103021310C	ORP		-58	mV
2103021310C	pH		8.69	NA
2103021310C	Temperature		20.10	ºC
2103021310C	Turbidity		2.82	NTU
2103021315C	Conductivity		993	µS/cm
2103021315C	DO		5.31	mg/L
2103021315C	DTW		378.39	ft
2103021315C	ORP		-59	mV
2103021315C	pH		8.76	NA
2103021315C	Temperature		19.76	ºC
2103021315C	Turbidity		2.76	NTU
2103021320C	Conductivity		999	µS/cm
2103021320C	DO		5.01	mg/L
2103021320C	DTW		378.39	ft
2103021320C	ORP		-60	mV
2103021320C	pH		8.90	NA
2103021320C	Temperature		19.80	ºC
2103021320C	Turbidity		2.42	NTU

Well ID	BW-1-268	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103091310B	Conductivity		1389	µS/cm
2103091310B	DO		5.31	mg/L
2103091310B	DTW		168.70	ft
2103091310B	ORP		122	mV
2103091310B	pH		6.93	NA
2103091310B	Temperature		21.89	ºC
2103091310B	Turbidity		6.06	NTU
2103091312B	Conductivity		1382	µS/cm
2103091312B	DO		5.12	mg/L
2103091312B	DTW		168.85	ft
2103091312B	ORP		121	mV
2103091312B	pH		6.98	NA
2103091312B	Temperature		22.02	ºC
2103091312B	Turbidity		5.13	NTU
2103091314B	Conductivity		1370	µS/cm
2103091314B	DO		4.94	mg/L
2103091314B	DTW		168.93	ft
2103091314B	ORP		120	mV
2103091314B	pH		7.04	NA
2103091314B	Temperature		22.08	ºC
2103091314B	Turbidity		4.60	NTU

Well ID	BW-3-180	Event Date	4/19/2021	
Sample	**Parameter**		**Result**	**Units**
2104190940C	Conductivity		2370	µS/cm
2104190940C	DO		2.44	mg/L
2104190940C	DTW		172.50	ft
2104190940C	ORP		0	mV
2104190940C	pH		8.36	NA
2104190940C	Temperature		20.65	ºC
2104190940C	Turbidity		46.2	NTU
2104190943C	Conductivity		2420	µS/cm
2104190943C	DO		2.31	mg/L
2104190943C	DTW		173.68	ft
2104190943C	ORP		-3	mV
2104190943C	pH		8.39	NA
2104190943C	Temperature		20.71	ºC
2104190943C	Turbidity		41.8	NTU
2104190946C	Conductivity		2440	µS/cm
2104190946C	DO		2.23	mg/L
2104190946C	DTW		173.76	ft
2104190946C	ORP		-5	mV
2104190946C	pH		8.41	NA
2104190946C	Temperature		20.74	ºC
2104190946C	Turbidity		35.0	NTU

Well ID	BW-6-355	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111025B	Conductivity		1022	µS/cm
2103111025B	DTW		245.30	ft
2103111025B	pH		8.30	NA
2103111025B	Temperature		19.1	ºC
2103111025B	Turbidity		0.76	NTU
2103111028B	Conductivity		1029	µS/cm
2103111028B	DTW		246.12	ft
2103111028B	pH		8.26	NA
2103111028B	Temperature		19.1	ºC
2103111028B	Turbidity		0.72	NTU
2103111031B	Conductivity		1033	µS/cm
2103111031B	DTW		246.12	ft
2103111031B	pH		8.24	NA
2103111031B	Temperature		19.3	ºC
2103111031B	Turbidity		0.63	NTU

Well ID	JER-1-483	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080830A	Conductivity		1310	µS/cm
2104080830A	pH		8.45	NA
2104080830A	Temperature		19.2	ºC
2104080830A	Turbidity		0.44	NTU
2104080845A	Conductivity		1310	µS/cm
2104080845A	pH		8.47	NA
2104080845A	Temperature		19.3	ºC
2104080845A	Turbidity		0.49	NTU

Well ID	JER-1-563	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080850A	Conductivity		1382	µS/cm
2104080850A	pH		8.38	NA
2104080850A	Temperature		20.0	ºC
2104080850A	Turbidity		0.29	NTU
2104080905A	Conductivity		1379	µS/cm
2104080905A	pH		8.41	NA
2104080905A	Temperature		20.1	ºC
2104080905A	Turbidity		0.21	NTU

Well ID	JER-1-683	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080910A	Conductivity		1381	µS/cm
2104080910A	pH		8.31	NA
2104080910A	Temperature		19.7	ºC
2104080910A	Turbidity		0.34	NTU
2104080917A	Conductivity		1383	µS/cm
2104080917A	pH		8.38	NA
2104080917A	Temperature		19.9	ºC
2104080917A	Turbidity		0.43	NTU

Well ID	JER-2-504	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104200950A	Conductivity		1032	µS/cm
2104200950A	pH		7.87	NA
2104200950A	Temperature		20.9	ºC
2104200950A	Turbidity		0.84	NTU
2104201010A	Conductivity		1034	µS/cm
2104201010A	pH		7.81	NA
2104201010A	Temperature		20.8	ºC
2104201010A	Turbidity		0.78	NTU

Well ID	JER-2-584	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201015A	Conductivity		1020	µS/cm
2104201015A	pH		7.83	NA
2104201015A	Temperature		21.4	ºC
2104201015A	Turbidity		0.86	NTU
2104201025A	Conductivity		1017	µS/cm
2104201025A	pH		7.78	NA
2104201025A	Temperature		21.6	ºC
2104201025A	Turbidity		0.84	NTU

Well ID	JER-2-684	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201030A	Conductivity		1058	µS/cm
2104201030A	pH		7.79	NA
2104201030A	Temperature		21.2	ºC
2104201030A	Turbidity		0.72	NTU
2104201045A	Conductivity		1061	µS/cm
2104201045A	pH		7.75	NA
2104201045A	Temperature		21.2	ºC
2104201045A	Turbidity		0.76	NTU

Well ID	JP-1-424	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104131350C	Conductivity		1097	µS/cm
2104131350C	DO		5.40	mg/L
2104131350C	DTW		411.70	ft
2104131350C	ORP		-4	mV
2104131350C	pH		8.50	NA
2104131350C	Temperature		21.38	ºC
2104131350C	Turbidity		0.51	NTU
2104131353C	Conductivity		1083	µS/cm
2104131353C	DO		5.25	mg/L
2104131353C	DTW		411.82	ft
2104131353C	ORP		-3	mV
2104131353C	pH		8.48	NA
2104131353C	Temperature		21.45	ºC
2104131353C	Turbidity		0.42	NTU
2104131356C	Conductivity		1078	µS/cm
2104131356C	DO		5.09	mg/L
2104131356C	DTW		411.82	ft
2104131356C	ORP		-3	mV
2104131356C	pH		8.48	NA
2104131356C	Temperature		21.42	ºC
2104131356C	Turbidity		0.33	NTU

Well ID	JP-2-447	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130950C	Conductivity		1143	µS/cm
2104130950C	DO		5.55	mg/L
2104130950C	DTW		412.77	ft
2104130950C	ORP		49	mV
2104130950C	pH		7.84	NA
2104130950C	Temperature		20.06	ºC
2104130950C	Turbidity		0.44	NTU
2104130953C	Conductivity		1138	µS/cm
2104130953C	DO		5.16	mg/L
2104130953C	DTW		412.82	ft
2104130953C	ORP		49	mV
2104130953C	pH		7.85	NA
2104130953C	Temperature		20.14	ºC
2104130953C	Turbidity		0.40	NTU
2104130956C	Conductivity		1129	µS/cm
2104130956C	DO		4.90	mg/L
2104130956C	DTW		412.82	ft
2104130956C	ORP		49	mV
2104130956C	pH		7.85	NA
2104130956C	Temperature		20.21	ºC
2104130956C	Turbidity		0.26	NTU

Well ID	JP-3-509	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150855C	Conductivity		1096	µS/cm
2104150855C	DO		5.01	mg/L
2104150855C	ORP		61	mV
2104150855C	pH		8.43	NA
2104150855C	Temperature		20.02	ºC
2104150855C	Turbidity		0.31	NTU
2104150858C	Conductivity		1101	µS/cm
2104150858C	DO		4.91	mg/L
2104150858C	ORP		61	mV
2104150858C	pH		8.40	NA
2104150858C	Temperature		20.14	ºC
2104150858C	Turbidity		0.29	NTU
2104150901C	Conductivity		1098	µS/cm
2104150901C	DO		4.63	mg/L
2104150901C	ORP		60	mV
2104150901C	pH		8.40	NA
2104150901C	Temperature		20.22	ºC
2104150901C	Turbidity		0.26	NTU

Well ID	JP-3-689	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151025C	Conductivity		678	µS/cm
2104151025C	DO		5.97	mg/L
2104151025C	ORP		23	mV
2104151025C	pH		8.75	NA
2104151025C	Temperature		20.42	ºC
2104151025C	Turbidity		0.62	NTU
2104151028C	Conductivity		689	µS/cm
2104151028C	DO		5.43	mg/L
2104151028C	ORP		24	mV
2104151028C	pH		8.71	NA
2104151028C	Temperature		20.54	ºC
2104151028C	Turbidity		0.55	NTU
2104151031C	Conductivity		693	µS/cm
2104151031C	DO		5.12	mg/L
2104151031C	ORP		24	mV
2104151031C	pH		8.68	NA
2104151031C	Temperature		20.62	ºC
2104151031C	Turbidity		0.47	NTU

Well ID	NASA 3	Event Date	3/17/2021	
Sample	**Parameter**		**Result**	**Units**
2103170855B	Conductivity		999	µS/cm
2103170855B	DO		4.10	mg/L
2103170855B	DTW		125.65	ft
2103170855B	ORP		8	mV
2103170855B	pH		7.92	NA
2103170855B	Temperature		17.42	ºC
2103170855B	Turbidity		0.86	NTU
2103170857B	Conductivity		1000	µS/cm
2103170857B	DO		4.05	mg/L
2103170857B	ORP		7	mV
2103170857B	pH		7.93	NA
2103170857B	Temperature		17.45	ºC
2103170857B	Turbidity		0.49	NTU
2103170859B	Conductivity		1009	µS/cm
2103170859B	DO		4.12	mg/L
2103170859B	DTW		125.80	ft
2103170859B	ORP		7	mV
2103170859B	pH		7.90	NA
2103170859B	Temperature		17.37	ºC
2103170859B	Turbidity		0.58	NTU

Well ID **PL-10-484** **Event Date** **4/6/2021**

Sample	Parameter	Result	Units
2104060920Y	Atmospheric Pressure	12.44	psia
2104060920Y	Conductivity	1102	µS/cm
2104060920Y	DTW	463.61	ft
2104060920Y	Formation Pressure	22.19	psia
2104060920Y	pH	8.49	NA
2104060920Y	Temperature	22.1	ºC
2104060920Y	Turbidity	0.88	NTU
2104061037Y	Atmospheric Pressure	12.42	psia
2104061037Y	Conductivity	1085	µS/cm
2104061037Y	DTW	463.69	ft
2104061037Y	pH	8.43	NA
2104061037Y	Temperature	22.5	ºC
2104061037Y	Turbidity	0.80	NTU

Well ID **PL-10-592** **Event Date** **4/5/2021**

Sample	Parameter	Result	Units
2104051430Y	Atmospheric Pressure	12.48	psia
2104051430Y	Conductivity	1107	µS/cm
2104051430Y	DTW	463.48	ft
2104051430Y	Formation Pressure	69.02	psia
2104051430Y	pH	8.25	NA
2104051430Y	Temperature	25.1	ºC
2104051430Y	Turbidity	1.41	NTU
2104051524Y	Atmospheric Pressure	12.49	psia
2104051524Y	Conductivity	1117	µS/cm
2104051524Y	DTW	463.61	ft
2104051524Y	pH	8.36	NA
2104051524Y	Temperature	24.8	ºC
2104051524Y	Turbidity	1.04	NTU

Well ID PL-10-813 **Event Date** 4/1/2021

Sample	Parameter	Result	Units
2104011450Y	Atmospheric Pressure	12.42	psia
2104011450Y	Conductivity	1011	µS/cm
2104011450Y	DTW	462.95	ft
2104011450Y	Formation Pressure	167.65	psia
2104011450Y	pH	8.47	NA
2104011450Y	Temperature	22.8	ºC
2104011450Y	Turbidity	3.75	NTU
2104050900Y	Atmospheric Pressure	12.45	psia
2104050900Y	Conductivity	1027	µS/cm
2104050900Y	DTW	463.26	ft
2104050900Y	pH	8.53	NA
2104050900Y	Temperature	21.6	ºC
2104050900Y	Turbidity	2.83	NTU

Well ID PL-10-962 **Event Date** 4/5/2021

Sample	Parameter	Result	Units
2104051025Y	Atmospheric Pressure	12.42	psia
2104051025Y	Conductivity	1014	µS/cm
2104051025Y	DTW	463.26	ft
2104051025Y	Formation Pressure	239.09	psia
2104051025Y	pH	8.77	NA
2104051025Y	Temperature	24.4	ºC
2104051025Y	Turbidity	1.40	NTU
2104051310Y	Atmospheric Pressure	12.40	psia
2104051310Y	Conductivity	1030	µS/cm
2104051310Y	DTW	463.48	ft
2104051310Y	pH	8.67	NA
2104051310Y	Temperature	24.4	ºC
2104051310Y	Turbidity	1.17	NTU

Well ID PL-11-470 **Event Date** 3/2/2021

Sample	Parameter	Result	Units
2103021015A	Conductivity	1137	µS/cm
2103021015A	pH	8.13	NA
2103021015A	Temperature	15.0	ºC
2103021015A	Turbidity	0.24	NTU
2103021301A	Conductivity	1158	µS/cm
2103021301A	pH	7.27	NA
2103021301A	Temperature	19.8	ºC
2103021301A	Turbidity	0.58	NTU

Well ID	PL-11-530	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021030A	Conductivity		1133	µS/cm
2103021030A	pH		8.17	NA
2103021030A	Temperature		16.7	ºC
2103021030A	Turbidity		0.84	NTU
2103021313A	Conductivity		1136	µS/cm
2103021313A	pH		7.15	NA
2103021313A	Temperature		18.0	ºC
2103021313A	Turbidity		0.66	NTU

Well ID	PL-11-710	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021045A	Conductivity		1141	µS/cm
2103021045A	pH		7.88	NA
2103021045A	Temperature		16.4	ºC
2103021045A	Turbidity		0.44	NTU
2103021331A	Conductivity		1168	µS/cm
2103021331A	pH		7.27	NA
2103021331A	Temperature		19.8	ºC
2103021331A	Turbidity		0.38	NTU

Well ID	PL-11-820	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040845A	Conductivity		1049	µS/cm
2103040845A	pH		7.39	NA
2103040845A	Temperature		17.3	ºC
2103040845A	Turbidity		0.48	NTU
2103040926A	Conductivity		1046	µS/cm
2103040926A	pH		7.43	NA
2103040926A	Temperature		17.4	ºC
2103040926A	Turbidity		0.37	NTU

Well ID	PL-11-980	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040900A	Conductivity		977	µS/cm
2103040900A	pH		8.21	NA
2103040900A	Temperature		17.5	ºC
2103040900A	Turbidity		0.30	NTU
2103040905A	Conductivity		977	µS/cm
2103040905A	pH		8.23	NA
2103040905A	Temperature		17.6	ºC
2103040905A	Turbidity		0.32	NTU

Well ID	PL-12-570	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102081500B	Conductivity		1088	µS/cm
2102081500B	DO		3.65	mg/L
2102081500B	DTW		482.52	ft
2102081500B	ORP		64	mV
2102081500B	pH		7.80	NA
2102081500B	Temperature		20.38	ºC
2102081500B	Turbidity		0.51	NTU
2102081502B	Conductivity		1092	µS/cm
2102081502B	DO		3.71	mg/L
2102081502B	DTW		482.55	ft
2102081502B	ORP		63	mV
2102081502B	pH		7.76	NA
2102081502B	Temperature		20.47	ºC
2102081502B	Turbidity		0.69	NTU
2102081504B	Conductivity		1084	µS/cm
2102081504B	DO		3.75	mg/L
2102081504B	DTW		482.55	ft
2102081504B	ORP		63	mV
2102081504B	pH		7.73	NA
2102081504B	Temperature		20.50	ºC
2102081504B	Turbidity		0.44	NTU

Well ID	PL-12-800	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102080940B	Conductivity		1096	µS/cm
2102080940B	DO		5.00	mg/L
2102080940B	DTW		482.50	ft
2102080940B	ORP		132	mV
2102080940B	pH		7.60	NA
2102080940B	Temperature		19.26	ºC
2102080940B	Turbidity		3.07	NTU
2102080942B	Conductivity		1101	µS/cm
2102080942B	DO		4.87	mg/L
2102080942B	DTW		482.52	ft
2102080942B	ORP		135	mV
2102080942B	pH		7.54	NA
2102080942B	Temperature		19.33	ºC
2102080942B	Turbidity		0.39	NTU
2102080944B	Conductivity		1102	µS/cm
2102080944B	DO		5.03	mg/L
2102080944B	DTW		482.52	ft
2102080944B	ORP		138	mV
2102080944B	pH		7.46	NA
2102080944B	Temperature		19.31	ºC
2102080944B	Turbidity		1.85	NTU

Well ID	PL-1-486	Event Date	4/19/2021	
Sample	**Parameter**		**Result**	**Units**
2104191445C	Conductivity		1024	µS/cm
2104191445C	DO		6.19	mg/L
2104191445C	DTW		486.14	ft
2104191445C	ORP		8	mV
2104191445C	pH		8.87	NA
2104191445C	Temperature		21.67	ºC
2104191445C	Turbidity		1.13	NTU
2104191448C	Conductivity		1016	µS/cm
2104191448C	DO		5.95	mg/L
2104191448C	DTW		486.20	ft
2104191448C	ORP		10	mV
2104191448C	pH		8.84	NA
2104191448C	Temperature		21.78	ºC
2104191448C	Turbidity		0.95	NTU
2104191451C	Conductivity		1012	µS/cm
2104191451C	DO		5.70	mg/L
2104191451C	DTW		486.20	ft
2104191451C	ORP		13	mV
2104191451C	pH		8.80	NA
2104191451C	Temperature		21.90	ºC
2104191451C	Turbidity		0.91	NTU

Well ID	PL-2-504	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103150945B	Conductivity		1011	µS/cm
2103150945B	DTW		477.17	ft
2103150945B	pH		8.54	NA
2103150945B	Temperature		17.2	ºC
2103150945B	Turbidity		2.09	NTU
2103150948B	Conductivity		1006	µS/cm
2103150948B	DTW		477.26	ft
2103150948B	pH		8.52	NA
2103150948B	Temperature		17.3	ºC
2103150948B	Turbidity		1.99	NTU
2103150951B	Conductivity		1009	µS/cm
2103150951B	DTW		477.26	ft
2103150951B	pH		8.51	NA
2103150951B	Temperature		17.3	ºC
2103150951B	Turbidity		1.75	NTU

Well ID	PL-4-464	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103110935C	Conductivity		1103	µS/cm
2103110935C	DO		5.70	mg/L
2103110935C	DTW		447.82	ft
2103110935C	ORP		24	mV
2103110935C	pH		8.63	NA
2103110935C	Temperature		18.69	ºC
2103110935C	Turbidity		0.35	NTU
2103110937C	Conductivity		1112	µS/cm
2103110937C	DO		5.68	mg/L
2103110937C	DTW		447.90	ft
2103110937C	ORP		21	mV
2103110937C	pH		8.64	NA
2103110937C	Temperature		18.61	ºC
2103110937C	Turbidity		0.36	NTU
2103110939C	Conductivity		1110	µS/cm
2103110939C	DO		5.59	mg/L
2103110939C	DTW		447.90	ft
2103110939C	ORP		22	mV
2103110939C	pH		8.64	NA
2103110939C	Temperature		18.64	ºC
2103110939C	Turbidity		0.42	NTU

Well ID	PL-6-545	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104081407Y	Atmospheric Pressure		12.36	psia
2104081407Y	Conductivity		998	µS/cm
2104081407Y	DTW		468.34	ft
2104081407Y	Formation Pressure		56.15	psia
2104081407Y	pH		8.43	NA
2104081407Y	Temperature		24.8	ºC
2104081407Y	Turbidity		1.30	NTU
2104081525Y	Atmospheric Pressure		12.38	psia
2104081525Y	Conductivity		1009	µS/cm
2104081525Y	DTW		468.45	ft
2104081525Y	pH		8.34	NA
2104081525Y	Temperature		24.5	ºC
2104081525Y	Turbidity		0.88	NTU

Well ID PL-6-725 **Event Date** 4/8/2021

Sample	Parameter	Result	Units
2104081000Y	Atmospheric Pressure	12.28	psia
2104081000Y	Conductivity	965	µS/cm
2104081000Y	DTW	468.15	ft
2104081000Y	Formation Pressure	135.05	psia
2104081000Y	pH	8.21	NA
2104081000Y	Temperature	23.5	ºC
2104081000Y	Turbidity	1.51	NTU
2104081116Y	Atmospheric Pressure	12.25	psia
2104081116Y	Conductivity	958	µS/cm
2104081116Y	DTW	468.34	ft
2104081116Y	pH	8.15	NA
2104081116Y	Temperature	23.3	ºC
2104081116Y	Turbidity	1.17	NTU

Well ID PL-7-480 **Event Date** 2/3/2021

Sample	Parameter	Result	Units
2102030935Y	Atmospheric Pressure	12.70	psia
2102030935Y	Conductivity	1189	µS/cm
2102030935Y	DTW	477.50	ft
2102030935Y	Formation Pressure	13.70	psia
2102030935Y	pH	8.36	NA
2102030935Y	Temperature	21.3	ºC
2102030935Y	Turbidity	0.47	NTU
2102031510Y	Atmospheric Pressure	12.68	psia
2102031510Y	Conductivity	1170	µS/cm
2102031510Y	DTW	477.55	ft
2102031510Y	pH	8.26	NA
2102031510Y	Temperature	21.8	ºC
2102031510Y	Turbidity	0.48	NTU

Well ID **PL-7-560** **Event Date** **2/2/2021**

Sample	Parameter	Result	Units
2102021430Y	Atmospheric Pressure	12.67	psia
2102021430Y	Conductivity	1202	µS/cm
2102021430Y	DTW	477.35	ft
2102021430Y	Formation Pressure	47.86	psia
2102021430Y	pH	8.04	NA
2102021430Y	Temperature	23.7	ºC
2102021430Y	Turbidity	0.38	NTU
2102021515Y	Atmospheric Pressure	12.68	psia
2102021515Y	Conductivity	1191	µS/cm
2102021515Y	DTW	477.50	ft
2102021515Y	pH	7.94	NA
2102021515Y	Temperature	23.4	ºC
2102021515Y	Turbidity	0.34	NTU

Well ID **PL-7-630** **Event Date** **2/2/2021**

Sample	Parameter	Result	Units
2102020945Y	Atmospheric Pressure	12.70	psia
2102020945Y	Conductivity	1208	µS/cm
2102020945Y	DTW	477.13	ft
2102020945Y	Formation Pressure	78.93	psia
2102020945Y	pH	8.30	NA
2102020945Y	Temperature	22.5	ºC
2102020945Y	Turbidity	5.16	NTU
2102021305Y	Atmospheric Pressure	12.66	psia
2102021305Y	Conductivity	1185	µS/cm
2102021305Y	DTW	477.35	ft
2102021305Y	pH	8.43	NA
2102021305Y	Temperature	22.3	ºC
2102021305Y	Turbidity	3.38	NTU

Well ID **PL-8-455** **Event Date** **3/4/2021**

Sample	Parameter	Result	Units
2103040955Y	Atmospheric Pressure	12.62	psia
2103040955Y	Conductivity	874	µS/cm
2103040955Y	DTW	436.02	ft
2103040955Y	Formation Pressure	23.37	psia
2103040955Y	pH	8.50	NA
2103040955Y	Temperature	21.0	ºC
2103040955Y	Turbidity	0.82	NTU
2103041131Y	Atmospheric Pressure	12.61	psia
2103041131Y	Conductivity	890	µS/cm
2103041131Y	DTW	436.12	ft
2103041131Y	pH	8.38	NA
2103041131Y	Temperature	20.8	ºC
2103041131Y	Turbidity	0.76	NTU

Well ID **PL-8-605** **Event Date** **3/3/2021**

Sample	Parameter	Result	Units
2103031010Y	Atmospheric Pressure	12.67	psia
2103031010Y	Conductivity	1062	µS/cm
2103031010Y	DTW	435.65	ft
2103031010Y	Formation Pressure	88.25	psia
2103031010Y	pH	8.42	NA
2103031010Y	Temperature	22.2	ºC
2103031010Y	Turbidity	1.39	NTU
2103031113Y	Atmospheric Pressure	12.69	psia
2103031113Y	Conductivity	1071	µS/cm
2103031113Y	DTW	435.79	ft
2103031113Y	pH	8.38	NA
2103031113Y	Temperature	22.0	ºC
2103031113Y	Turbidity	1.14	NTU

Well ID	PL-8-780	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103080955Y	Atmospheric Pressure		12.73	psia
2103080955Y	Conductivity		920	µS/cm
2103080955Y	DTW		436.12	ft
2103080955Y	Formation Pressure		164.26	psia
2103080955Y	pH		8.25	NA
2103080955Y	Temperature		23.4	ºC
2103080955Y	Turbidity		2.16	NTU
2103081314Y	Atmospheric Pressure		12.69	psia
2103081314Y	Conductivity		937	µS/cm
2103081314Y	DTW		436.30	ft
2103081314Y	pH		8.31	NA
2103081314Y	Temperature		23.0	ºC
2103081314Y	Turbidity		1.40	NTU

Well ID	PL-8-965	Event Date	3/3/2021	
Sample	**Parameter**		**Result**	**Units**
2103031420Y	Atmospheric Pressure		12.63	psia
2103031420Y	Conductivity		848	µS/cm
2103031420Y	DTW		435.79	ft
2103031420Y	Formation Pressure		244.51	psia
2103031420Y	pH		8.57	NA
2103031420Y	Temperature		25.0	ºC
2103031420Y	Turbidity		2.87	NTU
2103031522Y	Atmospheric Pressure		12.61	psia
2103031522Y	Conductivity		842	µS/cm
2103031522Y	DTW		436.02	ft
2103031522Y	pH		8.40	NA
2103031522Y	Temperature		24.6	ºC
2103031522Y	Turbidity		1.90	NTU

Well ID	ST-1-473	Event Date	4/12/2021	
Sample	**Parameter**		**Result**	**Units**
2104120920C	Conductivity		1138	µS/cm
2104120920C	DO		5.13	mg/L
2104120920C	DTW		470.60	ft
2104120920C	ORP		36	mV
2104120920C	pH		7.82	NA
2104120920C	Temperature		20.22	ºC
2104120920C	Turbidity		0.81	NTU
2104120923C	Conductivity		1150	µS/cm
2104120923C	DO		4.98	mg/L
2104120923C	DTW		470.63	ft
2104120923C	ORP		36	mV
2104120923C	pH		7.83	NA
2104120923C	Temperature		20.34	ºC
2104120923C	Turbidity		0.70	NTU
2104120926C	Conductivity		1156	µS/cm
2104120926C	DO		4.72	mg/L
2104120926C	DTW		470.63	ft
2104120926C	ORP		35	mV
2104120926C	pH		7.82	NA
2104120926C	Temperature		20.39	ºC
2104120926C	Turbidity		0.66	NTU

Well ID	ST-2-466	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021450C	Conductivity		1093	µS/cm
2102021450C	DO		4.20	mg/L
2102021450C	DTW		434.50	ft
2102021450C	ORP		21	mV
2102021450C	pH		8.54	NA
2102021450C	Temperature		20.78	ºC
2102021450C	Turbidity		1.16	NTU
2102021452C	Conductivity		1095	µS/cm
2102021452C	DO		4.46	mg/L
2102021452C	DTW		434.62	ft
2102021452C	ORP		21	mV
2102021452C	pH		8.50	NA
2102021452C	Temperature		20.77	ºC
2102021452C	Turbidity		0.98	NTU
2102021454C	Conductivity		1092	µS/cm
2102021454C	DO		5.05	mg/L
2102021454C	DTW		434.62	ft
2102021454C	ORP		21	mV
2102021454C	pH		8.53	NA
2102021454C	Temperature		20.70	ºC
2102021454C	Turbidity		1.04	NTU

Well ID	ST-4-481	Event Date	3/3/2021	
Sample	**Parameter**		**Result**	**Units**
2103030948C	Conductivity		1071	µS/cm
2103030948C	DO		6.31	mg/L
2103030948C	DTW		456.80	ft
2103030948C	ORP		-15	mV
2103030948C	pH		9.23	NA
2103030948C	Temperature		20.28	ºC
2103030948C	Turbidity		0.46	NTU
2103030950C	Conductivity		1074	µS/cm
2103030950C	DO		6.35	mg/L
2103030950C	DTW		456.96	ft
2103030950C	ORP		-16	mV
2103030950C	pH		9.18	NA
2103030950C	Temperature		20.25	ºC
2103030950C	Turbidity		0.48	NTU
2103030952C	Conductivity		1070	µS/cm
2103030952C	DO		6.30	mg/L
2103030952C	DTW		456.96	ft
2103030952C	ORP		-16	mV
2103030952C	pH		9.21	NA
2103030952C	Temperature		20.27	ºC
2103030952C	Turbidity		0.47	NTU

Well ID	ST-4-589	Event Date	2/4/2021	
Sample	**Parameter**		**Result**	**Units**
2102040955C	Conductivity		822	µS/cm
2102040955C	DTW		455.45	ft
2102040955C	pH		7.88	NA
2102040955C	Temperature		19.2	ºC
2102040955C	Turbidity		0.88	NTU
2102041010C	Conductivity		841	µS/cm
2102041010C	DTW		455.45	ft
2102041010C	pH		7.93	NA
2102041010C	Temperature		19.2	ºC
2102041010C	Turbidity		0.77	NTU

Well ID	ST-4-690	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021450C	Conductivity		853	µS/cm
2103021450C	DO		4.91	mg/L
2103021450C	DTW		455.66	ft
2103021450C	ORP		-36	mV
2103021450C	pH		9.10	NA
2103021450C	Temperature		20.05	ºC
2103021450C	Turbidity		1.74	NTU
2103021455C	Conductivity		847	µS/cm
2103021455C	DO		4.60	mg/L
2103021455C	DTW		455.70	ft
2103021455C	ORP		-36	mV
2103021455C	pH		9.11	NA
2103021455C	Temperature		20.01	ºC
2103021455C	Turbidity		1.59	NTU
2103021500C	Conductivity		851	µS/cm
2103021500C	DO		4.69	mg/L
2103021500C	DTW		455.70	ft
2103021500C	ORP		-36	mV
2103021500C	pH		9.19	NA
2103021500C	Temperature		19.92	ºC
2103021500C	Turbidity		1.62	NTU

Well ID	ST-5-481	Event Date	2/17/2021	
Sample	**Parameter**		**Result**	**Units**
2102171355B	Conductivity		1081	µS/cm
2102171355B	DO		4.93	mg/L
2102171355B	DTW		422.19	ft
2102171355B	ORP		68	mV
2102171355B	pH		7.59	NA
2102171355B	Temperature		18.94	ºC
2102171355B	Turbidity		0.88	NTU
2102171356B	Conductivity		1082	µS/cm
2102171356B	DO		4.71	mg/L
2102171356B	DTW		422.19	ft
2102171356B	ORP		68	mV
2102171356B	pH		7.59	NA
2102171356B	Temperature		18.94	ºC
2102171356B	Turbidity		0.94	NTU
2102171357B	Conductivity		1082	µS/cm
2102171357B	DO		4.84	mg/L
2102171357B	DTW		422.19	ft
2102171357B	ORP		68	mV
2102171357B	pH		7.59	NA
2102171357B	Temperature		18.91	ºC
2102171357B	Turbidity		0.91	NTU

Well ID	ST-5-485	Event Date	2/1/2021	
Sample	**Parameter**		**Result**	**Units**
2102011350Y	Atmospheric Pressure		12.74	psia
2102011350Y	Conductivity		1214	µS/cm
2102011350Y	DTW		472.00	ft
2102011350Y	Formation Pressure		41.46	psia
2102011350Y	pH		8.27	NA
2102011350Y	Temperature		21.3	ºC
2102011350Y	Turbidity		0.89	NTU
2102011536Y	Atmospheric Pressure		12.71	psia
2102011536Y	Conductivity		1203	µS/cm
2102011536Y	DTW		472.08	ft
2102011536Y	pH		8.21	NA
2102011536Y	Temperature		21.4	ºC
2102011536Y	Turbidity		0.74	NTU

Well ID	ST-5-655	Event Date	2/1/2021	
Sample	**Parameter**		**Result**	**Units**
2102010940Y	Atmospheric Pressure		12.78	psia
2102010940Y	Conductivity		1018	µS/cm
2102010940Y	DTW		471.86	ft
2102010940Y	Formation Pressure		115.06	psia
2102010940Y	pH		8.84	NA
2102010940Y	Temperature		20.4	ºC
2102010940Y	Turbidity		3.54	NTU
2102011105Y	Atmospheric Pressure		12.76	psia
2102011105Y	Conductivity		1007	µS/cm
2102011105Y	DTW		472.00	ft
2102011105Y	pH		8.65	NA
2102011105Y	Temperature		20.7	ºC
2102011105Y	Turbidity		1.87	NTU

Well ID	ST-6-528	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090955A	Conductivity		1347	µS/cm
2103090955A	pH		8.04	NA
2103090955A	Temperature		18.0	ºC
2103090955A	Turbidity		0.96	NTU
2103091031A	Conductivity		1343	µS/cm
2103091031A	pH		8.03	NA
2103091031A	Temperature		19.7	ºC
2103091031A	Turbidity		0.77	NTU

Well ID	ST-6-568	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090925A	Conductivity		1251	µS/cm
2103090925A	pH		8.05	NA
2103090925A	Temperature		19.4	ºC
2103090925A	Turbidity		0.87	NTU
2103091008A	Conductivity		1255	µS/cm
2103091008A	pH		8.03	NA
2103091008A	Temperature		19.8	ºC
2103091008A	Turbidity		0.78	NTU

Well ID	ST-6-678	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090944A	Conductivity		1251	µS/cm
2103090944A	pH		8.03	NA
2103090944A	Temperature		19.4	ºC
2103090944A	Turbidity		0.77	NTU
2103091046A	Conductivity		1255	µS/cm
2103091046A	pH		8.08	NA
2103091046A	Temperature		21.9	ºC
2103091046A	Turbidity		0.73	NTU

Well ID	ST-6-824	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103110940A	Conductivity		1127	µS/cm
2103110940A	pH		8.56	NA
2103110940A	Temperature		18.5	ºC
2103110940A	Turbidity		0.38	NTU
2103111015A	Conductivity		1125	µS/cm
2103111015A	pH		8.58	NA
2103111015A	Temperature		18.7	ºC
2103111015A	Turbidity		0.43	NTU

Well ID	ST-6-970	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111000A	Conductivity		1063	µS/cm
2103111000A	pH		8.64	NA
2103111000A	Temperature		17.7	ºC
2103111000A	Turbidity		3.08	NTU
2103111030A	Conductivity		1048	µS/cm
2103111030A	pH		8.68	NA
2103111030A	Temperature		18.1	ºC
2103111030A	Turbidity		2.73	NTU

Well ID	ST-7-453	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060915A	Conductivity		1304	µS/cm
2104060915A	pH		8.67	NA
2104060915A	Temperature		18.8	ºC
2104060915A	Turbidity		0.58	NTU
2104060930A	Conductivity		1301	µS/cm
2104060930A	pH		8.65	NA
2104060930A	Temperature		18.7	ºC
2104060930A	Turbidity		0.65	NTU

Well ID	ST-7-544	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060855A	Conductivity		1286	µS/cm
2104060855A	pH		8.62	NA
2104060855A	Temperature		18.0	ºC
2104060855A	Turbidity		1.02	NTU
2104060940A	Conductivity		1288	µS/cm
2104060940A	pH		8.63	NA
2104060940A	Temperature		18.4	ºC
2104060940A	Turbidity		0.96	NTU

Well ID	ST-7-779	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060905A	Conductivity		1143	µS/cm
2104060905A	pH		8.85	NA
2104060905A	Temperature		18.9	ºC
2104060905A	Turbidity		1.27	NTU
2104060955A	Conductivity		1140	µS/cm
2104060955A	pH		8.86	NA
2104060955A	Temperature		18.8	ºC
2104060955A	Turbidity		1.33	NTU

Well ID	ST-7-970	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060911A	Conductivity		1033	µS/cm
2104060911A	pH		8.76	NA
2104060911A	Temperature		17.4	ºC
2104060911A	Turbidity		0.73	NTU
2104061008A	Conductivity		1035	µS/cm
2104061008A	pH		8.77	NA
2104061008A	Temperature		17.8	ºC
2104061008A	Turbidity		0.65	NTU

Well ID	WW-1-452	Event Date	3/1/2021	
Sample	**Parameter**		**Result**	**Units**
2103011400C	Conductivity		1091	µS/cm
2103011400C	DO		4.75	mg/L
2103011400C	DTW		420.92	ft
2103011400C	ORP		-23	mV
2103011400C	pH		9.16	NA
2103011400C	Temperature		20.91	ºC
2103011400C	Turbidity		0.21	NTU
2103011402C	Conductivity		1089	µS/cm
2103011402C	DO		4.71	mg/L
2103011402C	DTW		421.11	ft
2103011402C	ORP		-22	mV
2103011402C	pH		9.10	NA
2103011402C	Temperature		20.90	ºC
2103011402C	Turbidity		0.23	NTU
2103011404C	Conductivity		1087	µS/cm
2103011404C	DO		4.72	mg/L
2103011404C	DTW		421.11	ft
2103011404C	ORP		-23	mV
2103011404C	pH		9.13	NA
2103011404C	Temperature		20.90	ºC
2103011404C	Turbidity		0.22	NTU

Well ID	WW-2-489	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103080950C	Conductivity		1001	µS/cm
2103080950C	DO		3.04	mg/L
2103080950C	ORP		118	mV
2103080950C	pH		7.28	NA
2103080950C	Temperature		20.09	ºC
2103080950C	Turbidity		2.27	NTU
2103080952C	Conductivity		1113	µS/cm
2103080952C	DO		3.51	mg/L
2103080952C	ORP		120	mV
2103080952C	pH		7.11	NA
2103080952C	Temperature		20.19	ºC
2103080952C	Turbidity		3.21	NTU
2103080954C	Conductivity		1031	µS/cm
2103080954C	DO		3.68	mg/L
2103080954C	ORP		122	mV
2103080954C	pH		7.23	NA
2103080954C	Temperature		20.21	ºC
2103080954C	Turbidity		3.34	NTU

Well ID	WW-2-664	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103081510C	Conductivity		963	µS/cm
2103081510C	DO		3.07	mg/L
2103081510C	ORP		100	mV
2103081510C	pH		8.03	NA
2103081510C	Temperature		21.10	ºC
2103081510C	Turbidity		2.76	NTU
2103081512C	Conductivity		969	µS/cm
2103081512C	DO		2.89	mg/L
2103081512C	ORP		102	mV
2103081512C	pH		7.97	NA
2103081512C	Temperature		21.05	ºC
2103081512C	Turbidity		1.97	NTU
2103081514C	Conductivity		974	µS/cm
2103081514C	DO		2.95	mg/L
2103081514C	ORP		99	mV
2103081514C	pH		8.04	NA
2103081514C	Temperature		21.40	ºC
2103081514C	Turbidity		1.78	NTU

Well ID	WW-3-469	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103020950Y	Atmospheric Pressure		12.40	psia
2103020950Y	Conductivity		1118	µS/cm
2103020950Y	DTW		407.94	ft
2103020950Y	Formation Pressure		39.59	psia
2103020950Y	pH		7.85	NA
2103020950Y	Temperature		20.6	ºC
2103020950Y	Turbidity		0.95	NTU
2103021111Y	Atmospheric Pressure		12.38	psia
2103021111Y	Conductivity		1127	µS/cm
2103021111Y	DTW		408.13	ft
2103021111Y	pH		7.95	NA
2103021111Y	Temperature		21.0	ºC
2103021111Y	Turbidity		0.83	NTU

Well ID **WW-3-569** **Event Date** **3/1/2021**

Sample	Parameter	Result	Units
2103011000Y	Atmospheric Pressure	12.40	psia
2103011000Y	Conductivity	1100	µS/cm
2103011000Y	DTW	407.64	ft
2103011000Y	Formation Pressure	82.92	psia
2103011000Y	pH	8.09	NA
2103011000Y	Temperature	20.8	ºC
2103011000Y	Turbidity	0.80	NTU
2103011056Y	Atmospheric Pressure	12.41	psia
2103011056Y	Conductivity	1093	µS/cm
2103011056Y	DTW	407.79	ft
2103011056Y	pH	8.14	NA
2103011056Y	Temperature	21.1	ºC
2103011056Y	Turbidity	0.74	NTU

Well ID **WW-3-710** **Event Date** **3/1/2021**

Sample	Parameter	Result	Units
2103011340Y	Atmospheric Pressure	12.37	psia
2103011340Y	Conductivity	1019	µS/cm
2103011340Y	DTW	407.79	ft
2103011340Y	Formation Pressure	143.74	psia
2103011340Y	pH	8.18	NA
2103011340Y	Temperature	22.7	ºC
2103011340Y	Turbidity	2.47	NTU
2103011441Y	Atmospheric Pressure	12.39	psia
2103011441Y	Conductivity	1012	µS/cm
2103011441Y	DTW	407.94	ft
2103011441Y	pH	8.03	NA
2103011441Y	Temperature	22.5	ºC
2103011441Y	Turbidity	1.64	NTU

Well ID **WW-3-978** **Event Date** **3/2/2021**

Sample	Parameter	Result	Units
2103021405Y	Atmospheric Pressure	12.30	psia
2103021405Y	Conductivity	1068	µS/cm
2103021405Y	DTW	408.13	ft
2103021405Y	Formation Pressure	261.11	psia
2103021405Y	pH	8.34	NA
2103021405Y	Temperature	23.5	ºC
2103021405Y	Turbidity	3.54	NTU
2103021515Y	Atmospheric Pressure	12.28	psia
2103021515Y	Conductivity	1045	µS/cm
2103021515Y	DTW	408.30	ft
2103021515Y	pH	8.16	NA
2103021515Y	Temperature	23.1	ºC
2103021515Y	Turbidity	2.27	NTU

Well ID **WW-5-459** **Event Date** **4/13/2021**

Sample	Parameter	Result	Units
2104130855A	Conductivity	1149	µS/cm
2104130855A	pH	8.84	NA
2104130855A	Temperature	18.9	ºC
2104130855A	Turbidity	0.95	NTU
2104130913A	Conductivity	1150	µS/cm
2104130913A	pH	8.89	NA
2104130913A	Temperature	18.9	ºC
2104130913A	Turbidity	0.97	NTU

Well ID **WW-5-579** **Event Date** **4/13/2021**

Sample	Parameter	Result	Units
2104130914A	Conductivity	1034	µS/cm
2104130914A	pH	8.03	NA
2104130914A	Temperature	19.0	ºC
2104130914A	Turbidity	0.95	NTU
2104130923A	Conductivity	1039	µS/cm
2104130923A	pH	8.04	NA
2104130923A	Temperature	19.1	ºC
2104130923A	Turbidity	0.89	NTU

Well ID	WW-5-809	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130925A	Conductivity		974	µS/cm
2104130925A	pH		8.27	NA
2104130925A	Temperature		18.9	ºC
2104130925A	Turbidity		0.56	NTU
2104130933A	Conductivity		969	µS/cm
2104130933A	pH		8.28	NA
2104130933A	Temperature		18.7	ºC
2104130933A	Turbidity		0.47	NTU

Well ID	WW-5-909	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130935A	Conductivity		1102	µS/cm
2104130935A	pH		7.98	NA
2104130935A	Temperature		19.0	ºC
2104130935A	Turbidity		1.62	NTU
2104130950A	Conductivity		1121	µS/cm
2104130950A	pH		7.99	NA
2104130950A	Temperature		18.9	ºC
2104130950A	Turbidity		1.80	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
2/3/2021	8260	2102031000C	Trichlorofluoromethane (CFC 11)	1.9	ug/L	1	0.24		
2/3/2021	8260	2102031000C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
2/3/2021	8270	2102031005C	Unknown	82	ug/L	NA	NA		TIC RB
2/3/2021	METALS	2102031007C	Sodium, Total	35.2	mg/L	1	0.2		
2/3/2021	METALS	2102031007C	Zinc, Total	0.022	mg/L	0.02	0.01		
2/3/2021	METALS	2102031007C	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
2/3/2021	METALS	2102031007C	Strontium, Total	3.47	mg/L	0.1	0.002		
2/3/2021	METALS	2102031007C	Potassium, Total	2.6	mg/L	2	0.2		
2/3/2021	METALS	2102031007C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/3/2021	METALS	2102031007C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
2/3/2021	METALS	2102031007C	Calcium, Total	142	mg/L	1	0.3		
2/3/2021	METALS	2102031007C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
2/3/2021	METALS	2102031007C	Boron, Total	0.07	mg/L	0.2	0.02		J
2/3/2021	METALS	2102031007C	Barium, Total	0.028	mg/L	0.02	0.003		
2/3/2021	METALS	2102031007C	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/3/2021	METALS	2102031007C	Magnesium, Total	70.1	mg/L	1	0.03		
2/3/2021	METALS	2102031007C	Thallium, Total	0.00007	mg/L	0.001	0.00004		J

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
2/22/2021	8260_LL	2102220945B	2-Propanol	5.2	ug/L	40	3.4		J
2/22/2021	8270	2102220949B	Unknown	9.5	ug/L	NA	NA		TIC
2/22/2021	8270	2102220949B	Benzenamine, 2,6-bis(1-methylethyl	10	ug/L	NA	NA		TIC
2/22/2021	8270	2102220949B	2,5-Cyclohexadiene-1,4-dione, 2,6-	5	ug/L	NA	NA		TIC
2/22/2021	METALS	2102220950B	Molybdenum, Total	0.027	mg/L	0.025	0.003		
2/22/2021	METALS	2102220950B	Barium, Total	0.016	mg/L	0.02	0.003		J
2/22/2021	METALS	2102220950B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/22/2021	METALS	2102220950B	Strontium, Total	2.35	mg/L	0.1	0.002		
2/22/2021	METALS	2102220950B	Sodium, Total	109	mg/L	1	0.2		
2/22/2021	METALS	2102220950B	Potassium, Total	1.6	mg/L	2	0.2		J
2/22/2021	METALS	2102220950B	Chromium, Total	0.023	mg/L	0.01	0.0006		
2/22/2021	METALS	2102220950B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102220950B	Boron, Total	0.17	mg/L	0.2	0.02		J
2/22/2021	METALS	2102220950B	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102220950B	Magnesium, Total	8.7	mg/L	1	0.03		
2/22/2021	METALS	2102220950B	Calcium, Total	51.6	mg/L	1	0.3		
2/22/2021	METALS	2102220951B	Boron, Total	0.18	mg/L	0.2	0.02		J
2/22/2021	METALS	2102220951B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/22/2021	METALS	2102220951B	Strontium, Total	2.4	mg/L	0.1	0.002		
2/22/2021	METALS	2102220951B	Sodium, Total	109	mg/L	1	0.2		
2/22/2021	METALS	2102220951B	Selenium, Total	0.008	mg/L	0.01	0.007		J
2/22/2021	METALS	2102220951B	Potassium, Total	1.6	mg/L	2	0.2		J
2/22/2021	METALS	2102220951B	Molybdenum, Total	0.028	mg/L	0.025	0.003		
2/22/2021	METALS	2102220951B	Magnesium, Total	8.8	mg/L	1	0.03		
2/22/2021	METALS	2102220951B	Calcium, Total	52.5	mg/L	1	0.3		
2/22/2021	METALS	2102220951B	Barium, Total	0.017	mg/L	0.02	0.003		J
2/22/2021	METALS	2102220951B	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102220951B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102220951B	Chromium, Total	0.023	mg/L	0.01	0.0006		
2/22/2021	ANIONS	2102220952B	Chloride	16.6	mg/L	2	0.5		
2/22/2021	ANIONS	2102220952B	Fluoride, undistilled	0.55	mg/L	0.1	0.01		
2/22/2021	ANIONS	2102220952B	Alkalinity, Total as CaCO3	29.7	mg/L	2	1.8		
2/22/2021	ANIONS	2102220952B	Sulfate	347	mg/L	8	1.6		
2/22/2021	SM2540C	2102220953B	Total Dissolved Solids (TDS)	564	mg/L	10	9		
2/22/2021	8015	2102220954B	Diesel Range Organics (DRO) as C10-C28 Alkanes	120	ug/L	100	75		
2/22/2021	353.2	2102220956B	Nitrate+Nitrite as Nitrogen	0.146	mg/L	0.05	0.002		

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
3/11/2021	8260	2103111425B	Sulfur Dioxide	27	ug/L	NA	NA		TIC RB
3/11/2021	8260	2103111425B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.2	ug/L	1	0.2		
3/11/2021	8260	2103111425B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.36	ug/L	1	0.2		J
3/11/2021	8260	2103111426B	Sulfur Dioxide	22	ug/L	NA	NA		TIC RB
3/11/2021	8260	2103111426B	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.8	ug/L	1	0.2		
3/11/2021	8260	2103111426B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.36	ug/L	1	0.2		J
3/11/2021	METALS	2103111430B	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/11/2021	METALS	2103111430B	Strontium, Total	3.65	mg/L	0.1	0.002		
3/11/2021	METALS	2103111430B	Sodium, Total	38.4	mg/L	1	0.2		
3/11/2021	METALS	2103111430B	Potassium, Total	2.9	mg/L	2	0.2		
3/11/2021	METALS	2103111430B	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
3/11/2021	METALS	2103111430B	Nickel, Total	0.005	mg/L	0.04	0.003		J
3/11/2021	METALS	2103111430B	Magnesium, Total	61	mg/L	1	0.03		
3/11/2021	METALS	2103111430B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/11/2021	METALS	2103111430B	Calcium, Total	117	mg/L	1	0.3		
3/11/2021	METALS	2103111430B	Barium, Total	0.039	mg/L	0.02	0.003		
3/11/2021	METALS	2103111430B	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/11/2021	METALS	2103111430B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J RB
3/11/2021	METALS	2103111430B	Boron, Total	0.06	mg/L	0.2	0.02		J
3/11/2021	ANIONS	2103111432B	Sulfate	319	mg/L	8	1.6		
3/11/2021	ANIONS	2103111432B	Fluoride, undistilled	0.85	mg/L	0.1	0.01		
3/11/2021	ANIONS	2103111432B	Chloride	52	mg/L	2	0.5		
3/11/2021	ANIONS	2103111432B	Alkalinity, Total as CaCO3	204	mg/L	2	1.8		
3/11/2021	SM2540C	2103111433B	Total Dissolved Solids (TDS)	816	mg/L	10	9		
3/11/2021	6850	2103111434B	Perchlorate	0.14	ug/L	0.2	0.06		J
3/11/2021	353.2	2103111435B	Nitrate+Nitrite as Nitrogen	0.319	mg/L	0.05	0.002		

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
3/15/2021	8260	2103151003C	trans-1,2-Dichloroethene	0.34	ug/L	1	0.2		J
3/15/2021	8260	2103151003C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.7	ug/L	1	0.2		
3/15/2021	8260	2103151003C	cis-1,2-Dichloroethene	0.76	ug/L	1	0.23		J
3/15/2021	8260	2103151003C	Trichlorofluoromethane (CFC 11)	92	ug/L	1	0.24		
3/15/2021	8260	2103151003C	Trichloroethene (TCE)	61	ug/L	1	0.2		
3/15/2021	8260	2103151003C	Tetrachloroethene (PCE)	2.9	ug/L	1	0.21		
3/15/2021	8260	2103151003C	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1	0.2		
3/15/2021	607	2103151005C	N-Nitrodimethylamine	0.24	µg/L	0.0097	0.0049	96	
3/15/2021	607	2103151005C	Bromacil	1.5	µg/L	0.0097	0.0049	99	
3/15/2021	607	2103151005C	N-Nitrosodimethylamine	0.14	µg/L	0.0097	0.0049	38	
3/15/2021	8270	2103151006C	Trichloroethene (TCE)	7	ug/L	NA	NA		TIC
3/15/2021	METALS	2103151012C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/15/2021	METALS	2103151012C	Zinc, Total	0.012	mg/L	0.02	0.01		J
3/15/2021	METALS	2103151012C	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
3/15/2021	METALS	2103151012C	Strontium, Total	2.08	mg/L	0.1	0.002		
3/15/2021	METALS	2103151012C	Magnesium, Total	65.7	mg/L	1	0.03		
3/15/2021	METALS	2103151012C	Potassium, Total	4.2	mg/L	2	0.2		
3/15/2021	METALS	2103151012C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
3/15/2021	METALS	2103151012C	Calcium, Total	123	mg/L	1	0.3		
3/15/2021	METALS	2103151012C	Boron, Total	0.13	mg/L	0.2	0.02		J
3/15/2021	METALS	2103151012C	Barium, Total	0.033	mg/L	0.02	0.003		
3/15/2021	METALS	2103151012C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
3/15/2021	METALS	2103151012C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J RB
3/15/2021	METALS	2103151012C	Sodium, Total	50.6	mg/L	1	0.2		

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
2/18/2021	8260	2102181520Y	Dichlorofluoromethane (CFC 21)	3	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Unknown	6	ug/L	NA	NA		TIC
2/18/2021	8260	2102181520Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.1	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Trichlorofluoromethane (CFC 11)	9.7	ug/L	1	0.24		
2/18/2021	8260	2102181520Y	Tetrahydrofuran (THF)	9	ug/L	5	1.3		
2/18/2021	8260	2102181520Y	Chloromethane	0.59	ug/L	2	0.28		J EB
2/18/2021	8260	2102181520Y	2-Propanol	7.4	ug/L	50	3.4		J
2/18/2021	8260	2102181520Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	24	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Trichloroethene (TCE)	1.5	ug/L	1	0.2		
2/18/2021	607	2102181521Y	Bromacil	0.12	µg/L	0.0098	0.0049	90	
2/18/2021	METALS	2102181540Y	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181540Y	Potassium, Total	2.6	mg/L	2	0.2		
2/18/2021	METALS	2102181540Y	Zinc, Total	0.086	mg/L	0.02	0.01		
2/18/2021	METALS	2102181540Y	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181540Y	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
2/18/2021	METALS	2102181540Y	Sodium, Total	44	mg/L	1	0.2		
2/18/2021	METALS	2102181540Y	Magnesium, Total	68.2	mg/L	1	0.03		
2/18/2021	METALS	2102181540Y	Strontium, Total	2.65	mg/L	0.1	0.002		
2/18/2021	METALS	2102181540Y	Calcium, Total	131	mg/L	1	0.3		
2/18/2021	METALS	2102181540Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181540Y	Barium, Total	0.033	mg/L	0.02	0.003		
2/18/2021	METALS	2102181540Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
2/18/2021	METALS	2102181540Y	Antimony, Total	0.0006	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181540Y	Manganese, Total	0.007	mg/L	0.01	0.004		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
2/18/2021	8260	2102181245Y	Chloromethane	0.53	ug/L	2	0.28		J
2/18/2021	8260	2102181245Y	Trichloroethene (TCE)	2.5	ug/L	1	0.2		
2/18/2021	8260	2102181245Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	ug/L	1	0.2		
2/18/2021	8260	2102181245Y	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/18/2021	607	2102181246Y	Bromacil	0.21	µg/L	0.0095	0.0048	90	
2/18/2021	METALS	2102181315Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181315Y	Potassium, Total	3.5	mg/L	2	0.2		
2/18/2021	METALS	2102181315Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/18/2021	METALS	2102181315Y	Vanadium, Total	0.0007	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181315Y	Strontium, Total	2.23	mg/L	0.1	0.002		
2/18/2021	METALS	2102181315Y	Sodium, Total	47	mg/L	1	0.2		
2/18/2021	METALS	2102181315Y	Selenium, Total	0.007	mg/L	0.01	0.007		J
2/18/2021	METALS	2102181315Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181315Y	Magnesium, Total	66.8	mg/L	1	0.03		
2/18/2021	METALS	2102181315Y	Calcium, Total	134	mg/L	1	0.3		
2/18/2021	METALS	2102181315Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181315Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
2/18/2021	METALS	2102181315Y	Zinc, Total	0.018	mg/L	0.02	0.01		J
2/18/2021	METALS	2102181315Y	Barium, Total	0.029	mg/L	0.02	0.003		
2/18/2021	ANIONS	2102181316Y	Sulfate	351	mg/L	8	1.6		
2/18/2021	ANIONS	2102181316Y	Fluoride, undistilled	1.1	mg/L	0.1	0.01		
2/18/2021	ANIONS	2102181316Y	Alkalinity, Total as CaCO3	270	mg/L	2	1.8		
2/18/2021	ANIONS	2102181316Y	Chloride	63.8	mg/L	2	0.5		
2/18/2021	SM2540C	2102181317Y	Total Dissolved Solids (TDS)	895	mg/L	10	9		
2/18/2021	6850	2102181345Y	Perchlorate	0.57	ug/L	0.2	0.06		
2/18/2021	353.2	2102181346Y	Nitrate+Nitrite as Nitrogen	2.67	mg/L	0.25	0.008		

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
2/17/2021	8260	2102180840Y	Trichloroethene (TCE)	2.6	ug/L	1	0.2		
2/17/2021	8260	2102180840Y	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
2/17/2021	8260	2102180840Y	Chloromethane	0.41	ug/L	2	0.28		J
2/17/2021	8260	2102180840Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	ug/L	1	0.2		
2/17/2021	607	2102180841Y	Bromacil	0.22	µg/L	0.0094	0.0047	90	
2/17/2021	METALS	2102180915Y	Barium, Total	0.028	mg/L	0.02	0.003		
2/17/2021	METALS	2102180915Y	Potassium, Total	3.8	mg/L	2	0.2		
2/17/2021	METALS	2102180915Y	Zinc, Total	0.017	mg/L	0.02	0.01		J
2/17/2021	METALS	2102180915Y	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
2/17/2021	METALS	2102180915Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/17/2021	METALS	2102180915Y	Strontium, Total	2.31	mg/L	0.1	0.002		
2/17/2021	METALS	2102180915Y	Sodium, Total	48.2	mg/L	1	0.2		
2/17/2021	METALS	2102180915Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/17/2021	METALS	2102180915Y	Magnesium, Total	68.6	mg/L	1	0.03		
2/17/2021	METALS	2102180915Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/17/2021	METALS	2102180915Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
2/17/2021	METALS	2102180915Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/17/2021	METALS	2102180915Y	Calcium, Total	137	mg/L	1	0.3		

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
3/16/2021	8260	2103161015C	1,1,2-Trichloro-1,2,2-Trifluoroethane	200	ug/L	2	0.4		
3/16/2021	8260	2103161015C	Trichlorofluoromethane (CFC 11)	54	ug/L	1	0.24		
3/16/2021	8260	2103161015C	Trichloroethene (TCE)	14	ug/L	1	0.2		
3/16/2021	8260	2103161015C	Tetrachloroethene (PCE)	0.31	ug/L	1	0.21		J
3/16/2021	8260	2103161015C	Chloroform	0.25	ug/L	1	0.24		J
3/16/2021	607	2103161017C	N-Nitrodimethylamine	0.0076	µg/L	0.0095	0.0048	96	J
3/16/2021	607	2103161017C	Bromacil	0.55	µg/L	0.0095	0.0048	99	
3/16/2021	METALS	2103161018C	Magnesium, Total	68.3	mg/L	1	0.03		
3/16/2021	METALS	2103161018C	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
3/16/2021	METALS	2103161018C	Strontium, Total	2.21	mg/L	0.1	0.002		
3/16/2021	METALS	2103161018C	Sodium, Total	58	mg/L	1	0.2		
3/16/2021	METALS	2103161018C	Potassium, Total	3.6	mg/L	2	0.2		
3/16/2021	METALS	2103161018C	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/16/2021	METALS	2103161018C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/16/2021	METALS	2103161018C	Calcium, Total	130	mg/L	1	0.3		
3/16/2021	METALS	2103161018C	Boron, Total	0.11	mg/L	0.2	0.02		J
3/16/2021	METALS	2103161018C	Barium, Total	0.034	mg/L	0.02	0.003		
3/16/2021	METALS	2103161018C	Arsenic, Total	0.001	mg/L	0.001	0.0004		
3/16/2021	METALS	2103161018C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/16/2021	METALS	2103161018C	Nickel, Total	0.045	mg/L	0.04	0.003		
3/16/2021	ANIONS	2103161019C	Alkalinity, Total as CaCO3	264	mg/L	2	1.8		
3/16/2021	ANIONS	2103161019C	Chloride	75.6	mg/L	2	0.5		
3/16/2021	ANIONS	2103161019C	Fluoride, undistilled	1.01	mg/L	0.1	0.01		
3/16/2021	ANIONS	2103161019C	Sulfate	320	mg/L	8	1.6		
3/16/2021	SM2540C	2103161020C	Total Dissolved Solids (TDS)	937	mg/L	10	9		
3/16/2021	6850	2103161021C	Perchlorate	0.57	ug/L	0.2	0.06		
3/16/2021	353.2	2103161022C	Nitrate+Nitrite as Nitrogen	3.17	mg/L	0.25	0.008		

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
2/23/2021	8260	2102231040Y	Trichlorofluoromethane (CFC 11)	5.5	ug/L	1	0.24		
2/23/2021	8260	2102231040Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	5.9	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Tetrahydrofuran (THF)	38	ug/L	5	1.3		
2/23/2021	8260	2102231040Y	Tetrachloroethene (PCE)	0.45	ug/L	1	0.21		J
2/23/2021	8260	2102231040Y	Dichlorofluoromethane (CFC 21)	15	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Benzene	0.76	ug/L	1	0.2		J
2/23/2021	8260	2102231040Y	Acrylonitrile	2.5	ug/L	5	0.9		J
2/23/2021	8260	2102231040Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	12	ug/L	1	0.2		
2/23/2021	607	2102231041Y	N-Nitrodimethylamine	0.011	µg/L	0.0094	0.0047	5.8	A
2/23/2021	607	2102231041Y	Bromacil	0.4	µg/L	0.0094	0.0047	101	
2/23/2021	607	2102231041Y	N-Nitrosodimethylamine	0.0057	µg/L	0.0094	0.0047	1.4	J A
2/23/2021	METALS	2102231105Y	Chromium, Total	0.0006	mg/L	0.01	0.0006		J
2/23/2021	METALS	2102231105Y	Manganese, Total	0.009	mg/L	0.01	0.004		J
2/23/2021	METALS	2102231105Y	Zinc, Total	0.013	mg/L	0.02	0.01		J
2/23/2021	METALS	2102231105Y	Strontium, Total	2.3	mg/L	0.1	0.002		
2/23/2021	METALS	2102231105Y	Sodium, Total	29.3	mg/L	1	0.2		
2/23/2021	METALS	2102231105Y	Potassium, Total	3.6	mg/L	2	0.2		
2/23/2021	METALS	2102231105Y	Molybdenum, Total	0.004	mg/L	0.025	0.003		J
2/23/2021	METALS	2102231105Y	Iron, Total	0.21	mg/L	0.1	0.07		
2/23/2021	METALS	2102231105Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/23/2021	METALS	2102231105Y	Calcium, Total	129	mg/L	1	0.3		
2/23/2021	METALS	2102231105Y	Boron, Total	0.11	mg/L	0.2	0.02		J
2/23/2021	METALS	2102231105Y	Barium, Total	0.039	mg/L	0.02	0.003		
2/23/2021	METALS	2102231105Y	Magnesium, Total	72.6	mg/L	1	0.03		

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
2/22/2021	8260	2102221010Y	Dichlorofluoromethane (CFC 21)	4.6	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.1	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	Tetrahydrofuran (THF)	28	ug/L	5	1.3		
2/22/2021	8260	2102221010Y	Acrylonitrile	1.3	ug/L	5	0.9		J
2/22/2021	8260	2102221010Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	Trichloroethene (TCE)	0.87	ug/L	1	0.2		J
2/22/2021	METALS	2102221030Y	Magnesium, Total	83.3	mg/L	1	0.03		
2/22/2021	METALS	2102221030Y	Sodium, Total	20.8	mg/L	1	0.2		
2/22/2021	METALS	2102221030Y	Strontium, Total	12.7	mg/L	1	0.02		
2/22/2021	METALS	2102221030Y	Potassium, Total	2.9	mg/L	2	0.2		
2/22/2021	METALS	2102221030Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/22/2021	METALS	2102221030Y	Manganese, Total	0.007	mg/L	0.01	0.004		J
2/22/2021	METALS	2102221030Y	Zinc, Total	0.033	mg/L	0.02	0.01		
2/22/2021	METALS	2102221030Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/22/2021	METALS	2102221030Y	Calcium, Total	154	mg/L	1	0.3		
2/22/2021	METALS	2102221030Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/22/2021	METALS	2102221030Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/22/2021	METALS	2102221030Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102221030Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102221030Y	Iron, Total	0.55	mg/L	0.1	0.07		

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
2/22/2021	8260	2102221535Y	Unknown	5.8	ug/L	NA	NA		TIC
2/22/2021	8260	2102221535Y	Acrylonitrile	1.2	ug/L	5	0.9		J
2/22/2021	8260	2102221535Y	Tetrahydrofuran (THF)	35	ug/L	5	1.3		
2/22/2021	METALS	2102230840Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/22/2021	METALS	2102230840Y	Zinc, Total	0.038	mg/L	0.02	0.01		
2/22/2021	METALS	2102230840Y	Strontium, Total	17.8	mg/L	1	0.02		
2/22/2021	METALS	2102230840Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J EB
2/22/2021	METALS	2102230840Y	Sodium, Total	23.7	mg/L	1	0.2		
2/22/2021	METALS	2102230840Y	Potassium, Total	3	mg/L	2	0.2		
2/22/2021	METALS	2102230840Y	Manganese, Total	0.012	mg/L	0.01	0.004		
2/22/2021	METALS	2102230840Y	Magnesium, Total	84	mg/L	1	0.03		
2/22/2021	METALS	2102230840Y	Iron, Total	0.55	mg/L	0.1	0.07		
2/22/2021	METALS	2102230840Y	Calcium, Total	168	mg/L	1	0.3		
2/22/2021	METALS	2102230840Y	Barium, Total	0.031	mg/L	0.02	0.003		
2/22/2021	METALS	2102230840Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/22/2021	ANIONS	2102230841Y	Fluoride, undistilled	1.7	mg/L	0.1	0.01		
2/22/2021	ANIONS	2102230841Y	Sulfate	501	mg/L	20	4		
2/22/2021	ANIONS	2102230841Y	Alkalinity, Total as CaCO3	272	mg/L	2	1.8		
2/22/2021	ANIONS	2102230841Y	Chloride	36.3	mg/L	2	0.5		
2/22/2021	SM2540C	2102230842Y	Total Dissolved Solids (TDS)	1040	mg/L	10	9		

Analytical Results for Sampling Events at 200-KV-150

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2021	8260	2103101435C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
3/10/2021	8260	2103101435C	Chloroform	0.26	ug/L	1	0.24		J
3/10/2021	8260	2103101435C	Dichlorofluoromethane (CFC 21)	0.37	ug/L	1	0.2		J
3/10/2021	8260	2103101435C	Trichloroethene (TCE)	14	ug/L	1	0.2		
3/10/2021	8260	2103101435C	Trichlorofluoromethane (CFC 11)	51	ug/L	1	0.24		
3/10/2021	8260	2103101435C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.32	ug/L	1	0.2		J
3/10/2021	8260	2103101435C	Sulfur Dioxide	35	ug/L	NA	NA		TIC RB FB
3/10/2021	8260	2103101435C	Silane, methoxytrimethyl-	5.3	ug/L	NA	NA		TIC FB
3/10/2021	8260	2103101436C	Chloroform	0.27	ug/L	1	0.24		J
3/10/2021	8260	2103101436C	Sulfur Dioxide	32	ug/L	NA	NA		TIC RB FB
3/10/2021	8260	2103101436C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.35	ug/L	1	0.2		J
3/10/2021	8260	2103101436C	Trichlorofluoromethane (CFC 11)	49	ug/L	1	0.24		
3/10/2021	8260	2103101436C	Dichlorofluoromethane (CFC 21)	0.39	ug/L	1	0.2		J
3/10/2021	8260	2103101436C	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1	0.2		
3/10/2021	8260	2103101436C	Trichloroethene (TCE)	13	ug/L	1	0.2		
3/10/2021	607	2103101438C	Bromacil	1.2	µg/L	0.0095	0.0048	102	
3/10/2021	METALS	2103101440C	Iron, Total	0.11	mg/L	0.1	0.07		
3/10/2021	METALS	2103101440C	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
3/10/2021	METALS	2103101440C	Strontium, Total	1.47	mg/L	0.1	0.002		
3/10/2021	METALS	2103101440C	Sodium, Total	35.2	mg/L	1	0.2		
3/10/2021	METALS	2103101440C	Potassium, Total	9.7	mg/L	2	0.2		
3/10/2021	METALS	2103101440C	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
3/10/2021	METALS	2103101440C	Manganese, Total	0.018	mg/L	0.01	0.004		
3/10/2021	METALS	2103101440C	Magnesium, Total	51	mg/L	1	0.03		
3/10/2021	METALS	2103101440C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/10/2021	METALS	2103101440C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103101440C	Calcium, Total	114	mg/L	1	0.3		
3/10/2021	METALS	2103101440C	Boron, Total	0.12	mg/L	0.2	0.02		J
3/10/2021	METALS	2103101440C	Barium, Total	0.06	mg/L	0.02	0.003		
3/10/2021	METALS	2103101440C	Arsenic, Total	0.0015	mg/L	0.001	0.0004		
3/10/2021	METALS	2103101440C	Antimony, Total	0.0066	mg/L	0.001	0.0002		
3/10/2021	METALS	2103101440C	Aluminum, Total	0.08	mg/L	0.1	0.03		J
3/10/2021	METALS	2103101440C	Copper, Total	0.008	mg/L	0.02	0.004		J
3/10/2021	ANIONS	2103101441C	Sulfate	222	mg/L	8	1.6		
3/10/2021	ANIONS	2103101441C	Fluoride, undistilled	0.8	mg/L	0.1	0.01		
3/10/2021	ANIONS	2103101441C	Alkalinity, Total as CaCO3	204	mg/L	2	1.8		
3/10/2021	ANIONS	2103101441C	Chloride	83.7	mg/L	2	0.5		
3/10/2021	SM2540C	2103101442C	Total Dissolved Solids (TDS)	727	mg/L	10	9		

Analytical Results for Sampling Events at 200-KV-150

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2021	6850	2103101443C	Perchlorate	0.56	ug/L	0.2	0.06		
3/10/2021	353.2	2103101444C	Nitrate+Nitrite as Nitrogen	3.18	mg/L	0.25	0.008		

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
2/18/2021	8260	2102181020B	Trichloroethene (TCE)	1.1	ug/L	1	0.2		
2/18/2021	8260	2102181020B	Trichlorofluoromethane (CFC 11)	320	ug/L	2.5	0.6		
2/18/2021	8260	2102181020B	Dichlorofluoromethane (CFC 21)	0.56	ug/L	1	0.2		J
2/18/2021	8260	2102181020B	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1	0.2		
2/18/2021	8260	2102181020B	Chloromethane	0.51	ug/L	2	0.28		J FB
2/18/2021	607	2102181022B	N-Nitrosodimethylamine	1.5	µg/L	0.0094	0.0047	39	
2/18/2021	607	2102181022B	N-Nitrodimethylamine	4.4	µg/L	0.0094	0.0047	94	
2/18/2021	607	2102181022B	Bromacil	2.2	µg/L	0.0094	0.0047	90	
2/18/2021	METALS	2102181023B	Manganese, Total	0.009	mg/L	0.01	0.004		J
2/18/2021	METALS	2102181023B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181023B	Strontium, Total	2.06	mg/L	0.1	0.002		
2/18/2021	METALS	2102181023B	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181023B	Sodium, Total	55.2	mg/L	1	0.2		
2/18/2021	METALS	2102181023B	Potassium, Total	2.4	mg/L	2	0.2		
2/18/2021	METALS	2102181023B	Nickel, Total	0.078	mg/L	0.04	0.003		
2/18/2021	METALS	2102181023B	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181023B	Iron, Total	0.54	mg/L	0.1	0.07		
2/18/2021	METALS	2102181023B	Chromium, Total	0.05	mg/L	0.01	0.0006		
2/18/2021	METALS	2102181023B	Calcium, Total	81.8	mg/L	1	0.3		
2/18/2021	METALS	2102181023B	Boron, Total	0.14	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181023B	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/18/2021	METALS	2102181023B	Barium, Total	0.04	mg/L	0.02	0.003		
2/18/2021	METALS	2102181023B	Magnesium, Total	54.3	mg/L	1	0.03		
2/18/2021	353.2	2102181024B	Nitrate+Nitrite as Nitrogen	5.34	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
2/3/2021	8260	2102031455C	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
2/3/2021	8260	2102031455C	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1	0.2		
2/3/2021	8260	2102031455C	Trichlorofluoromethane (CFC 11)	190	ug/L	1	0.24		
2/3/2021	607	2102031457C	N-Nitrosodimethylamine	2.8	µg/L	0.0094	0.0047	36	
2/3/2021	607	2102031457C	N-Nitrodimethylamine	3	µg/L	0.0094	0.0047	92	
2/3/2021	607	2102031457C	Bromacil	0.34	µg/L	0.0094	0.0047	98	
2/3/2021	METALS	2102031458C	Magnesium, Total	48.5	mg/L	1	0.03		
2/3/2021	METALS	2102031458C	Sodium, Total	37.4	mg/L	1	0.2		
2/3/2021	METALS	2102031458C	Potassium, Total	1.9	mg/L	2	0.2		J
2/3/2021	METALS	2102031458C	Strontium, Total	1.64	mg/L	0.1	0.002		
2/3/2021	METALS	2102031458C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/3/2021	METALS	2102031458C	Calcium, Total	66.5	mg/L	1	0.3		
2/3/2021	METALS	2102031458C	Boron, Total	0.1	mg/L	0.2	0.02		J
2/3/2021	METALS	2102031458C	Barium, Total	0.04	mg/L	0.02	0.003		
2/3/2021	METALS	2102031458C	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
2/3/2021	METALS	2102031458C	Antimony, Total	0.0006	mg/L	0.001	0.0002		J
2/3/2021	METALS	2102031458C	Nickel, Total	0.016	mg/L	0.04	0.003		J
2/3/2021	METALS	2102031458C	Chromium, Total	0.018	mg/L	0.01	0.0006		
2/3/2021	ANIONS	2102031459C	Alkalinity, Total as CaCO3	220	mg/L	2	1.8		
2/3/2021	ANIONS	2102031459C	Chloride	37.1	mg/L	2	0.5		
2/3/2021	ANIONS	2102031459C	Fluoride, undistilled	0.77	mg/L	0.1	0.01		
2/3/2021	ANIONS	2102031459C	Sulfate	154	mg/L	8	1.6		
2/3/2021	SM2540C	2102031500C	Total Dissolved Solids (TDS)	521	mg/L	10	9		
2/3/2021	6850	2102031501C	Perchlorate	0.54	ug/L	0.2	0.06		
2/3/2021	353.2	2102031502C	Nitrate+Nitrite as Nitrogen	3.25	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
2/23/2021	8260	2102231500Y	Tetrahydrofuran (THF)	3.1	ug/L	5	1.3		J
2/23/2021	8260	2102231500Y	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/23/2021	8260	2102231500Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	ug/L	1	0.2		
2/23/2021	607	2102231501Y	N-Nitrosodimethylamine	0.69	µg/L	0.0094	0.0047	1.4	A
2/23/2021	607	2102231501Y	N-Nitrodimethylamine	2.6	µg/L	0.0094	0.0047	5.8	A
2/23/2021	607	2102231501Y	Bromacil	0.25	µg/L	0.0094	0.0047	101	
2/23/2021	METALS	2102240815Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
2/23/2021	METALS	2102240815Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/23/2021	METALS	2102240815Y	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
2/23/2021	METALS	2102240815Y	Strontium, Total	2.59	mg/L	0.1	0.002		
2/23/2021	METALS	2102240815Y	Sodium, Total	125	mg/L	1	0.2		
2/23/2021	METALS	2102240815Y	Zinc, Total	0.034	mg/L	0.02	0.01		
2/23/2021	METALS	2102240815Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
2/23/2021	METALS	2102240815Y	Calcium, Total	137	mg/L	1	0.3		
2/23/2021	METALS	2102240815Y	Boron, Total	0.28	mg/L	0.2	0.02		
2/23/2021	METALS	2102240815Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/23/2021	METALS	2102240815Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/23/2021	METALS	2102240815Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/23/2021	METALS	2102240815Y	Magnesium, Total	89.2	mg/L	1	0.03		
2/23/2021	METALS	2102240815Y	Potassium, Total	2.9	mg/L	2	0.2		
2/23/2021	ANIONS	2102240816Y	Chloride	136	mg/L	8	1.7		
2/23/2021	ANIONS	2102240816Y	Alkalinity, Total as CaCO3	257	mg/L	2	1.8		
2/23/2021	ANIONS	2102240816Y	Fluoride, undistilled	0.81	mg/L	0.1	0.01		
2/23/2021	ANIONS	2102240816Y	Sulfate	501	mg/L	20	4		
2/23/2021	SM2540C	2102240817Y	Total Dissolved Solids (TDS)	1230	mg/L	11	10		
2/23/2021	6850	2102240818Y	Perchlorate	1	ug/L	0.2	0.06		
2/23/2021	353.2	2102240819Y	Nitrate+Nitrite as Nitrogen	9.95	mg/L	0.5	0.02		

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
2/24/2021	8260	2102241020Y	Trichlorofluoromethane (CFC 11)	9	ug/L	1	0.24		
2/24/2021	8260	2102241020Y	Trichloroethene (TCE)	1.4	ug/L	1	0.2		
2/24/2021	8260	2102241020Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.9	ug/L	1	0.2		
2/24/2021	8260	2102241020Y	Tetrahydrofuran (THF)	2.7	ug/L	5	1.3		J
2/24/2021	607	2102241021Y	N-Nitrodimethylamine	0.0057	µg/L	0.0095	0.0048	5.8	J A
2/24/2021	607	2102241021Y	Bromacil	1.3	µg/L	0.0095	0.0048	101	
2/24/2021	METALS	2102241040Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
2/24/2021	METALS	2102241040Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
2/24/2021	METALS	2102241040Y	Vanadium, Total	0.0009	mg/L	0.05	0.0007		J
2/24/2021	METALS	2102241040Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/24/2021	METALS	2102241040Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/24/2021	METALS	2102241040Y	Strontium, Total	1.94	mg/L	0.1	0.002		
2/24/2021	METALS	2102241040Y	Sodium, Total	44	mg/L	1	0.2		
2/24/2021	METALS	2102241040Y	Potassium, Total	3.7	mg/L	2	0.2		
2/24/2021	METALS	2102241040Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/24/2021	METALS	2102241040Y	Iron, Total	0.09	mg/L	0.1	0.07		J
2/24/2021	METALS	2102241040Y	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
2/24/2021	METALS	2102241040Y	Calcium, Total	115	mg/L	1	0.3		
2/24/2021	METALS	2102241040Y	Boron, Total	0.12	mg/L	0.2	0.02		J
2/24/2021	METALS	2102241040Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/24/2021	METALS	2102241040Y	Magnesium, Total	59.8	mg/L	1	0.03		

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
2/1/2021	8260	2102011500C	Unknown	25	ug/L	NA	NA		TIC RB
2/1/2021	8260	2102011500C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.21	ug/L	1	0.2		J
2/1/2021	8260	2102011500C	Trichlorofluoromethane (CFC 11)	420	ug/L	5	1.2		
2/1/2021	8260	2102011500C	Trichloroethene (TCE)	1.8	ug/L	1	0.2		
2/1/2021	8260	2102011500C	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1	0.2		
2/1/2021	8260	2102011500C	Dichlorofluoromethane (CFC 21)	0.65	ug/L	1	0.2		J

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
4/21/2021	8260	2104210935C	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
4/21/2021	8260	2104210935C	Dichlorofluoromethane (CFC 21)	6.3	ug/L	1	0.2		
4/21/2021	8260	2104210935C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.3	ug/L	1	0.2		
4/21/2021	8260	2104210935C	1,1,2-Trichloro-1,2,2-Trifluoroethane	58	ug/L	1	0.2		
4/21/2021	8260	2104210935C	Trichlorofluoromethane (CFC 11)	190	ug/L	2.5	0.6		

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
2/1/2021	8260	2102011020C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	4.8	ug/L	1	0.2		
2/1/2021	8260	2102011020C	1,1,2-Trichloro-1,2,2-Trifluoroethane	90	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Dichlorofluoromethane (CFC 21)	5.5	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Trichloroethene (TCE)	1.8	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Trichlorofluoromethane (CFC 11)	250	ug/L	2.5	0.6		

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
4/21/2021	8260	2104211410C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.9	ug/L	1	0.2		J
4/21/2021	8260	2104211410C	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
4/21/2021	8260	2104211410C	Trichloroethene (TCE)	0.59	ug/L	1	0.2		J
4/21/2021	8260	2104211410C	Dichlorofluoromethane (CFC 21)	2.7	ug/L	1	0.2		
4/21/2021	8260	2104211410C	Chloroform	0.65	ug/L	1	0.24		J
4/21/2021	8260	2104211410C	1,1,2-Trichloro-1,2,2-Trifluoroethane	72	ug/L	1	0.2		
4/21/2021	8260	2104211410C	2-Propanol	4.4	ug/L	50	3.4		J

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
2/2/2021	8260	2102020955C	Trichloroethene (TCE)	0.96	ug/L	1	0.2		J
2/2/2021	8260	2102020955C	Dichlorofluoromethane (CFC 21)	1.2	ug/L	1	0.2		
2/2/2021	8260	2102020955C	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	10	2		
2/2/2021	8260	2102020955C	Trichlorofluoromethane (CFC 11)	650	ug/L	10	2.4		
2/2/2021	8260	2102020955C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.82	ug/L	1	0.2		J
2/2/2021	8260	2102020955C	Chloroform	0.53	ug/L	1	0.24		J

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
2/4/2021	8260	2102041310Y	Trichloroethene (TCE)	0.46	ug/L	1	0.2		J
2/4/2021	8260	2102041310Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.9	ug/L	1	0.2		
2/4/2021	8260	2102041311Y	Trichloroethene (TCE)	0.61	ug/L	1	0.2		J
2/4/2021	8260	2102041311Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.1	ug/L	1	0.2		
2/4/2021	607	2102041312Y	Bromacil	0.048	µg/L	0.0095	0.0048	74	EB
2/4/2021	METALS	2102041330Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/4/2021	METALS	2102041330Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/4/2021	METALS	2102041330Y	Strontium, Total	5.33	mg/L	0.1	0.002		
2/4/2021	METALS	2102041330Y	Potassium, Total	3.1	mg/L	2	0.2		
2/4/2021	METALS	2102041330Y	Manganese, Total	0.018	mg/L	0.01	0.004		
2/4/2021	METALS	2102041330Y	Magnesium, Total	26.8	mg/L	1	0.03		
2/4/2021	METALS	2102041330Y	Boron, Total	0.21	mg/L	0.2	0.02		
2/4/2021	METALS	2102041330Y	Sodium, Total	121	mg/L	1	0.2		
2/4/2021	METALS	2102041330Y	Barium, Total	0.052	mg/L	0.02	0.003		
2/4/2021	METALS	2102041330Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/4/2021	METALS	2102041330Y	Aluminum, Total	0.03	mg/L	0.1	0.03		J
2/4/2021	METALS	2102041330Y	Calcium, Total	107	mg/L	1	0.3		

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
4/27/2021	8260	2104270815B	Trichloroethene (TCE)	40	ug/L	1	0.2		Q
4/27/2021	8260	2104270815B	Trichlorofluoromethane (CFC 11)	0.48	ug/L	1	0.24		J Q
4/27/2021	8260	2104270815B	Chloroform	0.51	ug/L	1	0.24		J
4/27/2021	8260	2104270815B	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	ug/L	1	0.2		Q
4/27/2021	8260	2104270815B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.51	ug/L	1	0.2		J
4/27/2021	607	2104270817B	Bromacil	18	µg/L	0.2	0.1	80	D
4/27/2021	300.0	2104270819B	Chloride	205	mg/L	6	1.3		
4/27/2021	353.2	2104270820B	Nitrate+Nitrite as Nitrogen	11.5	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
3/22/2021	8260	2103221320B	Trichloroethene (TCE)	0.99	ug/L	1.0	0.200		J RB FB
3/22/2021	8260	2103221320B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.21	ug/L	1.0	0.200		J
3/22/2021	ANIONS	2103221323B	Chloride	46.1	mg/L	2.0	0.500		
3/22/2021	ANIONS	2103221323B	Alkalinity, Total as CaCO3	245	mg/L	2.0	1.80		
3/22/2021	ANIONS	2103221323B	Sulfate	271	mg/L	8.0	1.60		
3/22/2021	ANIONS	2103221323B	Fluoride, undistilled	0.68	mg/L	0.10	0.01		
3/22/2021	6850	2103221324B	Perchlorate	0.27	ug/L	0.20	0.060		

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
3/23/2021	8260	2103230920B	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1.0	0.200		
3/23/2021	8260	2103230920B	Trichlorofluoromethane (CFC 11)	0.49	ug/L	1.0	0.240		J
3/23/2021	8260	2103230920B	Trichloroethene (TCE)	1.3	ug/L	1.0	0.200		RB FB
3/23/2021	607	2103230922B	Bromacil	0.01	µg/L	0.0095	0.0048	91	
3/23/2021	ANIONS	2103230923B	Alkalinity, Total as CaCO3	260	mg/L	2.0	1.80		
3/23/2021	ANIONS	2103230923B	Chloride	61.3	mg/L	2.0	0.500		
3/23/2021	ANIONS	2103230923B	Fluoride, undistilled	0.73	mg/L	0.10	0.01		
3/23/2021	ANIONS	2103230923B	Sulfate	378	mg/L	8.0	1.60		
3/23/2021	6850	2103230924B	Perchlorate	0.51	ug/L	0.20	0.060		

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
3/23/2021	8260	2103231505Y	Tetrachloroethene (PCE)	0.23	ug/L	1.0	0.210		J RB
3/23/2021	8260	2103231505Y	Trichloroethene (TCE)	0.79	ug/L	1.0	0.200		J RB EB
3/23/2021	ANIONS	2103231535Y	Fluoride, undistilled	0.29	mg/L	0.10	0.01		
3/23/2021	ANIONS	2103231535Y	Sulfate	247	mg/L	8.0	1.60		
3/23/2021	ANIONS	2103231535Y	Chloride	48.8	mg/L	2.0	0.500		
3/23/2021	ANIONS	2103231535Y	Alkalinity, Total as CaCO3	130	mg/L	2.0	1.80		
3/23/2021	6850	2103231536Y	Perchlorate	0.58	ug/L	0.20	0.060		

Analytical Results for Sampling Events at 700-H-535

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/22/2021	8260	2103221415Y	Tetrachloroethene (PCE)	0.23	ug/L	1.0	0.210		J RB
3/22/2021	8260	2103221415Y	Trichloroethene (TCE)	1.2	ug/L	1.0	0.200		RB EB

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
3/22/2021	8260	2103221015Y	Trichloroethene (TCE)	1.9	ug/L	1.0	0.200		RB TB EB
3/22/2021	8260	2103221015Y	Styrene	0.6	ug/L	1.0	0.200		J
3/22/2021	8260	2103221015Y	Tetrachloroethene (PCE)	0.31	ug/L	1.0	0.210		J RB TB EB
3/22/2021	607	2103221016Y	Bromacil	0.0086	µg/L	0.0095	0.0048	91	J EB

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
3/22/2021	8260	2103220900B	Tetrachloroethene (PCE)	0.36	ug/L	1.0	0.210		J RB FB
3/22/2021	8260	2103220900B	Trichloroethene (TCE)	1.8	ug/L	1.0	0.200		RB FB
3/22/2021	8260	2103220900B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.54	ug/L	1.0	0.200		J
3/22/2021	ANIONS	2103220903B	Sulfate	372	mg/L	8.0	1.60		
3/22/2021	ANIONS	2103220903B	Alkalinity, Total as CaCO3	260	mg/L	2.0	1.80		
3/22/2021	ANIONS	2103220903B	Chloride	56.4	mg/L	2.0	0.500		
3/22/2021	ANIONS	2103220903B	Fluoride, undistilled	1.1	mg/L	0.10	0.01		
3/22/2021	6850	2103220904B	Perchlorate	0.15	ug/L	0.20	0.060		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
4/1/2021	8260	2104011350B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.35	ug/L	1	0.2		J
4/1/2021	NDMA_LL	2104011352B	N-Nitrosodimethylamine	0.38	ng/L	0.47	0.33		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
3/4/2021	8260	2103040910C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.38	ug/L	1	0.2		J
3/4/2021	607	2103040912C	Bromacil	0.016	µg/L	0.0095	0.0048	107	
3/4/2021	METALS	2103040916C	Sodium, Total	42.2	mg/L	1	0.2		
3/4/2021	METALS	2103040916C	Zinc, Total	0.052	mg/L	0.02	0.01		
3/4/2021	METALS	2103040916C	Strontium, Total	3.28	mg/L	0.1	0.002		
3/4/2021	METALS	2103040916C	Potassium, Total	9.4	mg/L	2	0.2		
3/4/2021	METALS	2103040916C	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/4/2021	METALS	2103040916C	Magnesium, Total	73.7	mg/L	1	0.03		
3/4/2021	METALS	2103040916C	Calcium, Total	129	mg/L	1	0.3		
3/4/2021	METALS	2103040916C	Boron, Total	0.05	mg/L	0.2	0.02		J
3/4/2021	METALS	2103040916C	Barium, Total	0.03	mg/L	0.02	0.003		
3/4/2021	METALS	2103040916C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/4/2021	METALS	2103040916C	Antimony, Total	0.0012	mg/L	0.001	0.0002		
3/4/2021	METALS	2103040916C	Chromium, Total	0.026	mg/L	0.01	0.0006		
3/4/2021	METALS	2103040916C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/4/2021	METALS	2103040917C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/4/2021	METALS	2103040917C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/4/2021	METALS	2103040917C	Sodium, Total	41.8	mg/L	1	0.2		
3/4/2021	METALS	2103040917C	Potassium, Total	9.3	mg/L	2	0.2		
3/4/2021	METALS	2103040917C	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/4/2021	METALS	2103040917C	Magnesium, Total	73.1	mg/L	1	0.03		
3/4/2021	METALS	2103040917C	Chromium, Total	0.026	mg/L	0.01	0.0006		
3/4/2021	METALS	2103040917C	Calcium, Total	128	mg/L	1	0.3		
3/4/2021	METALS	2103040917C	Barium, Total	0.03	mg/L	0.02	0.003		
3/4/2021	METALS	2103040917C	Antimony, Total	0.0012	mg/L	0.001	0.0002		
3/4/2021	METALS	2103040917C	Strontium, Total	3.24	mg/L	0.1	0.002		
3/4/2021	METALS	2103040917C	Boron, Total	0.05	mg/L	0.2	0.02		J
3/4/2021	METALS	2103040917C	Zinc, Total	0.05	mg/L	0.02	0.01		
3/4/2021	ANIONS	2103040918C	Chloride	74	mg/L	2	0.5		
3/4/2021	ANIONS	2103040918C	Fluoride	1.06	mg/L	0.1	0.01		
3/4/2021	ANIONS	2103040918C	Sulfate	360	mg/L	8	1.6		
3/4/2021	ANIONS	2103040918C	Alkalinity, Total as CaCO3	233	mg/L	2	1.8		
3/4/2021	SM2540C	2103040919C	Total Dissolved Solids (TDS)	924	mg/L	10	9		
3/4/2021	6850	2103040922C	Perchlorate	0.42	ug/L	0.2	0.06		
3/4/2021	353.2	2103040923C	Nitrate+Nitrite as Nitrogen	5.7	mg/L	0.5	0.02		

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
3/15/2021	8260	2103151503C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.94	ug/L	1	0.2		J
3/15/2021	8260	2103151503C	cis-1,2-Dichloroethene	0.34	ug/L	1	0.23		J
3/15/2021	8260	2103151503C	Trichlorofluoromethane (CFC 11)	79	ug/L	1	0.24		
3/15/2021	8260	2103151503C	Trichloroethene (TCE)	63	ug/L	1	0.2		
3/15/2021	8260	2103151503C	Tetrachloroethene (PCE)	2.9	ug/L	1	0.21		
3/15/2021	8260	2103151503C	1,1,2-Trichloro-1,2,2-Trifluoroethane	290	ug/L	2.5	0.5		
3/15/2021	8260	2103151503C	Dichlorofluoromethane (CFC 21)	0.26	ug/L	1	0.2		J
3/15/2021	607	2103151505C	N-Nitrosodimethylamine	0.23	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151505C	N-Nitrodimethylamine	0.3	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151505C	Bromacil	0.73	µg/L	0.0094	0.0047	99	
3/15/2021	METALS	2103151506C	Calcium, Total	138	mg/L	1	0.3		
3/15/2021	METALS	2103151506C	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
3/15/2021	METALS	2103151506C	Strontium, Total	3.38	mg/L	0.1	0.002		
3/15/2021	METALS	2103151506C	Sodium, Total	48.8	mg/L	1	0.2		
3/15/2021	METALS	2103151506C	Potassium, Total	2.9	mg/L	2	0.2		
3/15/2021	METALS	2103151506C	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/15/2021	METALS	2103151506C	Magnesium, Total	71.2	mg/L	1	0.03		
3/15/2021	METALS	2103151506C	Chromium, Total	0.018	mg/L	0.01	0.0006		
3/15/2021	METALS	2103151506C	Boron, Total	0.11	mg/L	0.2	0.02		J
3/15/2021	METALS	2103151506C	Barium, Total	0.025	mg/L	0.02	0.003		
3/15/2021	METALS	2103151506C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/15/2021	METALS	2103151506C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
3/15/2021	METALS	2103151506C	Aluminum, Total	0.44	mg/L	0.1	0.03		
3/15/2021	METALS	2103151506C	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
3/15/2021	METALS	2103151506C	Iron, Total	0.18	mg/L	0.1	0.07		

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
2/8/2021	8260	2102080906C	Tetrachloroethene (PCE)	0.41	ug/L	1	0.21		J Q
2/8/2021	8260	2102080906C	Trichloroethene (TCE)	9.2	ug/L	1	0.2		Q
2/8/2021	8260	2102080906C	Trichlorofluoromethane (CFC 11)	25	ug/L	1	0.24		Q
2/8/2021	8260	2102080906C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
2/8/2021	8260	2102080906C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		Q
2/8/2021	8260	2102080906C	Dichlorofluoromethane (CFC 21)	0.36	ug/L	1	0.2		J
2/8/2021	607	2102080908C	N-Nitrosodimethylamine	0.37	µg/L	0.0095	0.0048	34	
2/8/2021	607	2102080908C	N-Nitrodimethylamine	0.4	µg/L	0.0095	0.0048	88	
2/8/2021	607	2102080908C	Bromacil	0.54	µg/L	0.0095	0.0048	74	
2/8/2021	METALS	2102080909C	Magnesium, Total	61.4	mg/L	1	0.03		
2/8/2021	METALS	2102080909C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102080909C	Strontium, Total	3.02	mg/L	0.1	0.002		
2/8/2021	METALS	2102080909C	Sodium, Total	60.3	mg/L	1	0.2		
2/8/2021	METALS	2102080909C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/8/2021	METALS	2102080909C	Calcium, Total	103	mg/L	1	0.3		
2/8/2021	METALS	2102080909C	Boron, Total	0.1	mg/L	0.2	0.02		J
2/8/2021	METALS	2102080909C	Barium, Total	0.031	mg/L	0.02	0.003		
2/8/2021	METALS	2102080909C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
2/8/2021	METALS	2102080909C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102080909C	Chromium, Total	0.005	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102080909C	Potassium, Total	3.8	mg/L	2	0.2		

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
2/4/2021	8260	2102041305C	Dichlorofluoromethane (CFC 21)	7	ug/L	1	0.2		
2/4/2021	8260	2102041305C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	9.2	ug/L	1	0.2		
2/4/2021	8260	2102041305C	Trichlorofluoromethane (CFC 11)	43	ug/L	1	0.24		
2/4/2021	8260	2102041305C	Tetrachloroethene (PCE)	1.3	ug/L	1	0.21		
2/4/2021	8260	2102041305C	1,1,2-Trichloro-1,2,2-Trifluoroethane	96	ug/L	1	0.2		
2/4/2021	8260	2102041305C	Trichloroethene (TCE)	48	ug/L	1	0.2		
2/4/2021	607	2102041307C	Bromacil	0.49	µg/L	0.0096	0.0048	74	
2/4/2021	607	2102041307C	N-Nitrosodimethylamine	0.2	µg/L	0.0096	0.0048	34	
2/4/2021	607	2102041307C	N-Nitrodimethylamine	0.25	µg/L	0.0096	0.0048	88	
2/4/2021	607	2102041308C	N-Nitrosodimethylamine	0.2	µg/L	0.0094	0.0047	34	
2/4/2021	607	2102041308C	Bromacil	0.49	µg/L	0.0094	0.0047	74	
2/4/2021	607	2102041308C	N-Nitrodimethylamine	0.24	µg/L	0.0094	0.0047	88	
2/4/2021	ANIONS	2102041310C	Chloride	86.8	mg/L	2	0.5		
2/4/2021	ANIONS	2102041310C	Fluoride, undistilled	1.13	mg/L	0.1	0.01		
2/4/2021	ANIONS	2102041310C	Sulfate	389	mg/L	8	1.6		
2/4/2021	ANIONS	2102041310C	Alkalinity, Total as CaCO3	244	mg/L	2	1.8		
2/4/2021	SM2540C	2102041311C	Total Dissolved Solids (TDS)	960	mg/L	10	9		
2/4/2021	6850	2102041312C	Perchlorate	0.51	ug/L	0.2	0.06		
2/4/2021	353.2	2102041313C	Nitrate+Nitrite as Nitrogen	2.21	mg/L	0.25	0.008		

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
2/2/2021	8260	2102020947A	Hexanoic acid, 2-ethyl-	11	ug/L	NA	NA		TIC FB
2/2/2021	8260	2102020947A	Tetrahydrofuran (THF)	2.1	ug/L	5	1.3		J
2/2/2021	8260	2102020947A	Toluene	0.27	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021027A	N-Nitrosodimethylamine	2.7	ng/L	0.48	0.33		FB
2/2/2021	NDMA_LL	2102021027A	N-Nitrodimethylamine	0.3	ng/L	0.48	0.2		J
2/2/2021	8270	2102021310A	Benzenesulfonamide, N-butyl-	7.2	ug/L	NA	NA		TIC
2/2/2021	8270	2102021310A	Butane, 2-methoxy-2-methyl-	85	ug/L	NA	NA		TIC RB
2/2/2021	8270	2102021310A	1,4-Dioxane, 2,5-dimethyl-	10	ug/L	NA	NA		TIC
2/2/2021	8270	2102021310A	Unknown	6.9	ug/L	NA	NA		TIC
2/2/2021	METALS	2102021428A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021428A	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021428A	Barium, Total	0.051	mg/L	0.02	0.003		
2/2/2021	METALS	2102021428A	Boron, Total	0.09	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021428A	Calcium, Total	83.5	mg/L	1	0.3		
2/2/2021	METALS	2102021428A	Copper, Total	0.013	mg/L	0.02	0.004		J
2/2/2021	METALS	2102021428A	Magnesium, Total	61.5	mg/L	1	0.03		
2/2/2021	METALS	2102021428A	Manganese, Total	0.091	mg/L	0.01	0.004		
2/2/2021	METALS	2102021428A	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021428A	Potassium, Total	3.1	mg/L	2	0.2		
2/2/2021	METALS	2102021428A	Sodium, Total	39.3	mg/L	1	0.2		
2/2/2021	METALS	2102021428A	Strontium, Total	2.06	mg/L	0.1	0.002		
2/2/2021	METALS	2102021428A	Zinc, Total	0.149	mg/L	0.02	0.01		
2/2/2021	METALS	2102021428A	Antimony, Total	0.0008	mg/L	0.001	0.0002		J
2/2/2021	ANIONS	2102021429A	Fluoride, undistilled	0.75	mg/L	0.1	0.01		
2/2/2021	ANIONS	2102021429A	Sulfate	279	mg/L	8	1.6		
2/2/2021	ANIONS	2102021429A	Alkalinity, Total as CaCO3	188	mg/L	2	1.8		
2/2/2021	ANIONS	2102021429A	Chloride	48.3	mg/L	2	0.5		
2/2/2021	SM2540C	2102021430A	Total Dissolved Solids (TDS)	687	mg/L	10	9		
2/2/2021	6850	2102021431A	Perchlorate	0.51	ug/L	0.2	0.06		
2/2/2021	353.2	2102021432A	Nitrate+Nitrite as Nitrogen	1.2	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
2/2/2021	8260	2102021002A	Hexanoic acid, 2-ethyl-	6.1	ug/L	NA	NA		TIC
2/2/2021	8260	2102021002A	Toluene	0.26	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021004A	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		
2/2/2021	NDMA_LL	2102021038A	N-Nitrosodimethylamine	0.74	ng/L	0.47	0.33		

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
2/2/2021	8260	2102021010A	Toluene	0.24	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021012A	N-Nitrosodimethylamine	0.83	ng/L	0.48	0.33		

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
4/7/2021	8260	2104071430Y	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	Tetrachloroethene (PCE)	6.1	ug/L	1	0.21		
4/7/2021	8260	2104071430Y	Trichlorofluoromethane (CFC 11)	92	ug/L	1	0.24		
4/7/2021	8260	2104071430Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	Trichloroethene (TCE)	150	ug/L	1	0.2		
4/7/2021	607	2104071431Y	N-Nitrodimethylamine	1.4	µg/L	0.0095	0.0048	112	
4/7/2021	607	2104071431Y	Bromacil	0.37	µg/L	0.0095	0.0048	114	
4/7/2021	607	2104071431Y	N-Nitrosodimethylamine	2.3	µg/L	0.0095	0.0048	46	
4/7/2021	METALS	2104071500Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/7/2021	METALS	2104071500Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
4/7/2021	METALS	2104071500Y	Boron, Total	0.11	mg/L	0.2	0.02		J
4/7/2021	METALS	2104071500Y	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
4/7/2021	METALS	2104071500Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
4/7/2021	METALS	2104071500Y	Barium, Total	0.031	mg/L	0.02	0.003		
4/7/2021	METALS	2104071500Y	Potassium, Total	3.1	mg/L	2	0.2		
4/7/2021	METALS	2104071500Y	Sodium, Total	44.1	mg/L	1	0.2		
4/7/2021	METALS	2104071500Y	Strontium, Total	2.98	mg/L	0.1	0.002		
4/7/2021	METALS	2104071500Y	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
4/7/2021	METALS	2104071500Y	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
4/7/2021	METALS	2104071500Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/7/2021	METALS	2104071500Y	Magnesium, Total	69.4	mg/L	1	0.03		
4/7/2021	METALS	2104071500Y	Calcium, Total	132	mg/L	1	0.3		

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
4/7/2021	8260	2104071015Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.5	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Dichlorofluoromethane (CFC 21)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Tetrachloroethene (PCE)	0.45	ug/L	1	0.21		J
4/7/2021	8260	2104071015Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Trichlorofluoromethane (CFC 11)	3	ug/L	1	0.24		
4/7/2021	8260	2104071015Y	Vinyl Chloride	0.21	ug/L	1	0.2		J
4/7/2021	8260	2104071015Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Tetrachloroethene (PCE)	0.34	ug/L	1	0.21		J
4/7/2021	8260	2104071016Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Vinyl Chloride	0.2	ug/L	1	0.2		J
4/7/2021	8260	2104071016Y	Trichloroethene (TCE)	11	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Dichlorofluoromethane (CFC 21)	7	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.4	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Trichlorofluoromethane (CFC 11)	3.1	ug/L	1	0.24		
4/7/2021	607	2104071017Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	46	
4/7/2021	METALS	2104071045Y	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
4/7/2021	METALS	2104071045Y	Sodium, Total	45.3	mg/L	1	0.2		
4/7/2021	METALS	2104071045Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
4/7/2021	METALS	2104071045Y	Barium, Total	0.038	mg/L	0.02	0.003		
4/7/2021	METALS	2104071045Y	Boron, Total	0.12	mg/L	0.2	0.02		J
4/7/2021	METALS	2104071045Y	Calcium, Total	68.2	mg/L	1	0.3		
4/7/2021	METALS	2104071045Y	Manganese, Total	0.13	mg/L	0.01	0.004		
4/7/2021	METALS	2104071045Y	Potassium, Total	7.9	mg/L	2	0.2		
4/7/2021	METALS	2104071045Y	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
4/7/2021	METALS	2104071045Y	Magnesium, Total	31.6	mg/L	1	0.03		
4/7/2021	METALS	2104071045Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/7/2021	METALS	2104071045Y	Strontium, Total	1.61	mg/L	0.1	0.002		
4/7/2021	METALS	2104071045Y	Zinc, Total	0.027	mg/L	0.02	0.01		
4/7/2021	ANIONS	2104071046Y	Sulfate	110	mg/L	8	1.6		
4/7/2021	ANIONS	2104071046Y	Alkalinity, Total as CaCO3	282	mg/L	2	1.8		
4/7/2021	ANIONS	2104071046Y	Chloride	7.6	mg/L	2	0.5		
4/7/2021	ANIONS	2104071046Y	Fluoride, undistilled	0.67	mg/L	0.1	0.01		
4/7/2021	SM2540C	2104071047Y	Total Dissolved Solids (TDS)	461	mg/L	10	9		
4/7/2021	6850	2104071048Y	Perchlorate	0.1	ug/L	0.2	0.06		J

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
4/1/2021	8260_LL	2104011031C	2-Propanol	9.7	ug/L	40	3.4		J
4/1/2021	607	2104011033C	Bromacil	0.01	µg/L	0.0095	0.0048	115	
4/1/2021	METALS	2104011036C	Antimony, Total	0.0007	mg/L	0.001	0.0002		J
4/1/2021	METALS	2104011036C	Molybdenum, Total	0.021	mg/L	0.025	0.003		J
4/1/2021	METALS	2104011036C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/1/2021	METALS	2104011036C	Sodium, Total	49.2	mg/L	1	0.2		
4/1/2021	METALS	2104011036C	Strontium, Total	2.67	mg/L	0.1	0.002		
4/1/2021	METALS	2104011036C	Potassium, Total	4.7	mg/L	2	0.2		
4/1/2021	METALS	2104011036C	Nickel, Total	0.007	mg/L	0.04	0.003		J
4/1/2021	METALS	2104011036C	Magnesium, Total	46.9	mg/L	1	0.03		
4/1/2021	METALS	2104011036C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/1/2021	METALS	2104011036C	Calcium, Total	80.4	mg/L	1	0.3		
4/1/2021	METALS	2104011036C	Boron, Total	0.09	mg/L	0.2	0.02		J
4/1/2021	METALS	2104011036C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/1/2021	METALS	2104011036C	Barium, Total	0.035	mg/L	0.02	0.003		
4/1/2021	ANIONS	2104011037C	Fluoride, undistilled	0.91	mg/L	0.1	0.01		
4/1/2021	ANIONS	2104011037C	Alkalinity, Total as CaCO3	161	mg/L	2	1.8		
4/1/2021	ANIONS	2104011037C	Chloride	48.2	mg/L	2	0.5		
4/1/2021	ANIONS	2104011037C	Sulfate	252	mg/L	8	1.6		
4/1/2021	SM2540C	2104011038C	Total Dissolved Solids (TDS)	630	mg/L	10	9		
4/1/2021	6850	2104011039C	Perchlorate	0.28	ug/L	0.2	0.06		
4/1/2021	353.2	2104011040C	Nitrate+Nitrite as Nitrogen	0.947	mg/L	0.05	0.002		

Analytical Results for Sampling Events at BLM-40-595

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	ANIONS	2104121414C	Alkalinity, Total as CaCO3	127	mg/L	2	1.8		
4/12/2021	ANIONS	2104121414C	Chloride	10.4	mg/L	2	0.5		
4/12/2021	ANIONS	2104121414C	Fluoride, undistilled	0.25	mg/L	0.1	0.01		
4/12/2021	ANIONS	2104121414C	Sulfate	167	mg/L	8	1.6		
4/12/2021	SM2540C	2104121415C	Total Dissolved Solids (TDS)	405	mg/L	10	9		
4/12/2021	6850	2104121416C	Perchlorate	0.21	ug/L	0.2	0.06		
4/12/2021	353.2	2104121417C	Nitrate+Nitrite as Nitrogen	0.228	mg/L	0.05	0.002		

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
4/14/2021	8260_LL	2104141105C	1,2-Dichloroethane	1.1	ug/L	0.5	0.2		
4/14/2021	ANIONS	2104141108C	Alkalinity, Total as CaCO3	148	mg/L	2	1.8		
4/14/2021	ANIONS	2104141108C	Chloride	17.2	mg/L	2	0.5		
4/14/2021	ANIONS	2104141108C	Fluoride, undistilled	0.41	mg/L	0.1	0.01		
4/14/2021	ANIONS	2104141108C	Sulfate	225	mg/L	8	1.6		
4/14/2021	SM2540C	2104141109C	Total Dissolved Solids (TDS)	532	mg/L	10	9		
4/14/2021	353.2	2104141111C	Nitrate+Nitrite as Nitrogen	0.005	mg/L	0.05	0.002		J

Analytical Results for Sampling Events at BLM-41-420

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/20/2021	NDMA_LL	2104201422C	N-Nitrosodimethylamine	0.5	ng/L	0.48	0.33		RB FB
4/20/2021	NDMA_LL	2104201423C	N-Nitrosodimethylamine	0.53	ng/L	0.47	0.33		RB FB
4/20/2021	ANIONS	2104201425C	Alkalinity, Total as CaCO3	228	mg/L	2	1.8		
4/20/2021	ANIONS	2104201425C	Chloride	55.1	mg/L	2	0.5		
4/20/2021	ANIONS	2104201425C	Fluoride, undistilled	0.73	mg/L	0.1	0.01		
4/20/2021	ANIONS	2104201425C	Sulfate	319	mg/L	8	1.6		
4/20/2021	SM2540C	2104201426C	Total Dissolved Solids (TDS)	769	mg/L	10	9		
4/20/2021	6850	2104201427C	Perchlorate	0.15	ug/L	0.2	0.06		J
4/20/2021	353.2	2104201428C	Nitrate+Nitrite as Nitrogen	0.352	mg/L	0.05	0.002		

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
4/20/2021	8260_LL	2104200925C	1,2-Dichloroethane	1.3	ug/L	0.5	0.2		
4/20/2021	NDMA_LL	2104200927C	N-Nitrosodimethylamine	1.4	ng/L	0.48	0.33		RB Q
4/20/2021	NDMA_LL	2104200928C	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		RB * Q
4/20/2021	ANIONS	2104200930C	Sulfate	260	mg/L	8	1.6		
4/20/2021	ANIONS	2104200930C	Chloride	49.1	mg/L	2	0.5		
4/20/2021	ANIONS	2104200930C	Alkalinity, Total as CaCO3	249	mg/L	2	1.8		
4/20/2021	ANIONS	2104200930C	Fluoride, undistilled	0.58	mg/L	0.1	0.01		
4/20/2021	SM2540C	2104200931C	Total Dissolved Solids (TDS)	712	mg/L	10	9		

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
3/10/2021	8260_LL	2103100900B	Sulfur Dioxide	82	ug/L	NA	NA		TIC RB TB FB
3/10/2021	607	2103100901B	Bromacil	0.0058	µg/L	0.0096	0.0048	102	J
3/10/2021	NDMA_LL	2103100902B	N-Nitrosodimethylamine	0.43	ng/L	0.48	0.33		J *
3/10/2021	8270	2103100903B	Bis(2-ethylhexyl) Phthalate	9.8	ug/L	4.7	3.9		
3/10/2021	METALS	2103100904B	Sodium, Total	42.8	mg/L	1	0.2		
3/10/2021	METALS	2103100904B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
3/10/2021	METALS	2103100904B	Arsenic, Total	0.0017	mg/L	0.001	0.0004		
3/10/2021	METALS	2103100904B	Barium, Total	0.032	mg/L	0.02	0.003		
3/10/2021	METALS	2103100904B	Boron, Total	0.09	mg/L	0.2	0.02		J
3/10/2021	METALS	2103100904B	Calcium, Total	42.6	mg/L	1	0.3		
3/10/2021	METALS	2103100904B	Chromium, Total	0.004	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103100904B	Magnesium, Total	28	mg/L	1	0.03		
3/10/2021	METALS	2103100904B	Potassium, Total	5.2	mg/L	2	0.2		
3/10/2021	METALS	2103100904B	Strontium, Total	1.58	mg/L	0.1	0.002		
3/10/2021	METALS	2103100904B	Vanadium, Total	0.016	mg/L	0.05	0.0007		J
3/10/2021	METALS	2103100904B	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
3/10/2021	ANIONS	2103100905B	Sulfate	95.3	mg/L	8	1.6		
3/10/2021	ANIONS	2103100905B	Alkalinity, Total as CaCO3	187	mg/L	2	1.8		
3/10/2021	ANIONS	2103100905B	Chloride	17.2	mg/L	2	0.5		
3/10/2021	ANIONS	2103100905B	Fluoride, undistilled	0.61	mg/L	0.1	0.01		
3/10/2021	SM2540C	2103100906B	Total Dissolved Solids (TDS)	389	mg/L	10	9		
3/10/2021	6850	2103100907B	Perchlorate	0.28	ug/L	0.2	0.06		
3/10/2021	353.2	2103100908B	Nitrate+Nitrite as Nitrogen	1.17	mg/L	0.05	0.002		

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
3/10/2021	8260_LL	2103101030B	Sulfur Dioxide	100	ug/L	NA	NA		TIC RB FB
3/10/2021	NDMA_LL	2103101033B	N-Nitrosodimethylamine	0.41	ng/L	0.47	0.33		J *
3/10/2021	METALS	2103101036B	Sodium, Total	43.4	mg/L	1	0.2		
3/10/2021	METALS	2103101036B	Strontium, Total	1.57	mg/L	0.1	0.002		
3/10/2021	METALS	2103101036B	Potassium, Total	5.2	mg/L	2	0.2		
3/10/2021	METALS	2103101036B	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
3/10/2021	METALS	2103101036B	Magnesium, Total	27.9	mg/L	1	0.03		
3/10/2021	METALS	2103101036B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103101036B	Calcium, Total	42.3	mg/L	1	0.3		
3/10/2021	METALS	2103101036B	Boron, Total	0.09	mg/L	0.2	0.02		J
3/10/2021	METALS	2103101036B	Barium, Total	0.032	mg/L	0.02	0.003		
3/10/2021	METALS	2103101036B	Arsenic, Total	0.0015	mg/L	0.001	0.0004		
3/10/2021	METALS	2103101036B	Vanadium, Total	0.016	mg/L	0.05	0.0007		J
3/10/2021	ANIONS	2103101037B	Sulfate	94.8	mg/L	8	1.6		
3/10/2021	ANIONS	2103101037B	Chloride	17.1	mg/L	2	0.5		
3/10/2021	ANIONS	2103101037B	Fluoride, undistilled	0.57	mg/L	0.1	0.01		
3/10/2021	ANIONS	2103101037B	Alkalinity, Total as CaCO3	188	mg/L	2	1.8		
3/10/2021	SM2540C	2103101038B	Total Dissolved Solids (TDS)	391	mg/L	10	9		
3/10/2021	6850	2103101039B	Perchlorate	0.23	ug/L	0.2	0.06		
3/10/2021	353.2	2103101040B	Nitrate+Nitrite as Nitrogen	1.19	mg/L	0.05	0.002		

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
3/15/2021	8260	2103151345B	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
3/15/2021	8260	2103151345B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.1	ug/L	1	0.2		
3/15/2021	8260	2103151345B	Dichlorofluoromethane (CFC 21)	0.27	ug/L	1	0.2		J
3/15/2021	8260	2103151345B	Tetrachloroethene (PCE)	0.47	ug/L	1	0.21		J
3/15/2021	8260	2103151345B	Trichloroethene (TCE)	24	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
3/15/2021	8260	2103151346B	Trichloroethene (TCE)	25	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Tetrachloroethene (PCE)	0.57	ug/L	1	0.21		J
3/15/2021	8260	2103151346B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.8	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Dichlorofluoromethane (CFC 21)	0.25	ug/L	1	0.2		J
3/15/2021	607	2103151348B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151348B	N-Nitrodimethylamine	0.058	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151348B	Bromacil	0.013	µg/L	0.0094	0.0047	99	
3/15/2021	607	2103151349B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151349B	N-Nitrodimethylamine	0.058	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151349B	Bromacil	0.0066	µg/L	0.0094	0.0047	99	J
3/15/2021	ANIONS	2103151350B	Fluoride, undistilled	0.83	mg/L	0.1	0.01		
3/15/2021	ANIONS	2103151350B	Chloride	40.3	mg/L	2	0.5		
3/15/2021	ANIONS	2103151350B	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
3/15/2021	ANIONS	2103151350B	Sulfate	282	mg/L	8	1.6		
3/15/2021	SM2540C	2103151351B	Total Dissolved Solids (TDS)	777	mg/L	10	9		
3/15/2021	6850	2103151352B	Perchlorate	0.44	ug/L	0.2	0.06		
3/15/2021	353.2	2103151353B	Nitrate+Nitrite as Nitrogen	1.33	mg/L	0.05	0.002		

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
4/14/2021	8260	2104141425C	Trichloroethene (TCE)	2	ug/L	1	0.2		
4/14/2021	8260	2104141425C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.21	ug/L	1	0.2		J
4/14/2021	8260	2104141425C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.96	ug/L	1	0.2		J
4/14/2021	NDMA_LL	2104141427C	N-Nitrosodimethylamine	0.76	ng/L	0.48	0.33		*

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
3/1/2021	METALS	2103010945C	Barium, Total	0.02	mg/L	0.02	0.003		J
3/1/2021	METALS	2103010945C	Magnesium, Total	67.6	mg/L	1	0.03		
3/1/2021	METALS	2103010945C	Strontium, Total	2.2	mg/L	0.1	0.002		
3/1/2021	METALS	2103010945C	Sodium, Total	43.6	mg/L	1	0.2		
3/1/2021	METALS	2103010945C	Potassium, Total	4.1	mg/L	2	0.2		
3/1/2021	METALS	2103010945C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/1/2021	METALS	2103010945C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103010945C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/1/2021	METALS	2103010945C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/1/2021	METALS	2103010945C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103010945C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103010945C	Calcium, Total	108	mg/L	1	0.3		
3/1/2021	ANIONS	2103010946C	Alkalinity, Total as CaCO3	220	mg/L	2	1.8		
3/1/2021	ANIONS	2103010946C	Chloride	44.2	mg/L	2	0.5		
3/1/2021	ANIONS	2103010946C	Fluoride, undistilled	0.82	mg/L	0.1	0.01		
3/1/2021	ANIONS	2103010946C	Sulfate	334	mg/L	8	1.6		
3/1/2021	SM2540C	2103010947C	Total Dissolved Solids (TDS)	795	mg/L	10	9		
3/1/2021	6850	2103010948C	Perchlorate	0.28	ug/L	0.2	0.06		
3/1/2021	353.2	2103010949C	Nitrate+Nitrite as Nitrogen	1.01	mg/L	0.05	0.002		

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
3/2/2021	8260	2103021330C	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
3/2/2021	8260	2103021330C	Trichlorofluoromethane (CFC 11)	5.6	ug/L	1	0.24		
3/2/2021	8260	2103021330C	Trichloroethene (TCE)	3	ug/L	1	0.2		
3/2/2021	607	2103021335C	N-Nitrosodimethylamine	0.0076	µg/L	0.0095	0.0048	36	J
3/2/2021	607	2103021335C	N-Nitrodimethylamine	0.0067	µg/L	0.0095	0.0048	94	J
3/2/2021	607	2103021336C	N-Nitrodimethylamine	0.0057	µg/L	0.0094	0.0047	94	J
3/2/2021	607	2103021336C	N-Nitrosodimethylamine	0.0075	µg/L	0.0094	0.0047	36	J
3/2/2021	ANIONS	2103021337C	Chloride	36	mg/L	2	0.5		
3/2/2021	ANIONS	2103021337C	Fluoride, undistilled	0.52	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021337C	Sulfate	251	mg/L	8	1.6		
3/2/2021	ANIONS	2103021337C	Alkalinity, Total as CaCO3	268	mg/L	2	1.8		
3/2/2021	SM2540C	2103021338C	Total Dissolved Solids (TDS)	746	mg/L	10	9		
3/2/2021	6850	2103021339C	Perchlorate	0.32	ug/L	0.2	0.06		
3/2/2021	353.2	2103021340C	Nitrate+Nitrite as Nitrogen	0.698	mg/L	0.05	0.002		

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
3/9/2021	8260	2103091316B	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
3/9/2021	8260	2103091316B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1	0.2		
3/9/2021	8260	2103091316B	Dichlorofluoromethane (CFC 21)	2.7	ug/L	1	0.2		
3/9/2021	8260	2103091316B	1,1,2-Trichloro-1,2,2-Trifluoroethane	49	ug/L	1	0.2		
3/9/2021	8260	2103091316B	Trichloroethene (TCE)	0.85	ug/L	1	0.2		J
3/9/2021	8260	2103091316B	Sulfur Dioxide	40	ug/L	NA	NA		TIC RB FB
3/9/2021	607	2103091318B	N-Nitrosodimethylamine	4.5	µg/L	0.0094	0.0047	40	
3/9/2021	607	2103091318B	N-Nitrodimethylamine	4.8	µg/L	0.0094	0.0047	99	
3/9/2021	607	2103091318B	Bromacil	4	µg/L	0.0094	0.0047	107	
3/9/2021	METALS	2103091319B	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/9/2021	METALS	2103091319B	Boron, Total	0.23	mg/L	0.2	0.02		
3/9/2021	METALS	2103091319B	Calcium, Total	98.5	mg/L	1	0.3		
3/9/2021	METALS	2103091319B	Chromium, Total	0.005	mg/L	0.01	0.0006		J
3/9/2021	METALS	2103091319B	Iron, Total	0.12	mg/L	0.1	0.07		
3/9/2021	METALS	2103091319B	Magnesium, Total	68.1	mg/L	1	0.03		
3/9/2021	METALS	2103091319B	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
3/9/2021	METALS	2103091319B	Potassium, Total	3.1	mg/L	2	0.2		
3/9/2021	METALS	2103091319B	Sodium, Total	89.7	mg/L	1	0.2		
3/9/2021	METALS	2103091319B	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/9/2021	METALS	2103091319B	Antimony, Total	0.0007	mg/L	0.001	0.0002		J
3/9/2021	METALS	2103091319B	Aluminum, Total	0.12	mg/L	0.1	0.03		
3/9/2021	METALS	2103091319B	Barium, Total	0.038	mg/L	0.02	0.003		
3/9/2021	METALS	2103091319B	Strontium, Total	2.88	mg/L	0.1	0.002		
3/9/2021	ANIONS	2103091320B	Sulfate	293	mg/L	8	1.6		
3/9/2021	ANIONS	2103091320B	Alkalinity, Total as CaCO3	275	mg/L	2	1.8		
3/9/2021	ANIONS	2103091320B	Fluoride, undistilled	0.77	mg/L	0.1	0.01		
3/9/2021	ANIONS	2103091320B	Chloride	74	mg/L	2	0.5		
3/9/2021	SM2540C	2103091321B	Total Dissolved Solids (TDS)	900	mg/L	10	9		
3/9/2021	6850	2103091322B	Perchlorate	0.62	ug/L	0.2	0.06		
3/9/2021	353.2	2103091323B	Nitrate+Nitrite as Nitrogen	6.4	mg/L	0.25	0.008		

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
4/19/2021	8260	2104190950C	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.2	ug/L	1	0.2		
4/19/2021	8260	2104190950C	Trichlorofluoromethane (CFC 11)	0.42	ug/L	1	0.24		J
4/19/2021	8260	2104190950C	Sulfur Dioxide	8.6	ug/L	NA	NA		TIC
4/19/2021	8260	2104190950C	Unknown	5.4	ug/L	NA	NA		TIC
4/19/2021	607	2104190952C	Bromacil	0.27	µg/L	0.0094	0.0047	85	
4/19/2021	METALS	2104190953C	Molybdenum, Total	0.032	mg/L	0.025	0.003		
4/19/2021	METALS	2104190953C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
4/19/2021	METALS	2104190953C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/19/2021	METALS	2104190953C	Barium, Total	0.026	mg/L	0.02	0.003		
4/19/2021	METALS	2104190953C	Boron, Total	0.09	mg/L	0.2	0.02		J
4/19/2021	METALS	2104190953C	Calcium, Total	268	mg/L	10	3		
4/19/2021	METALS	2104190953C	Chromium, Total	0.283	mg/L	0.01	0.0006		
4/19/2021	METALS	2104190953C	Iron, Total	2.24	mg/L	0.1	0.07		
4/19/2021	METALS	2104190953C	Manganese, Total	0.004	mg/L	0.01	0.004		J
4/19/2021	METALS	2104190953C	Nickel, Total	0.596	mg/L	0.04	0.003		
4/19/2021	METALS	2104190953C	Potassium, Total	2.4	mg/L	2	0.2		
4/19/2021	METALS	2104190953C	Sodium, Total	124	mg/L	1	0.2		
4/19/2021	METALS	2104190953C	Strontium, Total	7.4	mg/L	0.1	0.002		
4/19/2021	METALS	2104190953C	Magnesium, Total	86.8	mg/L	1	0.03		
4/19/2021	METALS	2104190954C	Barium, Total	0.026	mg/L	0.02	0.003		
4/19/2021	METALS	2104190954C	Manganese, Total	0.005	mg/L	0.01	0.004		J
4/19/2021	METALS	2104190954C	Strontium, Total	7.24	mg/L	0.1	0.002		
4/19/2021	METALS	2104190954C	Sodium, Total	121	mg/L	1	0.2		
4/19/2021	METALS	2104190954C	Potassium, Total	2.3	mg/L	2	0.2		
4/19/2021	METALS	2104190954C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
4/19/2021	METALS	2104190954C	Molybdenum, Total	0.031	mg/L	0.025	0.003		
4/19/2021	METALS	2104190954C	Magnesium, Total	85	mg/L	1	0.03		
4/19/2021	METALS	2104190954C	Iron, Total	2.22	mg/L	0.1	0.07		
4/19/2021	METALS	2104190954C	Chromium, Total	0.282	mg/L	0.01	0.0006		
4/19/2021	METALS	2104190954C	Calcium, Total	247	mg/L	1	0.3		
4/19/2021	METALS	2104190954C	Boron, Total	0.08	mg/L	0.2	0.02		J
4/19/2021	METALS	2104190954C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/19/2021	METALS	2104190954C	Nickel, Total	0.585	mg/L	0.04	0.003		
4/19/2021	ANIONS	2104190955C	Sulfate	698	mg/L	20	4		
4/19/2021	ANIONS	2104190955C	Alkalinity, Total as CaCO3	74.2	mg/L	2	1.8		
4/19/2021	ANIONS	2104190955C	Chloride	352	mg/L	8	1.7		
4/19/2021	ANIONS	2104190955C	Fluoride, undistilled	0.27	mg/L	0.1	0.01		
4/19/2021	SM2540C	2104190956C	Total Dissolved Solids (TDS)	1540	mg/L	11	10		

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
4/19/2021	6850	2104190957C	Perchlorate	0.97	ug/L	0.2	0.06		
4/19/2021	353.2	2104190958C	Nitrate+Nitrite as Nitrogen	5.04	mg/L	0.5	0.02		

Analytical Results for Sampling Events at BW-6-355

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/11/2021	8260	2103111035B	Sulfur Dioxide	44	ug/L	NA	NA		TIC RB FB

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
4/8/2021	8260_LL	2104080831A	Toluene	1.1	ug/L	0.5	0.2		
4/8/2021	8270	2104080835A	1,4-Dioxane	5.5	ug/L	0.04	0.027		
4/8/2021	8270	2104080835A	1,4-Dioxane	4.6	ug/L	0.04	0.027		T

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
4/8/2021	8260_LL	2104080851A	Vinyl Chloride	0.33	ug/L	0.5	0.2		J
4/8/2021	8260_LL	2104080851A	Toluene	0.6	ug/L	0.5	0.2		
4/8/2021	NDMA_LL	2104080853A	N-Nitrosodimethylamine	1.8	ng/L	0.48	0.34		RB FB
4/8/2021	NDMA_LL	2104080853A	N-Nitrodimethylamine	0.88	ng/L	0.48	0.2		FB
4/8/2021	8270	2104080855A	1,4-Dioxane	6.2	ug/L	0.04	0.027		QD
4/8/2021	8270	2104080856A	1,4-Dioxane	4.4	ug/L	0.04	0.027		QD

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
4/8/2021	8260_LL	2104080911A	Toluene	0.5	ug/L	0.5	0.2		J
4/8/2021	8260_LL	2104080911A	Vinyl Chloride	0.29	ug/L	0.5	0.2		J
4/8/2021	NDMA_LL	2104080913A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		RB FB
4/8/2021	NDMA_LL	2104080913A	N-Nitrodimethylamine	0.98	ng/L	0.47	0.2		
4/8/2021	8270	2104080915A	1,4-Dioxane	2.8	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
4/20/2021	8260_LL	2104200951A	Toluene	0.69	ug/L	0.5	0.2		
4/20/2021	NDMA_LL	2104200953A	N-Nitrosodimethylamine	2.5	ng/L	0.48	0.33		RB FB
4/20/2021	8270	2104200955A	1,4-Dioxane	5.3	ug/L	0.04	0.027		

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
4/20/2021	8260_LL	2104201016A	Toluene	0.42	ug/L	0.5	0.2		J
4/20/2021	NDMA_LL	2104201018A	N-Nitrosodimethylamine	2.1	ng/L	0.48	0.33		RB FB
4/20/2021	NDMA_LL	2104201020A	N-Nitrosodimethylamine	2.7	ng/L	0.47	0.33		RB FB
4/20/2021	8270	2104201021A	1,4-Dioxane	1.2	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
4/20/2021	8260_LL	2104201031A	Toluene	0.45	ug/L	0.5	0.2		J
4/20/2021	NDMA_LL	2104201033A	N-Nitrosodimethylamine	4	ng/L	0.47	0.33		FB
4/20/2021	8270	2104201035A	1,4-Dioxane	3.5	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
4/13/2021	NDMA_LL	2104131402C	N-Nitrosodimethylamine	0.37	ng/L	0.48	0.33		J * FB
4/13/2021	METALS	2104131406C	Barium, Total	0.023	mg/L	0.02	0.003		
4/13/2021	METALS	2104131406C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/13/2021	METALS	2104131406C	Sodium, Total	47.4	mg/L	1	0.2		
4/13/2021	METALS	2104131406C	Potassium, Total	3.6	mg/L	2	0.2		
4/13/2021	METALS	2104131406C	Nickel, Total	0.01	mg/L	0.04	0.003		J
4/13/2021	METALS	2104131406C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/13/2021	METALS	2104131406C	Magnesium, Total	65.1	mg/L	1	0.03		
4/13/2021	METALS	2104131406C	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
4/13/2021	METALS	2104131406C	Strontium, Total	2.14	mg/L	0.1	0.002		
4/13/2021	METALS	2104131406C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/13/2021	METALS	2104131406C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/13/2021	METALS	2104131406C	Calcium, Total	101	mg/L	1	0.3		

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
4/13/2021	607	2104131002C	Bromacil	0.015	µg/L	0.0094	0.0047	80	
4/13/2021	METALS	2104131006C	Zinc, Total	0.013	mg/L	0.02	0.01		J
4/13/2021	METALS	2104131006C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/13/2021	METALS	2104131006C	Calcium, Total	103	mg/L	1	0.3		
4/13/2021	METALS	2104131006C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/13/2021	METALS	2104131006C	Magnesium, Total	73.8	mg/L	1	0.03		
4/13/2021	METALS	2104131006C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/13/2021	METALS	2104131006C	Nickel, Total	0.007	mg/L	0.04	0.003		J
4/13/2021	METALS	2104131006C	Potassium, Total	3.3	mg/L	2	0.2		
4/13/2021	METALS	2104131006C	Sodium, Total	41.3	mg/L	1	0.2		
4/13/2021	METALS	2104131006C	Strontium, Total	2.5	mg/L	0.1	0.002		
4/13/2021	METALS	2104131006C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/13/2021	METALS	2104131006C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/13/2021	METALS	2104131006C	Barium, Total	0.022	mg/L	0.02	0.003		
4/13/2021	ANIONS	2104131007C	Fluoride, undistilled	0.84	mg/L	0.1	0.01		
4/13/2021	ANIONS	2104131007C	Chloride	44.4	mg/L	2	0.5		
4/13/2021	ANIONS	2104131007C	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
4/13/2021	ANIONS	2104131007C	Sulfate	347	mg/L	8	1.6		
4/13/2021	SM2540C	2104131008C	Total Dissolved Solids (TDS)	821	mg/L	10	9		
4/13/2021	6850	2104131009C	Perchlorate	0.32	ug/L	0.2	0.06		
4/13/2021	353.2	2104131010C	Nitrate+Nitrite as Nitrogen	0.673	mg/L	0.05	0.002		

Analytical Results for Sampling Events at JP-3-509

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260_LL	2104150905C	2-Propanol	4.4	ug/L	40	3.4		J

Analytical Results for Sampling Events at JP-3-689

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260_LL	2104151035C	2-Propanol	3.4	ug/L	40	3.4		J
4/15/2021	NDMA_LL	2104151037C	N-Nitrosodimethylamine	0.56	ng/L	0.47	0.33		* FB

Analytical Results for Sampling Events at NASA 3

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/17/2021	8260_LL	2103170905B	Sulfur Dioxide	87	ug/L	NA	NA		TIC RB FB
3/17/2021	NDMA_LL	2103170907B	N-Nitrosodimethylamine	0.58	ng/L	0.47	0.33		* TB FB
3/17/2021	METALS	2103170909B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/17/2021	METALS	2103170909B	Barium, Total	0.023	mg/L	0.02	0.003		
3/17/2021	METALS	2103170909B	Calcium, Total	107	mg/L	1	0.3		
3/17/2021	METALS	2103170909B	Boron, Total	0.05	mg/L	0.2	0.02		J
3/17/2021	METALS	2103170909B	Magnesium, Total	51.5	mg/L	1	0.03		
3/17/2021	METALS	2103170909B	Zinc, Total	0.017	mg/L	0.02	0.01		J
3/17/2021	METALS	2103170909B	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
3/17/2021	METALS	2103170909B	Strontium, Total	1.22	mg/L	0.1	0.002		
3/17/2021	METALS	2103170909B	Sodium, Total	30.6	mg/L	1	0.2		
3/17/2021	METALS	2103170909B	Potassium, Total	2.2	mg/L	2	0.2		
3/17/2021	METALS	2103170909B	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/17/2021	METALS	2103170909B	Arsenic, Total	0.001	mg/L	0.001	0.0004		

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
4/6/2021	NDMA_LL	2104060946Y	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		RB
4/6/2021	METALS	2104061010Y	Calcium, Total	104	mg/L	1	0.3		
4/6/2021	METALS	2104061010Y	Magnesium, Total	68.4	mg/L	1	0.03		
4/6/2021	METALS	2104061010Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/6/2021	METALS	2104061010Y	Potassium, Total	3.5	mg/L	2	0.2		
4/6/2021	METALS	2104061010Y	Sodium, Total	44.2	mg/L	1	0.2		
4/6/2021	METALS	2104061010Y	Strontium, Total	3.22	mg/L	0.1	0.002		
4/6/2021	METALS	2104061010Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/6/2021	METALS	2104061010Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/6/2021	METALS	2104061010Y	Barium, Total	0.024	mg/L	0.02	0.003		
4/6/2021	ANIONS	2104061011Y	Fluoride, undistilled	0.76	mg/L	0.1	0.01		
4/6/2021	ANIONS	2104061011Y	Alkalinity, Total as CaCO3	232	mg/L	2	1.8		
4/6/2021	ANIONS	2104061011Y	Chloride	43.3	mg/L	2	0.5		
4/6/2021	ANIONS	2104061011Y	Sulfate	324	mg/L	8	1.6		
4/6/2021	SM2540C	2104061012Y	Total Dissolved Solids (TDS)	791	mg/L	10	9		
4/6/2021	6850	2104061035Y	Perchlorate	0.34	ug/L	0.2	0.06		
4/6/2021	353.2	2104061036Y	Nitrate+Nitrite as Nitrogen	0.639	mg/L	0.05	0.002		

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
4/5/2021	NDMA_LL	2104051457Y	N-Nitrosodimethylamine	0.99	ng/L	0.48	0.33		RB
4/5/2021	METALS	2104051459Y	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
4/5/2021	METALS	2104051459Y	Barium, Total	0.022	mg/L	0.02	0.003		
4/5/2021	METALS	2104051459Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/5/2021	METALS	2104051459Y	Calcium, Total	103	mg/L	1	0.3		
4/5/2021	METALS	2104051459Y	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
4/5/2021	METALS	2104051459Y	Magnesium, Total	69.2	mg/L	1	0.03		
4/5/2021	METALS	2104051459Y	Potassium, Total	3.6	mg/L	2	0.2		
4/5/2021	METALS	2104051459Y	Zinc, Total	0.014	mg/L	0.02	0.01		J
4/5/2021	METALS	2104051459Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
4/5/2021	METALS	2104051459Y	Manganese, Total	0.012	mg/L	0.01	0.004		
4/5/2021	METALS	2104051459Y	Strontium, Total	3.25	mg/L	0.1	0.002		
4/5/2021	METALS	2104051459Y	Sodium, Total	44.9	mg/L	1	0.2		
4/5/2021	METALS	2104051459Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/5/2021	METALS	2104051459Y	Nickel, Total	0.044	mg/L	0.04	0.003		
4/5/2021	ANIONS	2104051520Y	Fluoride, undistilled	0.69	mg/L	0.1	0.01		
4/5/2021	ANIONS	2104051520Y	Chloride	43.6	mg/L	2	0.5		
4/5/2021	ANIONS	2104051520Y	Alkalinity, Total as CaCO3	221	mg/L	2	1.8		
4/5/2021	ANIONS	2104051520Y	Sulfate	336	mg/L	8	1.6		
4/5/2021	SM2540C	2104051521Y	Total Dissolved Solids (TDS)	797	mg/L	10	9		
4/5/2021	6850	2104051522Y	Perchlorate	0.25	ug/L	0.2	0.06		
4/5/2021	353.2	2104051523Y	Nitrate+Nitrite as Nitrogen	0.658	mg/L	0.05	0.002		

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
4/1/2021	NDMA_LL	2104050830Y	N-Nitrodimethylamine	1.1	ng/L	0.48	0.2		
4/1/2021	NDMA_LL	2104050830Y	N-Nitrosodimethylamine	5.7	ng/L	0.48	0.33		
4/1/2021	METALS	2104050831Y	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
4/1/2021	METALS	2104050831Y	Strontium, Total	2.89	mg/L	0.1	0.002		
4/1/2021	METALS	2104050831Y	Sodium, Total	72.9	mg/L	1	0.2		
4/1/2021	METALS	2104050831Y	Potassium, Total	6.1	mg/L	2	0.2		
4/1/2021	METALS	2104050831Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
4/1/2021	METALS	2104050831Y	Magnesium, Total	46.1	mg/L	1	0.03		
4/1/2021	METALS	2104050831Y	Chromium, Total	0.002	mg/L	0.01	0.0006		J
4/1/2021	METALS	2104050831Y	Calcium, Total	75.2	mg/L	1	0.3		
4/1/2021	METALS	2104050831Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/1/2021	METALS	2104050831Y	Barium, Total	0.055	mg/L	0.02	0.003		
4/1/2021	METALS	2104050831Y	Arsenic, Total	0.0016	mg/L	0.001	0.0004		
4/1/2021	METALS	2104050831Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/1/2021	ANIONS	2104050832Y	Fluoride, undistilled	0.26	mg/L	0.1	0.01		
4/1/2021	ANIONS	2104050832Y	Chloride	43.8	mg/L	2	0.5		
4/1/2021	ANIONS	2104050832Y	Alkalinity, Total as CaCO3	164	mg/L	2	1.8		
4/1/2021	ANIONS	2104050832Y	Sulfate	299	mg/L	8	1.6		
4/1/2021	SM2540C	2104050833Y	Total Dissolved Solids (TDS)	709	mg/L	10	9		
4/1/2021	6850	2104050834Y	Perchlorate	0.31	ug/L	0.2	0.06		
4/1/2021	353.2	2104050835Y	Nitrate+Nitrite as Nitrogen	1.15	mg/L	0.05	0.002		

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
4/5/2021	NDMA_LL	2104051052Y	N-Nitrosodimethylamine	1.2	ng/L	0.48	0.33		RB
4/5/2021	METALS	2104051305Y	Potassium, Total	5	mg/L	2	0.2		
4/5/2021	METALS	2104051305Y	Arsenic, Total	0.0026	mg/L	0.001	0.0004		
4/5/2021	METALS	2104051305Y	Barium, Total	0.017	mg/L	0.02	0.003		J
4/5/2021	METALS	2104051305Y	Boron, Total	0.12	mg/L	0.2	0.02		J
4/5/2021	METALS	2104051305Y	Calcium, Total	49.8	mg/L	1	0.3		
4/5/2021	METALS	2104051305Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/5/2021	METALS	2104051305Y	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
4/5/2021	METALS	2104051305Y	Sodium, Total	114	mg/L	1	0.2		
4/5/2021	METALS	2104051305Y	Strontium, Total	2.29	mg/L	0.1	0.002		
4/5/2021	METALS	2104051305Y	Magnesium, Total	36.9	mg/L	1	0.03		
4/5/2021	METALS	2104051305Y	Vanadium, Total	0.017	mg/L	0.05	0.0007		J
4/5/2021	ANIONS	2104051306Y	Alkalinity, Total as CaCO3	170	mg/L	2	1.8		
4/5/2021	ANIONS	2104051306Y	Chloride	44.2	mg/L	2	0.5		
4/5/2021	ANIONS	2104051306Y	Fluoride, undistilled	0.37	mg/L	0.1	0.01		
4/5/2021	ANIONS	2104051306Y	Sulfate	289	mg/L	8	1.6		
4/5/2021	SM2540C	2104051307Y	Total Dissolved Solids (TDS)	13	mg/L	10	9		*
4/5/2021	6850	2104051308Y	Perchlorate	0.45	ug/L	0.2	0.06		
4/5/2021	353.2	2104051309Y	Nitrate+Nitrite as Nitrogen	1.12	mg/L	0.05	0.002		

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
3/2/2021	8260_LL	2103021016A	Toluene	1.9	ug/L	0.5	0.2		
3/2/2021	NDMA_LL	2103021018A	N-Nitrodimethylamine	0.33	ng/L	0.48	0.2		J
3/2/2021	NDMA_LL	2103021018A	N-Nitrosodimethylamine	2.4	ng/L	0.48	0.33		RB
3/2/2021	8270	2103021300A	1,4-Dioxane	8.7	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
3/2/2021	8260_LL	2103021031A	Toluene	0.22	ug/L	0.5	0.2		J
3/2/2021	NDMA_LL	2103021033A	N-Nitrodimethylamine	0.23	ng/L	0.48	0.2		J
3/2/2021	NDMA_LL	2103021033A	N-Nitrosodimethylamine	1.9	ng/L	0.48	0.34		RB FB
3/2/2021	8270	2103021311A	1,4-Dioxane	5.8	ug/L	0.04	0.027		
3/2/2021	8270	2103021312A	1,4-Dioxane	7.4	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
3/2/2021	8260_LL	2103021046A	Toluene	0.31	ug/L	0.5	0.2		J
3/2/2021	NDMA_LL	2103021048A	N-Nitrosodimethylamine	1.6	ng/L	0.47	0.33		RB FB
3/2/2021	NDMA_LL	2103021048A	N-Nitrodimethylamine	0.21	ng/L	0.47	0.2		J
3/2/2021	8270	2103021330A	1,4-Dioxane	7.2	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
3/4/2021	8260_LL	2103040846A	Toluene	0.38	ug/L	0.5	0.2		J T
3/4/2021	NDMA_LL	2103040848A	N-Nitrosodimethylamine	0.93	ng/L	0.48	0.34		
3/4/2021	NDMA_LL	2103040925A	N-Nitrosodimethylamine	0.88	ng/L	0.49	0.34		

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
3/4/2021	8260_LL	2103040901A	Toluene	0.27	ug/L	0.5	0.2		J

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
2/8/2021	8260	2102081510B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.3	ug/L	1	0.2		
2/8/2021	8260	2102081510B	Tetrachloroethene (PCE)	0.29	ug/L	1	0.21		J
2/8/2021	8260	2102081510B	Trichloroethene (TCE)	16	ug/L	1	0.2		
2/8/2021	8260	2102081510B	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/8/2021	8260	2102081511B	Trichlorofluoromethane (CFC 11)	14	ug/L	1	0.24		
2/8/2021	8260	2102081511B	Trichloroethene (TCE)	17	ug/L	1	0.2		
2/8/2021	8260	2102081511B	1,1,2-Trichloro-1,2,2-Trifluoroethane	7.1	ug/L	1	0.2		
2/8/2021	607	2102081513B	Bromacil	0.04	µg/L	0.0099	0.005	74	
2/8/2021	NDMA_LL	2102081514B	N-Nitrosodimethylamine	5	ng/L	0.48	0.33		FB
2/8/2021	NDMA_LL	2102081514B	N-Nitrodimethylamine	0.83	ng/L	0.48	0.2		FB
2/8/2021	NDMA_LL	2102081516B	N-Nitrodimethylamine	1.2	ng/L	0.48	0.2		FB
2/8/2021	NDMA_LL	2102081516B	N-Nitrosodimethylamine	5.2	ng/L	0.48	0.33		FB
2/8/2021	8270	2102081518B	Trichloroethene (TCE)	1.9	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	n-Hexadecanoic acid	1.7	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Stearic Acid (Octadecanoic Acid)	1.2	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Unknown	3.6	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Drometrizole	3.2	ug/L	NA	NA		TIC
2/8/2021	METALS	2102081519B	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/8/2021	METALS	2102081519B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102081519B	Strontium, Total	2.47	mg/L	0.1	0.002		
2/8/2021	METALS	2102081519B	Antimony, Total	0.0002	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102081519B	Potassium, Total	3.5	mg/L	2	0.2		
2/8/2021	METALS	2102081519B	Magnesium, Total	64.2	mg/L	1	0.03		
2/8/2021	METALS	2102081519B	Chromium, Total	0.003	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102081519B	Calcium, Total	108	mg/L	1	0.3		
2/8/2021	METALS	2102081519B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/8/2021	METALS	2102081519B	Barium, Total	0.029	mg/L	0.02	0.003		
2/8/2021	METALS	2102081519B	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
2/8/2021	METALS	2102081519B	Sodium, Total	36.7	mg/L	1	0.2		
2/8/2021	ANIONS	2102081520B	Alkalinity, Total as CaCO3	235	mg/L	2	1.8		
2/8/2021	ANIONS	2102081520B	Chloride	37	mg/L	2	0.5		
2/8/2021	ANIONS	2102081520B	Fluoride, undistilled	0.88	mg/L	0.1	0.01		
2/8/2021	ANIONS	2102081520B	Sulfate	325	mg/L	8	1.6		
2/8/2021	SM2540C	2102081521B	Total Dissolved Solids (TDS)	780	mg/L	10	9		
2/8/2021	6850	2102081522B	Perchlorate	0.33	ug/L	0.2	0.06		
2/8/2021	353.2	2102081523B	Nitrate+Nitrite as Nitrogen	0.806	mg/L	0.05	0.002		

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
2/8/2021	8260	2102080950B	Trichloroethene (TCE)	14	ug/L	1	0.2		
2/8/2021	8260	2102080950B	Trichlorofluoromethane (CFC 11)	12	ug/L	1	0.24		
2/8/2021	8260	2102080950B	Tetrachloroethene (PCE)	0.27	ug/L	1	0.21		J
2/8/2021	8260	2102080950B	Dichlorofluoromethane (CFC 21)	0.34	ug/L	1	0.2		J
2/8/2021	8260	2102080950B	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.9	ug/L	1	0.2		
2/8/2021	8260	2102080950B	Unknown	5.2	ug/L	NA	NA		TIC
2/8/2021	607	2102080952B	Bromacil	0.019	µg/L	0.0095	0.0048	74	
2/8/2021	NDMA_LL	2102080953B	N-Nitrosodimethylamine	6.8	ng/L	0.47	0.33		FB Q
2/8/2021	NDMA_LL	2102080953B	N-Nitrodimethylamine	1.2	ng/L	0.47	0.2		
2/8/2021	8270	2102080955B	Benzoic acid, 3,5-bis(1,1-dimethyl	1.3	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	2,4,6-Triallyloxy-1,3,5-triazine	3.6	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Drometrizole	1.3	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Unknown	2.5	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Trichloroethene (TCE)	1.7	ug/L	NA	NA		TIC
2/8/2021	METALS	2102080956B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/8/2021	METALS	2102080956B	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102080956B	Barium, Total	0.03	mg/L	0.02	0.003		
2/8/2021	METALS	2102080956B	Potassium, Total	3.7	mg/L	2	0.2		
2/8/2021	METALS	2102080956B	Calcium, Total	105	mg/L	1	0.3		
2/8/2021	METALS	2102080956B	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102080956B	Magnesium, Total	63.3	mg/L	1	0.03		
2/8/2021	METALS	2102080956B	Sodium, Total	38	mg/L	1	0.2		
2/8/2021	METALS	2102080956B	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/8/2021	METALS	2102080956B	Arsenic, Total	0.0018	mg/L	0.001	0.0004		
2/8/2021	METALS	2102080956B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102080956B	Strontium, Total	2.45	mg/L	0.1	0.002		
2/8/2021	ANIONS	2102080957B	Sulfate	324	mg/L	8	1.6		
2/8/2021	ANIONS	2102080957B	Fluoride, undistilled	0.96	mg/L	0.1	0.01		
2/8/2021	ANIONS	2102080957B	Chloride	37	mg/L	2	0.5		
2/8/2021	ANIONS	2102080957B	Alkalinity, Total as CaCO3	238	mg/L	2	1.8		
2/8/2021	SM2540C	2102080958B	Total Dissolved Solids (TDS)	787	mg/L	10	9		
2/8/2021	6850	2102080959B	Perchlorate	0.31	ug/L	0.2	0.06		
2/8/2021	353.2	2102081000B	Nitrate+Nitrite as Nitrogen	0.696	mg/L	0.05	0.002		

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
4/19/2021	8260_LL	2104191455C	Trichloroethene (TCE)	0.21	ug/L	0.5	0.2		J
4/19/2021	8260_LL	2104191455C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	ug/L	0.5	0.2		
4/19/2021	8260_LL	2104191455C	Trichlorofluoromethane (CFC 11)	0.27	ug/L	0.5	0.24		J
4/19/2021	8260_LL	2104191456C	Trichloroethene (TCE)	0.23	ug/L	0.5	0.2		J
4/19/2021	8260_LL	2104191456C	Trichlorofluoromethane (CFC 11)	0.26	ug/L	0.5	0.24		J
4/19/2021	8260_LL	2104191456C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.74	ug/L	0.5	0.2		
4/19/2021	607	2104191458C	Bromacil	0.062	µg/L	0.0095	0.0048	85	RB
4/19/2021	NDMA_LL	2104191459C	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB TB
4/19/2021	METALS	2104191501C	Magnesium, Total	64.8	mg/L	1	0.03		
4/19/2021	METALS	2104191501C	Strontium, Total	2.38	mg/L	0.1	0.002		
4/19/2021	METALS	2104191501C	Barium, Total	0.021	mg/L	0.02	0.003		
4/19/2021	METALS	2104191501C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/19/2021	METALS	2104191501C	Calcium, Total	103	mg/L	1	0.3		
4/19/2021	METALS	2104191501C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
4/19/2021	METALS	2104191501C	Potassium, Total	3.2	mg/L	2	0.2		
4/19/2021	METALS	2104191501C	Sodium, Total	39	mg/L	1	0.2		
4/19/2021	METALS	2104191501C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/19/2021	METALS	2104191501C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/19/2021	ANIONS	2104191502C	Chloride	47.1	mg/L	2	0.5		
4/19/2021	ANIONS	2104191502C	Alkalinity, Total as CaCO3	199	mg/L	2	1.8		
4/19/2021	ANIONS	2104191502C	Sulfate	347	mg/L	8	1.6		
4/19/2021	ANIONS	2104191502C	Fluoride, undistilled	0.86	mg/L	0.1	0.01		
4/19/2021	SM2540C	2104191503C	Total Dissolved Solids (TDS)	793	mg/L	10	9		
4/19/2021	6850	2104191504C	Perchlorate	0.29	ug/L	0.2	0.06		
4/19/2021	353.2	2104191505C	Nitrate+Nitrite as Nitrogen	1.06	mg/L	0.05	0.002		

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
3/15/2021	8260	2103150955B	Tetrachloroethene (PCE)	0.91	ug/L	1	0.21		J
3/15/2021	8260	2103150955B	Dichlorofluoromethane (CFC 21)	2.4	ug/L	1	0.2		
3/15/2021	8260	2103150955B	Trichloroethene (TCE)	65	ug/L	1	0.2		
3/15/2021	8260	2103150955B	Trichlorofluoromethane (CFC 11)	41	ug/L	1	0.24		
3/15/2021	8260	2103150955B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.6	ug/L	1	0.2		J
3/15/2021	8260	2103150955B	1,1,2-Trichloro-1,2,2-Trifluoroethane	34	ug/L	1	0.2		
3/15/2021	607	2103150957B	N-Nitrodimethylamine	0.056	µg/L	0.0095	0.0048	96	
3/15/2021	607	2103150957B	Bromacil	0.03	µg/L	0.0095	0.0048	99	
3/15/2021	607	2103150957B	N-Nitrosodimethylamine	0.078	µg/L	0.0095	0.0048	38	

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
3/11/2021	8260	2103110945C	Silane, methoxytrimethyl-	7.4	ug/L	NA	NA		TIC
3/11/2021	8260	2103110945C	Sulfur Dioxide	24	ug/L	NA	NA		TIC RB TB FB
3/11/2021	8260	2103110946C	Sulfur Dioxide	39	ug/L	NA	NA		TIC RB TB FB
3/11/2021	METALS	2103110952C	Barium, Total	0.021	mg/L	0.02	0.003		
3/11/2021	METALS	2103110952C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/11/2021	METALS	2103110952C	Strontium, Total	2.4	mg/L	0.1	0.002		
3/11/2021	METALS	2103110952C	Sodium, Total	38.1	mg/L	1	0.2		
3/11/2021	METALS	2103110952C	Potassium, Total	3.2	mg/L	2	0.2		
3/11/2021	METALS	2103110952C	Nickel, Total	0.006	mg/L	0.04	0.003		J
3/11/2021	METALS	2103110952C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
3/11/2021	METALS	2103110952C	Magnesium, Total	68.5	mg/L	1	0.03		
3/11/2021	METALS	2103110952C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/11/2021	METALS	2103110952C	Calcium, Total	109	mg/L	1	0.3		
3/11/2021	METALS	2103110952C	Zinc, Total	0.016	mg/L	0.02	0.01		J
3/11/2021	METALS	2103110952C	Boron, Total	0.06	mg/L	0.2	0.02		J

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
4/8/2021	NDMA_LL	2104081500Y	N-Nitrosodimethylamine	0.76	ng/L	0.48	0.33		RB EB
4/8/2021	METALS	2104081501Y	Manganese, Total	0.023	mg/L	0.01	0.004		
4/8/2021	METALS	2104081501Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081501Y	Potassium, Total	4.1	mg/L	2	0.2		
4/8/2021	METALS	2104081501Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/8/2021	METALS	2104081501Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
4/8/2021	METALS	2104081501Y	Strontium, Total	2.98	mg/L	0.1	0.002		
4/8/2021	METALS	2104081501Y	Sodium, Total	40.6	mg/L	1	0.2		
4/8/2021	METALS	2104081501Y	Barium, Total	0.022	mg/L	0.02	0.003		
4/8/2021	METALS	2104081501Y	Calcium, Total	102	mg/L	1	0.3		
4/8/2021	METALS	2104081501Y	Magnesium, Total	71.3	mg/L	1	0.03		
4/8/2021	METALS	2104081501Y	Nickel, Total	0.184	mg/L	0.04	0.003		
4/8/2021	METALS	2104081501Y	Boron, Total	0.06	mg/L	0.2	0.02		J

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
4/8/2021	607	2104081026Y	Bromacil	0.042	µg/L	0.0095	0.0048	114	RB
4/8/2021	NDMA_LL	2104081050Y	N-Nitrodimethylamine	0.23	ng/L	0.48	0.2		J
4/8/2021	NDMA_LL	2104081050Y	N-Nitrosodimethylamine	0.87	ng/L	0.48	0.33		RB EB
4/8/2021	METALS	2104081051Y	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
4/8/2021	METALS	2104081051Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/8/2021	METALS	2104081051Y	Vanadium, Total	0.007	mg/L	0.05	0.0007		J
4/8/2021	METALS	2104081051Y	Strontium, Total	3.57	mg/L	0.1	0.002		
4/8/2021	METALS	2104081051Y	Sodium, Total	46.4	mg/L	1	0.2		
4/8/2021	METALS	2104081051Y	Potassium, Total	5.1	mg/L	2	0.2		
4/8/2021	METALS	2104081051Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081051Y	Magnesium, Total	61.1	mg/L	1	0.03		
4/8/2021	METALS	2104081051Y	Chromium, Total	0.0006	mg/L	0.01	0.0006		J
4/8/2021	METALS	2104081051Y	Calcium, Total	100	mg/L	1	0.3		
4/8/2021	METALS	2104081051Y	Barium, Total	0.027	mg/L	0.02	0.003		
4/8/2021	METALS	2104081051Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/8/2021	METALS	2104081115Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/8/2021	METALS	2104081115Y	Barium, Total	0.029	mg/L	0.02	0.003		
4/8/2021	METALS	2104081115Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/8/2021	METALS	2104081115Y	Calcium, Total	104	mg/L	1	0.3		
4/8/2021	METALS	2104081115Y	Magnesium, Total	63.8	mg/L	1	0.03		
4/8/2021	METALS	2104081115Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081115Y	Potassium, Total	5.4	mg/L	2	0.2		
4/8/2021	METALS	2104081115Y	Sodium, Total	48.4	mg/L	1	0.2		
4/8/2021	METALS	2104081115Y	Strontium, Total	3.74	mg/L	0.1	0.002		
4/8/2021	METALS	2104081115Y	Vanadium, Total	0.008	mg/L	0.05	0.0007		J

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
2/3/2021	NDMA_LL	2102031021Y	N-Nitrosodimethylamine	4.9	ng/L	0.5	0.35		
2/3/2021	NDMA_LL	2102031021Y	N-Nitrodimethylamine	0.29	ng/L	0.5	0.2		J

Analytical Results for Sampling Events at PL-7-560

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2021	NDMA_LL	2102021456Y	N-Nitrosodimethylamine	0.84	ng/L	0.48	0.33		EB

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
2/2/2021	NDMA_LL	2102021105Y	N-Nitrosodimethylamine	0.71	ng/L	0.48	0.34		TB EB
2/2/2021	METALS	2102021106Y	Zinc, Total	0.014	mg/L	0.02	0.01		J
2/2/2021	METALS	2102021106Y	Vanadium, Total	0.013	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021106Y	Strontium, Total	3.08	mg/L	0.1	0.002		
2/2/2021	METALS	2102021106Y	Sodium, Total	54.5	mg/L	1	0.2		
2/2/2021	METALS	2102021106Y	Potassium, Total	7.8	mg/L	2	0.2		
2/2/2021	METALS	2102021106Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021106Y	Manganese, Total	0.013	mg/L	0.01	0.004		
2/2/2021	METALS	2102021106Y	Aluminum, Total	0.9	mg/L	0.1	0.03		
2/2/2021	METALS	2102021106Y	Magnesium, Total	57.9	mg/L	1	0.03		
2/2/2021	METALS	2102021106Y	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
2/2/2021	METALS	2102021106Y	Iron, Total	0.42	mg/L	0.1	0.07		
2/2/2021	METALS	2102021106Y	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021106Y	Calcium, Total	86	mg/L	1	0.3		
2/2/2021	METALS	2102021106Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021106Y	Beryllium, Total	0.0002	mg/L	0.003	0.0002		J
2/2/2021	METALS	2102021106Y	Barium, Total	0.046	mg/L	0.02	0.003		

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
3/4/2021	NDMA_LL	2103041026Y	N-Nitrosodimethylamine	0.61	ng/L	0.48	0.33		EB
3/4/2021	8270	2103041100Y	1,4-Dioxane	0.074	ug/L	0.04	0.027		
3/4/2021	METALS	2103041130Y	Barium, Total	0.023	mg/L	0.02	0.003		
3/4/2021	METALS	2103041130Y	Sodium, Total	42.3	mg/L	1	0.2		
3/4/2021	METALS	2103041130Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/4/2021	METALS	2103041130Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/4/2021	METALS	2103041130Y	Strontium, Total	2.61	mg/L	0.1	0.002		
3/4/2021	METALS	2103041130Y	Potassium, Total	3.7	mg/L	2	0.2		
3/4/2021	METALS	2103041130Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/4/2021	METALS	2103041130Y	Magnesium, Total	72.3	mg/L	1	0.03		
3/4/2021	METALS	2103041130Y	Calcium, Total	106	mg/L	1	0.3		
3/4/2021	METALS	2103041130Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/4/2021	METALS	2103041130Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J

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
3/3/2021	NDMA_LL	2103031041Y	N-Nitrosodimethylamine	0.45	ng/L	0.48	0.33		J RB EB
3/3/2021	METALS	2103031112Y	Barium, Total	0.027	mg/L	0.02	0.003		
3/3/2021	METALS	2103031112Y	Sodium, Total	45.3	mg/L	1	0.2		
3/3/2021	METALS	2103031112Y	Strontium, Total	3.18	mg/L	0.1	0.002		
3/3/2021	METALS	2103031112Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031112Y	Potassium, Total	3.6	mg/L	2	0.2		
3/3/2021	METALS	2103031112Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031112Y	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103031112Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/3/2021	METALS	2103031112Y	Magnesium, Total	69.2	mg/L	1	0.03		

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
3/8/2021	NDMA_LL	2103081022Y	N-Nitrosodimethylamine	0.65	ng/L	0.48	0.33		
3/8/2021	METALS	2103081055Y	Sodium, Total	49.9	mg/L	1	0.2		
3/8/2021	METALS	2103081055Y	Potassium, Total	4.3	mg/L	2	0.2		
3/8/2021	METALS	2103081055Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081055Y	Vanadium, Total	0.008	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081055Y	Strontium, Total	3.07	mg/L	0.1	0.002		
3/8/2021	METALS	2103081055Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081055Y	Barium, Total	0.038	mg/L	0.02	0.003		
3/8/2021	METALS	2103081055Y	Calcium, Total	92.3	mg/L	1	0.3		
3/8/2021	METALS	2103081055Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/8/2021	METALS	2103081055Y	Magnesium, Total	54.5	mg/L	1	0.03		
3/8/2021	METALS	2103081055Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
3/8/2021	METALS	2103081055Y	Zinc, Total	0.013	mg/L	0.02	0.01		J
3/8/2021	ANIONS	2103081310Y	Alkalinity, Total as CaCO3	197	mg/L	2	1.8		
3/8/2021	ANIONS	2103081310Y	Chloride	42.5	mg/L	2	0.5		
3/8/2021	ANIONS	2103081310Y	Fluoride, undistilled	0.51	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081310Y	Sulfate	276	mg/L	8	1.6		
3/8/2021	SM2540C	2103081311Y	Total Dissolved Solids (TDS)	746	mg/L	10	9		
3/8/2021	6850	2103081312Y	Perchlorate	0.42	ug/L	0.2	0.06		
3/8/2021	353.2	2103081313Y	Nitrate+Nitrite as Nitrogen	1.04	mg/L	0.05	0.002		

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
3/3/2021	NDMA_LL	2103031520Y	N-Nitrodimethylamine	0.2	ng/L	0.48	0.2		J
3/3/2021	NDMA_LL	2103031520Y	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB EB
3/3/2021	METALS	2103031521Y	Nickel, Total	0.011	mg/L	0.04	0.003		J
3/3/2021	METALS	2103031521Y	Vanadium, Total	0.018	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031521Y	Strontium, Total	1.29	mg/L	0.1	0.002		
3/3/2021	METALS	2103031521Y	Potassium, Total	4.5	mg/L	2	0.2		
3/3/2021	METALS	2103031521Y	Chromium, Total	0.004	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103031521Y	Molybdenum, Total	0.02	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031521Y	Magnesium, Total	21.8	mg/L	1	0.03		
3/3/2021	METALS	2103031521Y	Arsenic, Total	0.0026	mg/L	0.005	0.0016		J
3/3/2021	METALS	2103031521Y	Barium, Total	0.012	mg/L	0.02	0.003		J
3/3/2021	METALS	2103031521Y	Boron, Total	0.23	mg/L	0.2	0.02		
3/3/2021	METALS	2103031521Y	Calcium, Total	42.1	mg/L	1	0.3		
3/3/2021	METALS	2103031521Y	Sodium, Total	110	mg/L	1	0.2		

Analytical Results for Sampling Events at ST-1-473

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	8260	2104120930C	Unknown	5.2	ug/L	NA	NA		TIC FB
4/12/2021	8260	2104120930C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.97	ug/L	1	0.2		J
4/12/2021	8260	2104120930C	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	2	0.4		
4/12/2021	8260	2104120930C	Chloroform	0.38	ug/L	1	0.24		J
4/12/2021	8260	2104120930C	Dichlorofluoromethane (CFC 21)	0.72	ug/L	1	0.2		J
4/12/2021	8260	2104120930C	Tetrachloroethene (PCE)	8.1	ug/L	1	0.21		
4/12/2021	8260	2104120930C	1,1-Dichloroethene	2.3	ug/L	1	0.2		
4/12/2021	8260	2104120930C	Trichlorofluoromethane (CFC 11)	180	ug/L	1	0.24		
4/12/2021	8260	2104120930C	Trichloroethene (TCE)	200	ug/L	2	0.4		
4/12/2021	8260	2104120931C	1,1-Dichloroethene	2	ug/L	1	0.2		
4/12/2021	8260	2104120931C	1,1,2-Trichloro-1,2,2-Trifluoroethane	200	ug/L	1	0.2		
4/12/2021	8260	2104120931C	Chloroform	0.34	ug/L	1	0.24		J
4/12/2021	8260	2104120931C	Dichlorofluoromethane (CFC 21)	0.62	ug/L	1	0.2		J
4/12/2021	8260	2104120931C	Tetrachloroethene (PCE)	7.8	ug/L	1	0.21		
4/12/2021	8260	2104120931C	Trichloroethene (TCE)	220	ug/L	2	0.4		
4/12/2021	8260	2104120931C	Trichlorofluoromethane (CFC 11)	170	ug/L	1	0.24		
4/12/2021	8260	2104120931C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1	ug/L	1	0.2		
4/12/2021	8260	2104120931C	Unknown	5.2	ug/L	NA	NA		TIC FB
4/12/2021	607	2104120933C	Bromacil	0.1	µg/L	0.0094	0.0047	80	QD
4/12/2021	607	2104120933C	N-Nitrodimethylamine	0.21	µg/L	0.0094	0.0047	120	
4/12/2021	607	2104120933C	N-Nitrosodimethylamine	0.42	µg/L	0.0094	0.0047	50	
4/12/2021	607	2104120934C	N-Nitrodimethylamine	0.2	µg/L	0.0096	0.0048	120	
4/12/2021	607	2104120934C	Bromacil	0.042	µg/L	0.0096	0.0048	80	QD
4/12/2021	607	2104120934C	N-Nitrosodimethylamine	0.41	µg/L	0.0096	0.0048	50	
4/12/2021	METALS	2104120935C	Calcium, Total	116	mg/L	1	0.3		
4/12/2021	METALS	2104120935C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/12/2021	METALS	2104120935C	Strontium, Total	2.61	mg/L	0.1	0.002		
4/12/2021	METALS	2104120935C	Sodium, Total	38.9	mg/L	1	0.2		
4/12/2021	METALS	2104120935C	Potassium, Total	3.3	mg/L	2	0.2		
4/12/2021	METALS	2104120935C	Nickel, Total	0.006	mg/L	0.04	0.003		J
4/12/2021	METALS	2104120935C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
4/12/2021	METALS	2104120935C	Chromium, Total	0.008	mg/L	0.01	0.0006		J
4/12/2021	METALS	2104120935C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/12/2021	METALS	2104120935C	Barium, Total	0.022	mg/L	0.02	0.003		
4/12/2021	METALS	2104120935C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/12/2021	METALS	2104120935C	Magnesium, Total	70.1	mg/L	1	0.03		
4/12/2021	ANIONS	2104120936C	Chloride	54.5	mg/L	2	0.5		
4/12/2021	ANIONS	2104120936C	Sulfate	328	mg/L	8	1.6		

Analytical Results for Sampling Events at ST-1-473

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	ANIONS	2104120936C	Alkalinity, Total as CaCO3	240	mg/L	2	1.8		
4/12/2021	ANIONS	2104120936C	Fluoride, undistilled	0.72	mg/L	0.1	0.01		
4/12/2021	SM2540C	2104120937C	Total Dissolved Solids (TDS)	818	mg/L	10	9		
4/12/2021	6850	2104120938C	Perchlorate	0.54	ug/L	0.2	0.06		
4/12/2021	353.2	2104120939C	Nitrate+Nitrite as Nitrogen	2.79	mg/L	0.25	0.008		

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
2/2/2021	607	2102021503C	Bromacil	0.0096	µg/L	0.0096	0.0048	98	
2/2/2021	METALS	2102021507C	Calcium, Total	105	mg/L	1	0.3		
2/2/2021	METALS	2102021507C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021507C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021507C	Sodium, Total	39.2	mg/L	1	0.2		
2/2/2021	METALS	2102021507C	Boron, Total	0.06	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021507C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021507C	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2021	METALS	2102021507C	Potassium, Total	3.3	mg/L	2	0.2		
2/2/2021	METALS	2102021507C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021507C	Magnesium, Total	72.1	mg/L	1	0.03		
2/2/2021	METALS	2102021507C	Strontium, Total	2.64	mg/L	0.1	0.002		
2/2/2021	METALS	2102021508C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021508C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021508C	Strontium, Total	2.61	mg/L	0.1	0.002		
2/2/2021	METALS	2102021508C	Sodium, Total	38.6	mg/L	1	0.2		
2/2/2021	METALS	2102021508C	Potassium, Total	3.2	mg/L	2	0.2		
2/2/2021	METALS	2102021508C	Calcium, Total	104	mg/L	1	0.3		
2/2/2021	METALS	2102021508C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021508C	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2021	METALS	2102021508C	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021508C	Boron, Total	0.06	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021508C	Magnesium, Total	71	mg/L	1	0.03		
2/2/2021	ANIONS	2102021509C	Chloride	38.1	mg/L	2	0.5		
2/2/2021	ANIONS	2102021509C	Fluoride, undistilled	0.73	mg/L	0.1	0.01		
2/2/2021	ANIONS	2102021509C	Alkalinity, Total as CaCO3	239	mg/L	2	1.8		
2/2/2021	ANIONS	2102021509C	Sulfate	332	mg/L	8	1.6		
2/2/2021	SM2540C	2102021510C	Total Dissolved Solids (TDS)	799	mg/L	10	9		
2/2/2021	6850	2102021511C	Perchlorate	0.25	ug/L	0.2	0.06		
2/2/2021	353.2	2102021512C	Nitrate+Nitrite as Nitrogen	0.663	mg/L	0.05	0.002		

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
3/3/2021	8260_LL	2103030955C	2-Propanol	8.5	ug/L	40	3.4		J
3/3/2021	NDMA_LL	2103030957C	N-Nitrosodimethylamine	0.44	ng/L	0.47	0.33		J RB
3/3/2021	METALS	2103030959C	Sodium, Total	39.6	mg/L	1	0.2		
3/3/2021	METALS	2103030959C	Antimony, Total	0.0011	mg/L	0.005	0.0009		J
3/3/2021	METALS	2103030959C	Barium, Total	0.025	mg/L	0.02	0.003		
3/3/2021	METALS	2103030959C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2021	METALS	2103030959C	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103030959C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103030959C	Magnesium, Total	65	mg/L	1	0.03		
3/3/2021	METALS	2103030959C	Potassium, Total	4	mg/L	2	0.2		
3/3/2021	METALS	2103030959C	Strontium, Total	2.52	mg/L	0.1	0.002		
3/3/2021	METALS	2103030959C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103030959C	Zinc, Total	0.011	mg/L	0.02	0.01		J
3/3/2021	METALS	2103030959C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031000C	Strontium, Total	2.52	mg/L	0.1	0.002		
3/3/2021	METALS	2103031000C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2021	METALS	2103031000C	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103031000C	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103031000C	Magnesium, Total	65	mg/L	1	0.03		
3/3/2021	METALS	2103031000C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031000C	Sodium, Total	39.5	mg/L	1	0.2		
3/3/2021	METALS	2103031000C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031000C	Zinc, Total	0.01	mg/L	0.02	0.01		J
3/3/2021	METALS	2103031000C	Potassium, Total	3.9	mg/L	2	0.2		
3/3/2021	METALS	2103031000C	Barium, Total	0.025	mg/L	0.02	0.003		
3/3/2021	ANIONS	2103031001C	Fluoride, undistilled	0.56	mg/L	0.1	0.01		
3/3/2021	ANIONS	2103031001C	Sulfate	310	mg/L	8	1.6		
3/3/2021	ANIONS	2103031001C	Chloride	42.7	mg/L	2	0.5		
3/3/2021	ANIONS	2103031001C	Alkalinity, Total as CaCO3	234	mg/L	2	1.8		
3/3/2021	SM2540C	2103031002C	Total Dissolved Solids (TDS)	756	mg/L	10	9		
3/3/2021	6850	2103031003C	Perchlorate	0.33	ug/L	0.2	0.06		
3/3/2021	353.2	2103031004C	Nitrate+Nitrite as Nitrogen	0.808	mg/L	0.05	0.002		

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
3/2/2021	NDMA_LL	2103021504C	N-Nitrosodimethylamine	0.78	ng/L	0.47	0.33		RB FB
3/2/2021	METALS	2103021506C	Molybdenum, Total	0.039	mg/L	0.025	0.003		
3/2/2021	METALS	2103021506C	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021506C	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
3/2/2021	METALS	2103021506C	Strontium, Total	1.37	mg/L	0.1	0.002		
3/2/2021	METALS	2103021506C	Sodium, Total	112	mg/L	1	0.2		
3/2/2021	METALS	2103021506C	Potassium, Total	8.7	mg/L	2	0.2		
3/2/2021	METALS	2103021506C	Nickel, Total	0.005	mg/L	0.04	0.003		J
3/2/2021	METALS	2103021506C	Manganese, Total	0.011	mg/L	0.01	0.004		
3/2/2021	METALS	2103021506C	Magnesium, Total	19.6	mg/L	1	0.03		
3/2/2021	METALS	2103021506C	Chromium, Total	0.0009	mg/L	0.01	0.0006		J
3/2/2021	METALS	2103021506C	Calcium, Total	34.7	mg/L	1	0.3		
3/2/2021	METALS	2103021506C	Boron, Total	0.2	mg/L	0.2	0.02		
3/2/2021	METALS	2103021506C	Barium, Total	0.034	mg/L	0.02	0.003		
3/2/2021	METALS	2103021506C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
3/2/2021	METALS	2103021506C	Arsenic, Total	0.0026	mg/L	0.001	0.0004		
3/2/2021	ANIONS	2103021507C	Chloride	22.8	mg/L	2	0.5		
3/2/2021	ANIONS	2103021507C	Alkalinity, Total as CaCO3	193	mg/L	2	1.8		
3/2/2021	ANIONS	2103021507C	Fluoride, undistilled	0.66	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021507C	Sulfate	212	mg/L	8	1.6		
3/2/2021	SM2540C	2103021508C	Total Dissolved Solids (TDS)	569	mg/L	10	9		

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
2/17/2021	METALS	2102171405B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/17/2021	METALS	2102171405B	Antimony, Total	0.0005	mg/L	0.001	0.0002		J FB
2/17/2021	METALS	2102171405B	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
2/17/2021	METALS	2102171405B	Barium, Total	0.022	mg/L	0.02	0.003		
2/17/2021	METALS	2102171405B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/17/2021	METALS	2102171405B	Calcium, Total	99.8	mg/L	1	0.3		
2/17/2021	METALS	2102171405B	Magnesium, Total	69.7	mg/L	1	0.03		
2/17/2021	METALS	2102171405B	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/17/2021	METALS	2102171405B	Potassium, Total	3.1	mg/L	2	0.2		
2/17/2021	METALS	2102171405B	Sodium, Total	42	mg/L	1	0.2		
2/17/2021	METALS	2102171405B	Strontium, Total	2.43	mg/L	0.1	0.002		
2/17/2021	353.2	2102171407B	Nitrate+Nitrite as Nitrogen	0.813	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
2/1/2021	NDMA_LL	2102011440Y	N-Nitrosodimethylamine	0.46	ng/L	0.49	0.34		J
2/1/2021	NDMA_LL	2102011440Y	N-Nitrodimethylamine	0.41	ng/L	0.49	0.2		J
2/1/2021	METALS	2102011510Y	Barium, Total	0.022	mg/L	0.02	0.003		
2/1/2021	METALS	2102011510Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/1/2021	METALS	2102011510Y	Boron, Total	0.06	mg/L	0.2	0.02		J
2/1/2021	METALS	2102011510Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/1/2021	METALS	2102011510Y	Magnesium, Total	68.8	mg/L	1	0.03		
2/1/2021	METALS	2102011510Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/1/2021	METALS	2102011510Y	Potassium, Total	3.3	mg/L	2	0.2		
2/1/2021	METALS	2102011510Y	Sodium, Total	38.4	mg/L	1	0.2		
2/1/2021	METALS	2102011510Y	Strontium, Total	2.38	mg/L	0.1	0.002		
2/1/2021	METALS	2102011510Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/1/2021	METALS	2102011510Y	Calcium, Total	88.7	mg/L	1	0.3		
2/1/2021	ANIONS	2102011511Y	Sulfate	313	mg/L	8	1.6		
2/1/2021	ANIONS	2102011511Y	Fluoride, undistilled	0.61	mg/L	0.1	0.01		
2/1/2021	ANIONS	2102011511Y	Chloride	37.5	mg/L	2	0.5		
2/1/2021	ANIONS	2102011511Y	Alkalinity, Total as CaCO3	213	mg/L	2	1.8		
2/1/2021	SM2540C	2102011512Y	Total Dissolved Solids (TDS)	745	mg/L	10	9		
2/1/2021	6850	2102011513Y	Perchlorate	0.42	ug/L	0.2	0.06		
2/1/2021	353.2	2102011535Y	Nitrate+Nitrite as Nitrogen	0.782	mg/L	0.05	0.002		

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
2/1/2021	607	2102011006Y	Bromacil	0.0097	µg/L	0.0097	0.0049	98	
2/1/2021	NDMA_LL	2102011035Y	N-Nitrosodimethylamine	0.46	ng/L	0.47	0.33		J TB EB
2/1/2021	METALS	2102011036Y	Strontium, Total	2.55	mg/L	0.1	0.002		
2/1/2021	METALS	2102011036Y	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
2/1/2021	METALS	2102011036Y	Barium, Total	0.028	mg/L	0.02	0.003		
2/1/2021	METALS	2102011036Y	Boron, Total	0.08	mg/L	0.2	0.02		J
2/1/2021	METALS	2102011036Y	Calcium, Total	56	mg/L	1	0.3		
2/1/2021	METALS	2102011036Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/1/2021	METALS	2102011036Y	Magnesium, Total	46.9	mg/L	1	0.03		
2/1/2021	METALS	2102011036Y	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
2/1/2021	METALS	2102011036Y	Sodium, Total	51.1	mg/L	1	0.2		
2/1/2021	METALS	2102011036Y	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
2/1/2021	METALS	2102011036Y	Potassium, Total	3.7	mg/L	2	0.2		

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
3/9/2021	8260_LL	2103090956A	Benzene	0.22	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090956A	Sulfur Dioxide	18	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090956A	Toluene	0.21	ug/L	0.5	0.2		J
3/9/2021	8270	2103091030A	1,4-Dioxane	2.5	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
3/9/2021	8260_LL	2103090926A	Toluene	0.42	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090926A	Trichloroethene (TCE)	0.45	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090926A	Trichlorofluoromethane (CFC 11)	0.32	ug/L	0.5	0.24		J
3/9/2021	8260_LL	2103090926A	Sulfur Dioxide	35	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090926A	Unknown	7.1	ug/L	NA	NA		TIC FB
3/9/2021	NDMA_LL	2103090928A	N-Nitrosodimethylamine	0.81	ng/L	0.5	0.35		* FB
3/9/2021	NDMA_LL	2103090928A	N-Nitrodimethylamine	0.26	ng/L	0.5	0.21		J
3/9/2021	NDMA_LL	2103091005A	N-Nitrosodimethylamine	0.64	ng/L	0.49	0.34		* FB
3/9/2021	8270	2103091006A	1,4-Dioxane	3.4	ug/L	0.04	0.027		

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
3/9/2021	8260_LL	2103090945A	1,4-Dioxane	13	ug/L	40	13		J
3/9/2021	8260_LL	2103090945A	Sulfur Dioxide	24	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090945A	Toluene	0.53	ug/L	0.5	0.2		
3/9/2021	NDMA_LL	2103090947A	N-Nitrosodimethylamine	0.9	ng/L	0.48	0.34		*
3/9/2021	8270	2103091045A	1,4-Dioxane	1.9	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
3/11/2021	8260_LL	2103110941A	Sulfur Dioxide	59	ug/L	NA	NA		TIC RB TB FB
3/11/2021	8260_LL	2103110941A	Toluene	0.59	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
3/11/2021	8260_LL	2103111001A	Sulfur Dioxide	32	ug/L	NA	NA		TIC RB FB
3/11/2021	8260_LL	2103111001A	Toluene	0.41	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
4/6/2021	8260_LL	2104060916A	Dichlorofluoromethane (CFC 21)	0.34	ug/L	0.5	0.2		J
4/6/2021	8260_LL	2104060916A	Benzene	0.35	ug/L	0.5	0.2		J
4/6/2021	NDMA_LL	2104060918A	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB

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
4/6/2021	NDMA_LL	2104060937A	N-Nitrosodimethylamine	0.57	ng/L	0.48	0.33		RB

Analytical Results for Sampling Events at ST-7-779

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2021	8260_LL	2104060945A	Toluene	0.23	ug/L	0.5	0.2		J
4/6/2021	NDMA_LL	2104060947A	N-Nitrosodimethylamine	0.52	ng/L	0.48	0.33		RB FB

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
3/1/2021	METALS	2103011419C	Magnesium, Total	68.5	mg/L	1	0.03		
3/1/2021	METALS	2103011419C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011419C	Strontium, Total	2.34	mg/L	0.1	0.002		
3/1/2021	METALS	2103011419C	Sodium, Total	36.8	mg/L	1	0.2		
3/1/2021	METALS	2103011419C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011419C	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
3/1/2021	METALS	2103011419C	Calcium, Total	105	mg/L	1	0.3		
3/1/2021	METALS	2103011419C	Boron, Total	0.06	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011419C	Barium, Total	0.023	mg/L	0.02	0.003		
3/1/2021	METALS	2103011419C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103011419C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011419C	Potassium, Total	2.9	mg/L	2	0.2		

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
3/8/2021	607	2103081002C	Bromacil	0.0094	µg/L	0.0094	0.0047	107	
3/8/2021	METALS	2103081005C	Manganese, Total	0.005	mg/L	0.01	0.004		J
3/8/2021	METALS	2103081005C	Strontium, Total	2.87	mg/L	0.1	0.002		
3/8/2021	METALS	2103081005C	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081005C	Sodium, Total	69.3	mg/L	1	0.2		
3/8/2021	METALS	2103081005C	Potassium, Total	3.3	mg/L	2	0.2		
3/8/2021	METALS	2103081005C	Nickel, Total	0.456	mg/L	0.04	0.003		
3/8/2021	METALS	2103081005C	Molybdenum, Total	0.013	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081005C	Magnesium, Total	46.5	mg/L	1	0.03		
3/8/2021	METALS	2103081005C	Iron, Total	0.51	mg/L	0.1	0.07		
3/8/2021	METALS	2103081005C	Chromium, Total	0.073	mg/L	0.01	0.0006		
3/8/2021	METALS	2103081005C	Calcium, Total	61.6	mg/L	1	0.3		
3/8/2021	METALS	2103081005C	Boron, Total	0.14	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081005C	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
3/8/2021	METALS	2103081005C	Barium, Total	0.024	mg/L	0.02	0.003		
3/8/2021	ANIONS	2103081006C	Alkalinity, Total as CaCO3	155	mg/L	2	1.8		
3/8/2021	ANIONS	2103081006C	Chloride	40.6	mg/L	2	0.5		
3/8/2021	ANIONS	2103081006C	Fluoride, undistilled	0.68	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081006C	Sulfate	252	mg/L	8	1.6		
3/8/2021	SM2540C	2103081007C	Total Dissolved Solids (TDS)	661	mg/L	10	9		
3/8/2021	6850	2103081008C	Perchlorate	0.35	ug/L	0.2	0.06		
3/8/2021	353.2	2103081009C	Nitrate+Nitrite as Nitrogen	0.816	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
3/8/2021	METALS	2103081525C	Strontium, Total	2.89	mg/L	0.1	0.002		
3/8/2021	METALS	2103081525C	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081525C	Sodium, Total	69.5	mg/L	1	0.2		
3/8/2021	METALS	2103081525C	Potassium, Total	3.3	mg/L	2	0.2		
3/8/2021	METALS	2103081525C	Nickel, Total	0.044	mg/L	0.04	0.003		
3/8/2021	METALS	2103081525C	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081525C	Iron, Total	0.27	mg/L	0.1	0.07		
3/8/2021	METALS	2103081525C	Chromium, Total	0.043	mg/L	0.01	0.0006		
3/8/2021	METALS	2103081525C	Calcium, Total	62.6	mg/L	1	0.3		
3/8/2021	METALS	2103081525C	Boron, Total	0.14	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081525C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
3/8/2021	METALS	2103081525C	Barium, Total	0.025	mg/L	0.02	0.003		
3/8/2021	METALS	2103081525C	Magnesium, Total	46.9	mg/L	1	0.03		
3/8/2021	ANIONS	2103081526C	Fluoride, undistilled	0.69	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081526C	Alkalinity, Total as CaCO3	158	mg/L	2	1.8		
3/8/2021	ANIONS	2103081526C	Sulfate	251	mg/L	8	1.6		
3/8/2021	ANIONS	2103081526C	Chloride	39	mg/L	2	0.5		
3/8/2021	SM2540C	2103081527C	Total Dissolved Solids (TDS)	665	mg/L	10	9		
3/8/2021	6850	2103081528C	Perchlorate	0.38	ug/L	0.2	0.06		
3/8/2021	353.2	2103081529C	Nitrate+Nitrite as Nitrogen	0.83	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
3/2/2021	NDMA_LL	2103021017Y	N-Nitrosodimethylamine	0.75	ng/L	0.47	0.33		RB
3/2/2021	NDMA_LL	2103021017Y	N-Nitrodimethylamine	0.3	ng/L	0.47	0.2		J
3/2/2021	METALS	2103021045Y	Potassium, Total	3	mg/L	2	0.2		
3/2/2021	METALS	2103021045Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
3/2/2021	METALS	2103021045Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021045Y	Strontium, Total	2.42	mg/L	0.1	0.002		
3/2/2021	METALS	2103021045Y	Sodium, Total	41.6	mg/L	1	0.2		
3/2/2021	METALS	2103021045Y	Magnesium, Total	70.5	mg/L	1	0.03		
3/2/2021	METALS	2103021045Y	Calcium, Total	104	mg/L	1	0.3		
3/2/2021	METALS	2103021045Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/2/2021	METALS	2103021045Y	Barium, Total	0.029	mg/L	0.02	0.003		
3/2/2021	METALS	2103021045Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/2/2021	METALS	2103021045Y	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
3/2/2021	ANIONS	2103021046Y	Sulfate	345	mg/L	8	1.6		
3/2/2021	ANIONS	2103021046Y	Alkalinity, Total as CaCO3	241	mg/L	2	1.8		
3/2/2021	ANIONS	2103021046Y	Chloride	40.2	mg/L	2	0.5		
3/2/2021	ANIONS	2103021046Y	Fluoride, undistilled	0.63	mg/L	0.1	0.01		
3/2/2021	SM2540C	2103021047Y	Total Dissolved Solids (TDS)	798	mg/L	10	9		
3/2/2021	6850	2103021048Y	Perchlorate	0.24	ug/L	0.2	0.06		
3/2/2021	353.2	2103021110Y	Nitrate+Nitrite as Nitrogen	0.519	mg/L	0.05	0.002		

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
3/1/2021	NDMA_LL	2103011027Y	N-Nitrosodimethylamine	0.46	ng/L	0.48	0.33		J
3/1/2021	NDMA_LL	2103011027Y	N-Nitrodimethylamine	0.42	ng/L	0.48	0.2		J
3/1/2021	METALS	2103011055Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011055Y	Sodium, Total	45.6	mg/L	1	0.2		
3/1/2021	METALS	2103011055Y	Strontium, Total	2.64	mg/L	0.1	0.002		
3/1/2021	METALS	2103011055Y	Zinc, Total	0.016	mg/L	0.02	0.01		J
3/1/2021	METALS	2103011055Y	Potassium, Total	3.7	mg/L	2	0.2		
3/1/2021	METALS	2103011055Y	Calcium, Total	99.9	mg/L	1	0.3		
3/1/2021	METALS	2103011055Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011055Y	Barium, Total	0.026	mg/L	0.02	0.003		
3/1/2021	METALS	2103011055Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103011055Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011055Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011055Y	Magnesium, Total	67.2	mg/L	1	0.03		

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
3/1/2021	METALS	2103011435Y	Sodium, Total	57	mg/L	1	0.2		
3/1/2021	METALS	2103011435Y	Zinc, Total	0.011	mg/L	0.02	0.01		J
3/1/2021	METALS	2103011435Y	Strontium, Total	2.86	mg/L	0.1	0.002		
3/1/2021	METALS	2103011435Y	Potassium, Total	4.3	mg/L	2	0.2		
3/1/2021	METALS	2103011435Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011435Y	Magnesium, Total	56.8	mg/L	1	0.03		
3/1/2021	METALS	2103011435Y	Calcium, Total	82.2	mg/L	1	0.3		
3/1/2021	METALS	2103011435Y	Boron, Total	0.08	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011435Y	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011435Y	Barium, Total	0.028	mg/L	0.02	0.003		
3/1/2021	METALS	2103011435Y	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011435Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
3/1/2021	METALS	2103011435Y	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
3/1/2021	ANIONS	2103011437Y	Sulfate	316	mg/L	8	1.6		
3/1/2021	ANIONS	2103011437Y	Alkalinity, Total as CaCO3	173	mg/L	2	1.8		
3/1/2021	ANIONS	2103011437Y	Chloride	41.6	mg/L	2	0.5		
3/1/2021	ANIONS	2103011437Y	Fluoride, undistilled	0.49	mg/L	0.1	0.01		
3/1/2021	SM2540C	2103011438Y	Total Dissolved Solids (TDS)	725	mg/L	10	9		
3/1/2021	6850	2103011439Y	Perchlorate	0.38	ug/L	0.2	0.06		
3/1/2021	353.2	2103011440Y	Nitrate+Nitrite as Nitrogen	0.714	mg/L	0.05	0.002		

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
3/2/2021	NDMA_LL	2103021442Y	N-Nitrosodimethylamine	0.86	ng/L	0.48	0.33		RB
3/2/2021	METALS	2103021510Y	Molybdenum, Total	0.021	mg/L	0.025	0.003		J
3/2/2021	METALS	2103021510Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
3/2/2021	METALS	2103021510Y	Vanadium, Total	0.006	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021510Y	Zinc, Total	0.352	mg/L	0.02	0.01		
3/2/2021	METALS	2103021510Y	Strontium, Total	1.32	mg/L	0.1	0.002		
3/2/2021	METALS	2103021510Y	Sodium, Total	141	mg/L	1	0.2		
3/2/2021	METALS	2103021510Y	Potassium, Total	4.1	mg/L	2	0.2		
3/2/2021	METALS	2103021510Y	Magnesium, Total	23.3	mg/L	1	0.03		
3/2/2021	METALS	2103021510Y	Calcium, Total	49.3	mg/L	1	0.3		
3/2/2021	METALS	2103021510Y	Boron, Total	0.23	mg/L	0.2	0.02		
3/2/2021	METALS	2103021510Y	Arsenic, Total	0.0027	mg/L	0.001	0.0004		
3/2/2021	METALS	2103021510Y	Barium, Total	0.023	mg/L	0.02	0.003		
3/2/2021	METALS	2103021510Y	Manganese, Total	0.102	mg/L	0.01	0.004		
3/2/2021	ANIONS	2103021511Y	Alkalinity, Total as CaCO3	168	mg/L	2	1.8		
3/2/2021	ANIONS	2103021511Y	Chloride	38.2	mg/L	2	0.5		
3/2/2021	ANIONS	2103021511Y	Fluoride, undistilled	0.54	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021511Y	Sulfate	317	mg/L	8	1.6		
3/2/2021	SM2540C	2103021512Y	Total Dissolved Solids (TDS)	719	mg/L	10	9		
3/2/2021	6850	2103021513Y	Perchlorate	0.093	ug/L	0.2	0.06		J
3/2/2021	353.2	2103021514Y	Nitrate+Nitrite as Nitrogen	0.31	mg/L	0.05	0.002		

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
4/13/2021	8260_LL	2104130900A	Toluene	1.3	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130910A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		* FB

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
4/13/2021	8260_LL	2104130915A	Toluene	0.67	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130920A	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		*

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
4/13/2021	8260_LL	2104130926A	Toluene	3.9	ug/L	0.5	0.2		
4/13/2021	8260_LL	2104130926A	Unknown	55	ug/L	NA	NA		TIC
4/13/2021	NDMA_LL	2104130930A	N-Nitrosodimethylamine	1.4	ng/L	0.47	0.33		* FB

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
4/13/2021	8260_LL	2104130940A	Toluene	8.4	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130945A	N-Nitrodimethylamine	0.93	ng/L	0.47	0.2		
4/13/2021	NDMA_LL	2104130945A	N-Nitrosodimethylamine	6.5	ng/L	0.47	0.33		*

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** 2/9/2021

Sample	Parameter	Result	Units
2102091320	Conductivity	1135	µS/cm
2102091320	pH	7.81	NA
2102091320	Temperature	25.1	ºC
2102091320	Turbidity	0.49	NTU

Well ID B650-EFF-1 **Event Date** 3/5/2021

Sample	Parameter	Result	Units
2103050520	Conductivity	1095	µS/cm
2103050520	pH	8.16	NA
2103050520	Temperature	24.7	ºC
2103050520	Turbidity	0.18	NTU

Well ID B650-EFF-1 **Event Date** 4/14/2021

Sample	Parameter	Result	Units
2104141405	Conductivity	1085	µS/cm
2104141405	pH	8.69	NA
2104141405	Temperature	25.6	ºC
2104141405	Turbidity	1.75	NTU

Well ID B650-INF-1 **Event Date** 2/9/2021

Sample	Parameter	Result	Units
2102091403	Conductivity	1110	µS/cm
2102091403	pH	7.42	NA
2102091403	Temperature	24.2	ºC
2102091403	Turbidity	0.83	NTU

Well ID B650-INF-1 **Event Date** 3/5/2021

Sample	Parameter	Result	Units
2103050548	Conductivity	1103	µS/cm
2103050548	pH	7.32	NA
2103050548	Temperature	24.0	ºC
2103050548	Turbidity	0.53	NTU

Well ID B650-INF-1 **Event Date** 4/14/2021

Sample	Parameter	Result	Units
2104141415	Conductivity	1080	µS/cm
2104141415	pH	7.41	NA
2104141415	Temperature	25.5	ºC
2104141415	Turbidity	2.79	NTU

Well ID	PFE-2	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151430	Conductivity		1057	µS/cm
2104151430	pH		7.76	NA
2104151430	Temperature		26.9	ºC
2104151430	Turbidity		21.7	NTU

Well ID	PFE-3	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150925	Conductivity		1158	µS/cm
2104150925	pH		7.76	NA
2104150925	Temperature		23.6	ºC
2104150925	Turbidity		0.92	NTU

Well ID	PFE-4A	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150949	Conductivity		1100	µS/cm
2104150949	pH		7.27	NA
2104150949	Temperature		24.2	ºC
2104150949	Turbidity		11.3	NTU

Well ID	PFE-5	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151033	Conductivity		951	µS/cm
2104151033	pH		7.75	NA
2104151033	Temperature		25.3	ºC
2104151033	Turbidity		2.56	NTU

Well ID	PFE-7	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151315	Conductivity		1102	µS/cm
2104151315	pH		8.55	NA
2104151315	Temperature		24.9	ºC
2104151315	Turbidity		1.89	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
2/9/2021	8260_LL	2102091322	Chloromethane	0.33	ug/L	0.5	0.28		J
2/9/2021	607	2102091324	Bromacil	0.0057	µg/L	0.0095	0.0048	96	J
3/5/2021	8260_LL	2103050525	Chloromethane	0.36	ug/L	0.5	0.28		J
3/5/2021	607	2103050527	Bromacil	0.0057	µg/L	0.0095	0.0048	107	J
4/14/2021	607	2104141408	Bromacil	0.059	µg/L	0.0095	0.0048	80	
4/14/2021	NDMA_LL	2104141409	N-Nitrodimethylamine	0.84	ng/L	0.48	0.2		
4/14/2021	NDMA_LL	2104141409	N-Nitrosodimethylamine	3.5	ng/L	0.48	0.33		*

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
2/9/2021	8260	2102091405	1,1,2-Trichloro-1,2,2-Trifluoroethane	21	ug/L	1	0.2		
2/9/2021	8260	2102091405	Tetrachloroethene (PCE)	0.48	ug/L	1	0.21		J
2/9/2021	8260	2102091405	Trichloroethene (TCE)	17	ug/L	1	0.2		
2/9/2021	8260	2102091405	Trichlorofluoromethane (CFC 11)	11	ug/L	1	0.24		
2/9/2021	607	2102091407	N-Nitrosodimethylamine	0.078	µg/L	0.0097	0.0049	40	
2/9/2021	607	2102091407	Bromacil	0.045	µg/L	0.0097	0.0049	96	
2/9/2021	607	2102091407	N-Nitrodimethylamine	0.06	µg/L	0.0097	0.0049	97	
3/5/2021	8260	2103050554	1,1,2-Trichloro-1,2,2-Trifluoroethane	26	ug/L	1	0.2		
3/5/2021	8260	2103050554	Tetrachloroethene (PCE)	0.83	ug/L	1	0.21		J
3/5/2021	8260	2103050554	Trichloroethene (TCE)	17	ug/L	1	0.2		
3/5/2021	8260	2103050554	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
3/5/2021	8260	2103050555	1,1,2-Trichloro-1,2,2-Trifluoroethane	25	ug/L	1	0.2		
3/5/2021	8260	2103050555	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
3/5/2021	8260	2103050555	Trichloroethene (TCE)	17	ug/L	1	0.2		
3/5/2021	8260	2103050555	Tetrachloroethene (PCE)	0.55	ug/L	1	0.21		J
3/5/2021	607	2103050557	N-Nitrodimethylamine	0.054	µg/L	0.0096	0.0048	99	
3/5/2021	607	2103050557	N-Nitrosodimethylamine	0.062	µg/L	0.0096	0.0048	40	
3/5/2021	607	2103050557	Bromacil	0.041	µg/L	0.0096	0.0048	107	
3/5/2021	607	2103050558	N-Nitrosodimethylamine	0.064	µg/L	0.01	0.005	40	
3/5/2021	607	2103050558	N-Nitrodimethylamine	0.054	µg/L	0.01	0.005	99	
3/5/2021	607	2103050558	Bromacil	0.044	µg/L	0.01	0.005	107	
4/14/2021	8260	2104141416	Trichloroethene (TCE)	14	ug/L	1	0.2		
4/14/2021	8260	2104141416	Tetrachloroethene (PCE)	0.58	ug/L	1	0.21		J
4/14/2021	8260	2104141416	Trichlorofluoromethane (CFC 11)	13	ug/L	1	0.24		
4/14/2021	8260	2104141416	1,1,2-Trichloro-1,2,2-Trifluoroethane	24	ug/L	1	0.2		
4/14/2021	8260	2104141418	Trichloroethene (TCE)	14	ug/L	1	0.2		
4/14/2021	8260	2104141418	Trichlorofluoromethane (CFC 11)	12	ug/L	1	0.24		
4/14/2021	8260	2104141418	1,1,2-Trichloro-1,2,2-Trifluoroethane	23	ug/L	1	0.2		
4/14/2021	8260	2104141418	Tetrachloroethene (PCE)	0.56	ug/L	1	0.21		J
4/14/2021	607	2104141419	Bromacil	0.037	µg/L	0.0098	0.0049	80	
4/14/2021	607	2104141419	N-Nitrosodimethylamine	0.045	µg/L	0.0098	0.0049	50	
4/14/2021	607	2104141419	N-Nitrodimethylamine	0.039	µg/L	0.0098	0.0049	120	

Analytical Results for Sampling Events at PFE-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151431	Trichloroethene (TCE)	0.3	ug/L	1	0.2		J
4/15/2021	8260	2104151431	Trichlorofluoromethane (CFC 11)	0.31	ug/L	1	0.24		J
4/15/2021	8260	2104151431	Toluene	0.25	ug/L	1	0.2		J
4/15/2021	METALS	2104151434	Calcium, Total	75.9	mg/L	1	0.3		
4/15/2021	METALS	2104151434	Chromium, Total	0.004	mg/L	0.01	0.0006		J RB
4/15/2021	METALS	2104151434	Boron, Total	0.1	mg/L	0.2	0.02		J
4/15/2021	METALS	2104151434	Zinc, Total	0.015	mg/L	0.02	0.01		J
4/15/2021	METALS	2104151434	Cobalt, Total	0.001	mg/L	0.05	0.0009		J
4/15/2021	METALS	2104151434	Iron, Total	1.72	mg/L	0.1	0.07		
4/15/2021	METALS	2104151434	Magnesium, Total	47	mg/L	1	0.03		
4/15/2021	METALS	2104151434	Potassium, Total	7.6	mg/L	2	0.2		
4/15/2021	METALS	2104151434	Manganese, Total	0.03	mg/L	0.01	0.004		
4/15/2021	METALS	2104151434	Sodium, Total	83.5	mg/L	1	0.2		
4/15/2021	METALS	2104151434	Aluminum, Total	1.35	mg/L	0.1	0.03		
4/15/2021	METALS	2104151434	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
4/15/2021	METALS	2104151434	Strontium, Total	2.54	mg/L	0.1	0.002		
4/15/2021	METALS	2104151434	Vanadium, Total	0.015	mg/L	0.05	0.0007		J
4/15/2021	METALS	2104151434	Arsenic, Total	0.0014	mg/L	0.001	0.0004		
4/15/2021	METALS	2104151434	Barium, Total	0.031	mg/L	0.02	0.003		
4/15/2021	ANIONS	2104151435	Fluoride, undistilled	0.37	mg/L	0.1	0.01		
4/15/2021	ANIONS	2104151435	Sulfate	310	mg/L	8	1.6		
4/15/2021	ANIONS	2104151435	Alkalinity, Total as CaCO3	181	mg/L	2	1.8		
4/15/2021	ANIONS	2104151435	Chloride	43.1	mg/L	2	0.5		
4/15/2021	SM2540C	2104151436	Total Dissolved Solids (TDS)	744	mg/L	10	9		
4/15/2021	6850	2104151437	Perchlorate	0.34	ug/L	0.2	0.06		
4/15/2021	353.2	2104151438	Nitrate+Nitrite as Nitrogen	0.634	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PFE-3

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104150930	1,1,2-Trichloro-1,2,2-Trifluoroethane	95	ug/L	1	0.2		
4/15/2021	8260	2104150930	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
4/15/2021	8260	2104150930	Trichloroethene (TCE)	45	ug/L	1	0.2		
4/15/2021	8260	2104150930	Trichlorofluoromethane (CFC 11)	45	ug/L	1	0.24		
4/15/2021	8260	2104150930	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.33	ug/L	1	0.2		J
4/15/2021	607	2104150932	Bromacil	0.12	µg/L	0.0098	0.0049	85	RB
4/15/2021	607	2104150932	N-Nitrodimethylamine	0.13	µg/L	0.0098	0.0049	98	
4/15/2021	607	2104150932	N-Nitrosodimethylamine	0.16	µg/L	0.0098	0.0049	40	

Analytical Results for Sampling Events at PFE-4A

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104150950	1,1,2-Trichloro-1,2,2-Trifluoroethane	2	ug/L	1	0.2		
4/15/2021	8260	2104150950	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
4/15/2021	8260	2104150950	Trichlorofluoromethane (CFC 11)	0.81	ug/L	1	0.24		J
4/15/2021	8260	2104150952	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1	0.2		
4/15/2021	8260	2104150952	Trichloroethene (TCE)	1.1	ug/L	1	0.2		
4/15/2021	8260	2104150952	Trichlorofluoromethane (CFC 11)	0.83	ug/L	1	0.24		J
4/15/2021	607	2104150953	Bromacil	0.03	µg/L	0.0097	0.0049	85	RB QD
4/15/2021	607	2104150953	N-Nitrodimethylamine	0.0078	µg/L	0.0097	0.0049	98	J
4/15/2021	607	2104150953	N-Nitrosodimethylamine	0.0078	µg/L	0.0097	0.0049	40	J
4/15/2021	607	2104150954	Bromacil	0.018	µg/L	0.0097	0.0049	85	RB QD
4/15/2021	607	2104150954	N-Nitrosodimethylamine	0.0068	µg/L	0.0097	0.0049	40	J
4/15/2021	607	2104150954	N-Nitrodimethylamine	0.0087	µg/L	0.0097	0.0049	98	J

Analytical Results for Sampling Events at PFE-5

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151030	Tetrachloroethene (PCE)	2.8	ug/L	1	0.21		
4/15/2021	8260	2104151030	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.31	ug/L	1	0.2		J
4/15/2021	8260	2104151030	Trichloroethene (TCE)	59	ug/L	1	0.2		
4/15/2021	8260	2104151030	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	ug/L	1	0.2		
4/15/2021	8260	2104151030	Dichlorofluoromethane (CFC 21)	0.28	ug/L	1	0.2		J
4/15/2021	8260	2104151030	Trichlorofluoromethane (CFC 11)	32	ug/L	1	0.24		
4/15/2021	607	2104151032	N-Nitrosodimethylamine	0.38	µg/L	0.0099	0.005	40	
4/15/2021	607	2104151032	N-Nitrodimethylamine	0.23	µg/L	0.0099	0.005	98	
4/15/2021	607	2104151032	Bromacil	0.048	µg/L	0.0099	0.005	85	RB

Analytical Results for Sampling Events at PFE-7

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151320	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
4/15/2021	8260	2104151320	Trichlorofluoromethane (CFC 11)	4.8	ug/L	1	0.24		
4/15/2021	8260	2104151320	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.9	ug/L	1	0.2		
4/15/2021	8260	2104151320	2-Propanol	4.3	ug/L	50	3.4		J
4/15/2021	607	2104151322	Bromacil	0.0096	µg/L	0.0096	0.0048	85	RB
4/15/2021	NDMA_LL	2104151323	N-Nitrodimethylamine	0.89	ng/L	0.5	0.2		
4/15/2021	NDMA_LL	2104151323	N-Nitrosodimethylamine	2.9	ng/L	0.5	0.35		* FB
4/15/2021	NDMA_LL	2104151325	N-Nitrosodimethylamine	2.8	ng/L	0.48	0.33		* FB
4/15/2021	NDMA_LL	2104151325	N-Nitrodimethylamine	0.56	ng/L	0.48	0.2		

Appendix A.5
MPITS Indicator Parameters

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
2/9/2021	607	2102090856	Bromacil	0.0096	µg/L	0.0096	0.0048	96	
3/5/2021	607	2103050709	Bromacil	0.0078	µg/L	0.0097	0.0049	107	J
4/14/2021	607	2104141328	Bromacil	0.079	µg/L	0.0095	0.0048	80	
4/14/2021	NDMA_LL	2104141329	N-Nitrosodimethylamine	0.38	ng/L	0.48	0.34		J * FB

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
2/9/2021	8260	2102090844	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	2	0.4		
2/9/2021	8260	2102090844	Dichlorofluoromethane (CFC 21)	1.8	ug/L	1	0.2		
2/9/2021	8260	2102090844	Tetrachloroethene (PCE)	2.5	ug/L	1	0.21		
2/9/2021	8260	2102090844	Trichloroethene (TCE)	53	ug/L	1	0.2		
2/9/2021	8260	2102090844	Trichlorofluoromethane (CFC 11)	110	ug/L	1	0.24		
2/9/2021	8260	2102090844	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.5	ug/L	1	0.2		
2/9/2021	607	2102090846	N-Nitrodimethylamine	1.2	µg/L	0.0095	0.0048	97	
2/9/2021	607	2102090846	Bromacil	0.34	µg/L	0.0095	0.0048	96	
2/9/2021	607	2102090846	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	40	
3/5/2021	8260	2103050806	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
3/5/2021	8260	2103050806	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
3/5/2021	8260	2103050806	Trichloroethene (TCE)	44	ug/L	1	0.2		
3/5/2021	8260	2103050806	Trichlorofluoromethane (CFC 11)	84	ug/L	1	0.24		
3/5/2021	8260	2103050806	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
3/5/2021	8260	2103050806	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	1	0.2		
3/5/2021	607	2103050808	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	40	
3/5/2021	607	2103050808	N-Nitrodimethylamine	0.96	µg/L	0.0095	0.0048	99	
3/5/2021	607	2103050808	Bromacil	0.24	µg/L	0.0095	0.0048	107	
4/14/2021	8260	2104141346	1,1,2-Trichloro-1,2,2-Trifluoroethane	190	ug/L	1	0.2		
4/14/2021	8260	2104141346	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.4	ug/L	1	0.2		
4/14/2021	8260	2104141346	Trichlorofluoromethane (CFC 11)	95	ug/L	1	0.24		
4/14/2021	8260	2104141346	Dichlorofluoromethane (CFC 21)	1.1	ug/L	1	0.2		
4/14/2021	8260	2104141346	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
4/14/2021	8260	2104141346	Trichloroethene (TCE)	44	ug/L	1	0.2		
4/14/2021	607	2104141348	N-Nitrosodimethylamine	1.8	µg/L	0.0098	0.0049	50	
4/14/2021	607	2104141348	N-Nitrodimethylamine	1.1	µg/L	0.0098	0.0049	120	
4/14/2021	607	2104141348	Bromacil	0.23	µg/L	0.0098	0.0049	80	

Analytical Results for Sampling Events at MPE-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100901	Trichloroethene (TCE)	82	ug/L	1	0.2		
2/10/2021	8260	2102100901	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100901	Unknown	5.2	ug/L	NA	NA		TIC RB
2/10/2021	8260	2102100901	Trichlorofluoromethane (CFC 11)	180	ug/L	1	0.24		
2/10/2021	8260	2102100901	Tetrachloroethene (PCE)	4	ug/L	1	0.21		
2/10/2021	8260	2102100901	Dichlorofluoromethane (CFC 21)	1.8	ug/L	1	0.2		
2/10/2021	8260	2102100901	2-Propanol	8.3	ug/L	50	3.4		J
2/10/2021	8260	2102100901	1,1,2-Trichloro-1,2,2-Trifluoroethane	350	ug/L	2.5	0.5		
2/10/2021	8260	2102100901	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1	0.2		
2/10/2021	607	2102100903	N-Nitrosodimethylamine	3.9	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102100903	N-Nitrodimethylamine	2.1	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102100903	Bromacil	0.74	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-10

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100946	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.7	ug/L	1	0.2		
2/10/2021	8260	2102100946	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1	0.2		
2/10/2021	8260	2102100946	Dichlorofluoromethane (CFC 21)	2.2	ug/L	1	0.2		
2/10/2021	8260	2102100946	Tetrachloroethene (PCE)	3.1	ug/L	1	0.21		
2/10/2021	8260	2102100946	Trichloroethene (TCE)	61	ug/L	1	0.2		
2/10/2021	8260	2102100946	Unknown	5.6	ug/L	NA	NA		TIC RB FB
2/10/2021	8260	2102100946	Trichlorofluoromethane (CFC 11)	97	ug/L	1	0.24		
2/10/2021	607	2102100948	N-Nitrosodimethylamine	3.4	µg/L	0.0095	0.0048	40	
2/10/2021	607	2102100948	N-Nitrodimethylamine	1.7	µg/L	0.0095	0.0048	97	
2/10/2021	607	2102100948	Bromacil	0.3	µg/L	0.0095	0.0048	96	

Analytical Results for Sampling Events at MPE-11

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102101101	1,1,2-Trichloro-1,2,2-Trifluoroethane	7.6	ug/L	1	0.2		
2/10/2021	8260	2102101101	2-Propanol	6.3	ug/L	50	3.4		J FB
2/10/2021	8260	2102101101	Dichlorofluoromethane (CFC 21)	0.71	ug/L	1	0.2		J
2/10/2021	8260	2102101101	Tetrachloroethene (PCE)	0.25	ug/L	1	0.21		J
2/10/2021	8260	2102101101	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
2/10/2021	8260	2102101101	Trichlorofluoromethane (CFC 11)	6.7	ug/L	1	0.24		
2/10/2021	8260	2102101101	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.56	ug/L	1	0.2		J
2/10/2021	607	2102101103	N-Nitrosodimethylamine	0.26	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102101103	N-Nitrodimethylamine	0.14	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102101103	Bromacil	0.024	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100931	Dichlorofluoromethane (CFC 21)	1.5	ug/L	1	0.2		
2/10/2021	8260	2102100931	Tetrachloroethene (PCE)	3.4	ug/L	1	0.21		
2/10/2021	8260	2102100931	Trichloroethene (TCE)	77	ug/L	1	0.2		
2/10/2021	8260	2102100931	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
2/10/2021	8260	2102100931	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.2	ug/L	1	0.2		
2/10/2021	8260	2102100931	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100931	1,1,2-Trichloro-1,2,2-Trifluoroethane	300	ug/L	2.5	0.5		
2/10/2021	8260	2102100933	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100933	Tetrachloroethene (PCE)	3.2	ug/L	1	0.21		
2/10/2021	8260	2102100933	2-Propanol	12	ug/L	50	3.4		J
2/10/2021	8260	2102100933	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
2/10/2021	8260	2102100933	1,1,2-Trichloro-1,2,2-Trifluoroethane	300	ug/L	2.5	0.5		
2/10/2021	8260	2102100933	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.3	ug/L	1	0.2		
2/10/2021	8260	2102100933	Trichloroethene (TCE)	75	ug/L	1	0.2		
2/10/2021	8260	2102100933	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
2/10/2021	8260	2102100933	Silane, fluorotrimethyl-	7.9	ug/L	NA	NA		TIC
2/10/2021	607	2102100934	N-Nitrosodimethylamine	2.6	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102100934	N-Nitrodimethylamine	1.4	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102100934	Bromacil	0.37	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-9

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100916	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1	0.2		
2/10/2021	8260	2102100916	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2	ug/L	1	0.2		
2/10/2021	8260	2102100916	Trichlorofluoromethane (CFC 11)	110	ug/L	1	0.24		
2/10/2021	8260	2102100916	Tetrachloroethene (PCE)	4.2	ug/L	1	0.21		
2/10/2021	8260	2102100916	Chloroform	0.27	ug/L	1	0.24		J
2/10/2021	8260	2102100916	1,1,2-Trichloro-1,2,2-Trifluoroethane	90	ug/L	1	0.2		
2/10/2021	8260	2102100916	Trichloroethene (TCE)	96	ug/L	1	0.2		
2/10/2021	607	2102100918	N-Nitrosodimethylamine	4.6	µg/L	0.0097	0.0049	40	
2/10/2021	607	2102100918	N-Nitrodimethylamine	2.4	µg/L	0.0097	0.0049	97	
2/10/2021	607	2102100918	Bromacil	0.5	µg/L	0.0097	0.0049	96	
2/10/2021	607	2102100919	Bromacil	0.5	µg/L	0.0097	0.0049	96	
2/10/2021	607	2102100919	N-Nitrosodimethylamine	4.9	µg/L	0.0097	0.0049	40	
2/10/2021	607	2102100919	N-Nitrodimethylamine	2.5	µg/L	0.0097	0.0049	97	

Appendix B
Sampling Event Logbook Entries and Internal CoC Forms

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PROJECT 100-A-182

Notebook No. 032 #110

Continued from page 12

Marcus Avalos & Tony Torres 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. Parameters will be collected using a YSI MP20 flow cell & water analyzer. Carboy G-3.

Calibrations

DO- Cal in saturated air @ 639 mm/Hg 177.25

PH- Cal using Fisher Buffers (4, 7, 10)

Conductivity- Cal using 1413 us/cm STD solution.

Turb Meter #20 STD- 5.63 NTU RDG- 5.70 NTU Lot- 9107 Exp: 2/28/21

Parameters (time)	Temp (°C)	Cond (mS/cm)	DO	PH	ORP	Turb (NTU)	DTW
1) 210203 0955 C	20.51	1.292	3.83	6.96	199	0.97	178.80
2) 210203 0957 C	20.54	1.284	3.76	6.95	197	1.08	"
3) —— 0959 C	20.48	1.288	3.70	6.94	198	1.10	"

Sample #	Analysis	Samples Preserve	Container	lot	Lab
210203 1000 C	VOA by 8260 - (FB)	HCl / Ice	(3) 40 ml vials	25732	ALS
—— 1001 C					
—— 1002 C	GRO by 8015D				
—— 1003 C	607 / Bromacil - (FB)	Ice	(1) 1L Amber	108501	SDI
—— 1004 C					
—— 1005 C	SVOA by 8270D		(2)	101920 10K	ALS
—— 1006 C	DRO by 8015D		(1)		
—— 1007 C	Total Metals - (FB)	HNO3 / Ice	(2) 125 ml poly	191129	ALS
—— 1008 C					

IDW- 2 gal

Continued from page

Read and Understood By

Signed — Date 2/3/21

Signed — Date 2-4-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of 1

Sample Location: 100-A-182

Sample Number	# of Containers	Sample Matrix*	8260	GRO	67	SUOA 8270	DRO			Charge Number
Pertinent Notes (if any)										
210203 1000C	3	A	X							XGMD
1001C (FB)	3		X							
1002C	3		MS MSD	X						
1003C	1				X					
1004C (FB)	1				X					
1005C	2					X				
1006C	1						X			

Sample Location:

Sample Number	# of Containers	Sample Matrix*	T. Metals							Charge Number
Pertinent Notes (if any)										
210203 1007C	2	A	X							
1008C (FB)	2	1	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/3/21 @ 1105			2-4-21 / 0915

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

PROJECT 100-C-365 ENV-0078

Notebook No. D32#119(B)

Continued from page

AL Montez & Tony Torres present. The weather is clear & cool. This zone will be purged & sampled using a dedicated TEFLON Bladder pump. Params will be collected with a QED MP-20 flow cell. Samples will be collected with a TEFLON discharge tube. Carboy G-3

Calibrations

DO sensor cal'd @ Bldg 638 in 640 mm/Hg saturated air

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

pH sensor cal'd in 4, 7, 10 buffers using the Optical method

Turbometer #20 std 5.63 @ 5.69 Lot# 9107 Exp. 2/21

Params

Samples	Temp	Cond	DO	pH	ORP	Turb	DTW
210222094DB	19.85	0.851	4.15	8.23	-10	0.74	285.75
0944B	19.87	0.855	4.02	8.24	-10	0.68	285.75
0942B	19.87	0.849	3.92	8.25	-10	0.81	285.71

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210222 0945B	8260 II	ICE/HCl	2538	(3) 40 mL vials	ALS
0946B	" (FB)	"	"	"	"
0947B	GRO	"	"	"	"
0948B	6007	ICE	108501	(1) 1LT amber	SRL
0949B	8270	"	"	(2) "	"
0950B	TOT & METALS	ICE/HNO_3	200707	(2) 125 ml poly	ALS
0951B	" (Dup)	"	"	"	"
0952B	Anions/Alk	ICE	200707	" "	"
0953B	TDS	"	"	(1) 125 ml poly	"
0954B	DRO	"	080219DK	(1) 1LT Amber	"
0955B	Perchlorate	"	200707	(1) 125 ml poly	"
0956B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250 ml poly	"

Continued from page

Read and Understood By

J. [signature] 2-22-21

Signed Date

Jeri Munch 2-23-21

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-22-21 Page 1 of 1

Sample Location: 100-C-365

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260C	GRO	6007	8270	Total Metals			Charge Number: X6MA
210222 0945 B		3		X							
0946 B (FB)		3		X							
0947 B		3			X						
0948 B		1				X					
0949 B		2					X				
0950 B		2						X			
0951 B (Dup)		2						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	ANIONS ACK	TDS	DRO	PERCHLORATE	NO2 NO3			Charge Number: X6MA
0952 B		2		X							
0953 B		1			X						
0954 B		1				X					
0955 B		1					X				
0956 B		1						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/22/21 / 1100		[signature]	2-23-21 / 0905

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

Marcus Avalos & Robert Burrows present. Weather is cloudy & cold. This zone will be sampled using 5 triple rinsed, steam cleaned stainless steel sample tubes. Gear in use. Probe #2167. Surface checks performed on probe prior to sampling.

30-Min Equipment Blanks
Carboy CB-5

Sample #	Analysis	Preserve	Container	lot	lab
210218143041	VOA by 8260	HCl/Ice	(3) 40ml vials	25732	ALS

Initial Parameters		Final	Meter ID		
Time	210218150041	210218154541	pH/Cond	13	
pH	7.14	7.05	Turb	21	
Temp	18.4°C	14.4°C	= 510	56.8 NTU	
Cond	1320 uS/cm	1498 uS/cm	= 606	54.3 NTU	
Turb	1.31 NTU	0.72 NTU	= LOT	9/017	
pH pre	7.03 / 9.98 (12.6°C)	7.06 / 10.01 (11.8°C)	= Exp	2/21	
pH post	7.02 / 10.01	7.01 / 10.02			
DTW	149.00'	149.20'	Buffers	lot	exp
Atmos	12.58 psia	12.55 psia	7	40026691	8/21
		FDW: 0.50 gal	10	40010005	6/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210218152041	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
——— 1521Y	607/Bromacil	Ice	(1) 1L Amber	0108501F	SRI
——— 1540Y	Total Metals	HNO3/Ice	(2) 125 ml polys	200707	ALS

Runs	1)	2)	3)
	25.35	25.34	25.36
	29.90	29.92	29.91
	28.87	29.88	29.89
	25.33	25.31	25.35

Continued from page

Signed 2/18/21 Date

Read and understood by

Signed 2-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200 - C - 170

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607/8270	TCL/Metals					Charge Number
210218143OY (EB)	3	A	X							VGMD
1520Y	3	1	X							1
1521Y	1	1		X						1
1540Y	2	1			X					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:
[signature]	2/18/21 @ 1600	[signature]	2-22-21 / 0900

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

WSTF 381C (05/2016)

Marcus Avalos & Robert Burrows present. Weather is clear & cold. This zone will be sampled using 5 stainless steel, steam cleaned, & triple rinsed Sample tubes. Gen in use. Probe # 2167. Surface checks performed on probe prior to sampling.

30-Min Equipment Blanks - Carboy G-5

Sample #	Analysis	Preserve	Container	lot	lab
210218 1015 y	VOA by 8260	HCl / Ice	(3) 40 ml vials	25732	Als

Initial Parameters	Final	Meter ID
Time - 210218 1050 y	210218 1350 y	PH/Cond - 13
PH - ~~20.56~~ 7.96	7.90	Turb - 21
Temp - 19.8 °C	15.1 °C	= STD - 56.8 NTU
Cond - 1485 us/cm	1358 us/cm	= RDG - 54.3 NTUs
Turb - 0.43 NTU	0.27 NTU	= Lot - 91017
PH pre - 6.99 / 10.05 (13.8°)	6.98 / 10.04 (10.8°)	= Exp - 2/21
PH post - 7.03 / 10.01	6.99 / 10.02	
DTW - 148.70'	149.06'	Buffers / lot / exp
Atmos - 12.60 psia	12.62 psia	7 / 4002691 / 8/21
	IDW - 0.50 gal	10 / 4601005 / 6/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210218 1245 y	VOA by 8260	HCl / Ice	(3) 40 ml vials	25732	Als
—— 1246 y	60T / Bromacil	Ice	(1) 1L Amber	0108501F	SGI
—— 1315 y	Total Metals	HNO3 / Ice	(2) 125 ml polys	200764	Als
—— 1316 y	Anions / Alk	Ice / Zero HS	"	"	"
—— 1317 y	TDS by SM2540C	Ice	(1)	"	"
—— 1345 y	Perchlorate by 6850	Ice / 1/3 HS	"	"	"
—— 1346 y	NO2, NO3 by 353.2	H2SO4 / Ice	(1) 250 ml poly	200811	"

Runs	1)	2)	3)	4)
	49.82	49.88	49.85	49.84
	53.70	53.66	53.69	53.65
	53.64	53.63	53.67	53.66
	49.81	49.84	49.82	49.79

Continued from page

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Signed — Date 2/18/21

Signed — Date 2-22-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200-C-225

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	T. Metals	Anions/Alk	TDS	Perchlorate		Charge Number
210218 1015Y (EB)	3	A	X							XGMD
1245Y	3		X							
1246Y	1			X						
1315Y	2				X					
1316Y	2					X				
1317Y	1						X			
1345Y	1							X		—

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	NO2 NO3							Charge Number
210218 1346Y	1	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/18/21 @ 1600		[signature]	2-22-21 / 0900

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

Marcus Avalos & Robert Burrows present. Weather is cloudy & sleet. This zone will be sampled using 5 steam cleaned & triple rinsed stainless steel sample tubes. Crew in use. Probe #1167. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G-5

Sample #	Analysis	Preserve	Container	lot	lab
210217145oy	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	Als

Initial Parameters	Final	Meter ID
Time - 210217153oy	210218092 3y	PH/Cond - #13
PH - 7.90	7.65	Turb - #21
Temp - 18.8 °C	14.4 °C	STD - 56.8 NTU
Cond - 1492 us/cm	1534 us/cm	PDG - 56.6 NTU
Turb - 0.64 NTU	0.50 NTU	LOT - 91017
PH pre - 7.03/10.03 (14.1°C)	6.96/9.97 (10.8°C)	EXP - 2/21
PH post - 7.02/10.05	7.01/9.95	
OTW - 148.37'	148.70'	
Atmos - 12.38 psia	12.59 psia	
	IDW - 0.50 gal	

Buffers	lot	exp
7	4002G91	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preserve	Container	lot	lab
210218084oy	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	Als
—— 0841y	607/Bromacil	Ice	(1) 1L Amber	0108501F	SRI
—— 0915y	Total Metals	HNO3/Ice	(2) 125 ml polys	200707	Als

Runs	1)	2)	3)
	69.44	69.42	69.41
	73.03	73.02	73.07
	72.94	73.03	73.04
	69.33	69.41	69.42

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Read and Understood By

MJ CS — Signed — 2/18/21 — Date

Peri Munch — Signed — 2-22-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/17/21

Sample Location: 200-C-270

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210217145oy (EB)	3	A	X							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:
MS GS	2/17/21 @ 1600	[signature]	2-18-21 / 0925

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200-C-270

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6010	T. Metals					Charge Number
210218085404	3	A	X							VGMO
085114	1	A		X						
~~085124~~ MB										
210218091504	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:
[signature]	2/18/21 @ 1105	[signature]	2-22-21 / 0900

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

PROJECT 200-F-225 WJI ENV-0020

Notebook No. D64#127(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. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks – Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210223092SY	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters

Time – 210223101OY
PH – 7.67
Temp – 20.0°C
Cond – 1387 us/cm
Turb – 4.03 NTU's
pHpre – 7.09/10.12 (17.1°C)
pHpost – 7.09/10.10
DTW – 176.06ft.
Atmos – 12.48psia

Final

Time – 2102231106Y
PH – 7.45
Temp – 20.9°C
Cond – 1371 us/cm
Turb – 2.92 NTU's
pHpre – 7.05/10.08 (18.3°C)
pHpost – 7.03/10.09
DTW – 176.17ft.
Atmos – 12.50psia
IDW – 1/2 gal.

Meter ID

pH/cond – ~~21~~ 13
Turb ~~21~~ 00 21
u Std – 56.8
u rdg – 54.8
u lot – 91017
u Exp – 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210223104OY	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1041Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1105Y	Total Metals	ice/HNO_3	(2) 125ml/poly's	20-07-07	ALS

Runs	1)	2)	3)
	37.54	37.52	37.45
	42.62	40.30	40.35
	40.13	38.60	38.12
	37.54	37.47	37.42

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Read and Understood By

Craig Del Ferraro — Signed — 2/23/21 — Date

Jeri Wunderlich — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 1 of 1

Sample Location: 200-F-225

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210223092SY (EB)	3	A	✓							XGMD
1040Y	3	A	✓							"
1041Y	1	A		✓						"
1105Y	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	2/23/21 1115 hrs.		Jon W Munch	2-24-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5' steam cleaned & triple rinsed, stainless steel sample tubes. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210222 0945Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters
Time - 210222 0945Y
PH - 7.36
Temp - 20.4°C
Cond - 1492 us/cm
Turb - 2.08 NTU's
pH pre - 7.16/10.11 (15.3°C)
pH post - 7.18/10.10
DTW - 175.72ft.
Atmos - 12.60psia

Final
Time - 210222 1031Y
PH - 7.27
Temp - 20.7°C
Cond - 1475 us/cm
Turb - 1.51 NTU's
pH pre - 7.11/10.08 (17.7°C)
pH post - 7.09/10.05
DTW - 175.87ft.
Atmos - 12.58 psia
IDW - ½ gal.

Meter ID
pH/cond - 13
Turb - 21
u · Std - 56.8
u rdg - 55.0
u lot - 91017
u Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1010Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1011Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SPL
——— 1030Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	100.39	100.37	100.28
	104.91	104.87	104.86
	104.91	104.82	104.84
	100.38	100.31	100.29

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/22/21 — Date
John Munch — Signed — 2.23.21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/22/21 Page 1 of 1

Sample Location: 200-F-370

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210222091SY (EB)	3	A	✓							XGMD
1010Y	3	A	✓							u
1011Y	1	A		✓						u
1030Y	2	A			✓					u

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	2/22/21 1115hrs.		[signature]	2-23-21 / 0905

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1435Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1436Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Initial Parameters

Time - 210222 1505Y
PH - 7.51
Temp - 22.3°C
Cond - 1593 us/cm
Turb - 7.22 NTU's
pHpre - 7.04/10.01 (25.2°C)
pHpost - 7.03/9.98
DTW - 175.87 ft.
Atmos - 12.53 psia

Final

Time - 210223 0845Y
PH - 7.37
Temp - 21.7°C
Cond - 1605 us/cm
Turb - 4.41 NTU's
pHpre - 7.15/10.10 (14.7°C)
pHpost - 7.16/10.09
DTW - 176.06 ft.
Atmos - 12.57 psia
IDW - ½ gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 56.8
" rdg - 55.0
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1535Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1536Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SPL
210223 0840Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0841Y	Anions/Alk.	ice	"	N/A	"
——— 0842Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0843Y	Perchlorate by 6850	"	"	"	"
——— 0844Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-08-11	"

Runs	1)	2)	3)
	121.59	121.53	121.40
	126.92	~~126.~~ eq	126.71
	126.90	125.55	126.72
	121.57	125.51	121.35
		121.48	

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/23/21 — Date

Jeri W Mundt — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/22/21 Page 1 of 2

Sample Location: 200-F-420

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210222 1435y (EB)	3	A	✓							XGMD
1436y (EB)	2	A			✓					4
1535y	3	A	✓							4
1536y	1	A		✓						4

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 Dell'Orso	2/22/21 1550hrs		Jon Munch	2-23-21 /0905

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

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 2 of 2

Sample Location: 200-F-420

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210223 0840Y	2	A	✓							XGMD
0841Y	2	A		✓						4
0842Y	1	A			✓					4
0843Y	1	A				✓				4
0844Y	1	A					✓			4

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terzo	2/23/21 1115 hrs			2-24-21 / 0915

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

DAN HALVORSEN & TONY TOLLEF PRESENT. THIS WEATHER IS CLEAR & COLD. THIS ZONE WILL BE SAMPLED & PURGED WITH A TEFLON bladder pump. SAMPLES COLLECTED WITH A TEFLON DISCHARGE TUBE. PARAM's WILL BE COLLECTED FROM a QED MP-20 FLOWCELL. CARBOY G-3

CALIBRATIONS

DO SENSOR Cal'd in 639 mm/Hg @ Bldg 607B
COND SENSOR Cal'd in 1413 µs/cm STANDARD.
pH SENSOR cal'd using 3pt cal METHOD using 4, 7, 10 buffers.
Turb # 20 STD Rdg LOT# Exp

	Params		Temp	Cond	DO	pH	ORP	Turb
1)	210218	1015B	20.94	0.974	4.27	7.62	94	4.71
2)	——	1016B	21.03	0.981	4.24	7.62	96	4.77
3)	——	1017B	20.89	0.978	4.13	7.62	96	4.83

SAMPLES

Sample #	Analysis	Preserv	LOT #	Cont	Lab
210218 1020B	8260	ICE/HCl	253B	(3) 40ml vials	ALS
—— 1021B	" (FB)	"	"	"	"
—— 1022B	607	ICE	108501	(1) 1LT Amber	SRL
—— 1023B	TOTAL METALS	ICE/HNO_3	200707	(2) 125ml/poly	ALS
—— 1024B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250ml/poly	"

Continued from page

Read and Understood By

T- Signed — 2/18/21 Date — Jon W Munch Signed — 2-18-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-18-21 Page 1 of 1

Sample Location: 300.A.170

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	NO2/NO3				Charge Number
										X6MD
210218 1020B	3	A	X							
1021B (FB)	3		X							
1022B	1			X						
1023B	2				X					
1024B	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:
[signature]	2-18-21		[signature]	2-22-21 / 0900

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

Marcus Avalos & Tony Torres 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. Parameters will be collected using a QED MP.20 flow cell & water analyzer. Carboy G-

Calibrations DTW - 163.55'

DO - Cal in saturated air @ 639 mm/Hg.
pH - Cal using Fisher Buffers (4,7,10)
Conductivity - Cal using 1413 us/cm STD solution.
Turb Meter - #20 STD - 5.63 NTU ROC - 5.70 NTU Lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (°C)	Cond (ms/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210203/1450C	20.67	0.850	4.78	7.43	171	1.25	163.60'
2) ——— 1451C	20.71	0.849	4.55	7.44	175	1.29	:"
3) ——— 1452C	20.69	0.836	4.62	7.46	174	1.59	:"

Sample #	Analysis	Samples Preserve	Container	Lot	Lab
210203/1455C	VOA by 8260	HCl/Ice	(3) 40ml vials	25732	ALS
——— 1456C	:" (FB)	:"	:"	:"	:"
——— 1457C	607/Bromacil	Ice	(1) 1L Amber	108501	SBL
——— 1458C	Total Metals	HNO3/Ice	(2) 125ml poly	191129	ALS
——— 1459C	Anions/Alk	Ice/Zero HS	:"	:"	:"
——— 1500C	TDS by SM2540C	Ice	(1) :"	:"	:"
——— 1501C	Perchlorate 6850	Ice/1/3 HS	:"	:"	:"
——— 1502C	NO2, NO3 by 353.2	H2SO4/Ice	(1) 250ml poly	200221	:"

IDW - 2 gal

Continued from page

Read and Understood By

Marcus Avalos Signed 2/3/21 Date

Pam Munch Signed 2-4-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of

Sample Location: 300 B - 166

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	6007	T. Metals	Anions/Alk	TDS	Perchlorate		Charge Number
210203 1455C	3	A	X							XGMD
1456C (FB)	3		X							
1457C	1			X						
1458C	2				X					
1459C	2					X				
1500C	1						X			
1501C	1							X		

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	NO2 NO3							Charge Number
210203 1502C	1	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/3/20 @ 1600			2-4-21 / 0915

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

Bob Tufts & Craig Del Fevaro present. Weather is clear & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Then in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210223140oy	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters

Time - 210223143 5y
PH - 8.04
Temp - 20.7°c
Cond - 1489 us/cm
Turb - 1.71 NTU's
pH pre - 7.03/10.06 (21.2°c)
pH post - 7.04/10.06
DTW - 138.30 ft.
Atmos - 12.40 psia

Final

Time - 2102240840y
PH - 7.86
Temp - 20.3°c
Cond - 1506 us/cm
Turb - 1.12 NTU's
pH pre - 7.10/10.12 (15.5°c)
pH post - 7.12/10.08
DTW - 138.36 ft.
Atmos - 12.49 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb -21
" Std - 56.8
" rdg - 54.8
" Lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210223150oy	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1501y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
210224 0815y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0816y	Anions/Alk.	ice	"	N/A	"
——— 0817y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0818y	Perchlorate by 6850	"	"	"	"
——— 0819y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)	4)	5)
	16.27	16.26	16.24	16.29	16.35
	22.49	22.47	22.47	22.50	22.53
	22.45	22.45	22.45	22.50	22.49
	16.32	16.27	16.24	16.31	16.32

Continued from page

Read and Understood By

Craig Del Fevaro — Signed — 2/24/21 — Date

Jeri Mumdr — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 1 of 2

Sample Location: 300-E-138

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210223140oy (EB)	3	A	✓							XGMD
1500y	3	A	✓							4
1501y	1	A		✓						4

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 Fernal	2/23/21 1540hrs		[signature]	2-24-21 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/24/21 Page 2 of 2

Sample Location: 300-E-138

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210224 0815Y	2	A	✓							XGMD
0816Y	2	A		✓						4
0817Y	1	A			✓					4
0818Y	1	A				✓				4
0819Y	1	A					✓			4

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	2/24/21 1055 hrs.		[signature]	2-24-21 / 1100

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

b Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be mpled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. obe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy C2

ample	Analysis	Preservative	Container	Lot	Lab
2102240925y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0926y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI

nitial Parameters	Final	Meter ID
ime - 2102241000y	Time - 2102241041y	pH/cond - 13
H - 7.94	PH - 8.01	Turb -21
mp - 19.4°C	Temp - 19.9°C	" std - 56.8
nd - 1067 us/cm	Cond - 1036 us/cm	" rdg - 55.4
rb - 1.44 NTU's	Turb - 1.07 NTU's	" lot - 91017
pre - 7.06/10.10 (18.0°C)	pHpre - 7.03/10.08 (18.7°C)	" Exp - 2/28/21
post - 7.04/10.13	pHpost - 7.04/10.08	
tw - 138.36ft.	STW - 138.52 ft.	Buffers Lot Exp.
Tmos - 12.47psia	Atmos - 12.49 psia	7 4002691 8/21
	IDW - ½ gal.	10 4001205 6/21

Samples

ample	Analysis	Preservative	Container	Lot	Lab
2102241020y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1021y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1040y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

uns	1)	2)	3)
	35.89	35.84	35.81
	42.03	41.96	41.95
	42.00	41.96	41.96
	35.86	35.85	35.79

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/24/21 — Date

Peri W Munck — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/24/21 Page 1 of 1

Sample Location: 300-E-183

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210224092SY (EB)	3	A	✓							XGMD
0926Y (EB)	1	A		✓						"
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 Del Torro	2/24/21 1055hrs		Jon Munch	2-24-21 / 1100

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This well will be purged & sampled using a dedicated Teflon bladder pump. Samples collected from a dedicated Tygon discharge tube. Parameters collected with a QED MP.20 flowcell. Canopy 6.5

Calibrations:
DO cal'd in 643mm/Hg in saturated air
Cond cal'd in 1413 uS/cm standard.
pH sensor cal'd with a 3pt cal method with 4, 7, 10 buffers.
Turb #20 Std = 5.63 Rdg 5.64 Lot# 91017 Exp 2-28-21

Parameters

Sample#	Temp	Cond	DO	pH	ORP	Turb	DTW
210201 1455c	19.88	1.480	4.66	8.02	54	5.63	142.70
" 1456c	19.87	1.470	4.79	8.02	56	5.76	142.70
" 1457c	19.87	1.460	4.63	8.02	56	5.83	142.70

Samples

Sample#	Analysis	Preserv	Lot#	Cont	Lab
210201 1500c	8260	1:1 HCl	25732	(3) 40mL vials	ACS
" 1501c	"	"	"	"	"

Continued from page

Read and Understood By

T. D. — Signed — 2-1-21 Date

Lori Munch — Signed — 2-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-1-21 Page 1 of 1

Sample Location: 400-EV-131

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number: XGMD
210201500C	3	A	X							
1501C	3	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. [illegible]	2-1-21 / 1600		[illegible]	2-2-21 / 0900

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

Marcus Avalos & Tony Torres present. The weather is overcast & cold. This zone will be purged & sampled using a Dedicated Teflon bladder pump. Samples collected with a Teflon Tube. Parameters collected in a QED MP-20 flow cell & water Analysis Carboy G-5

Calibrations

DO Sensor Cal'd in 643mm/Hg Saturated Air
pH Cal'd using the 3pt method with 4, 7, 10 buffers
Cond Cal'd in 1413uS/cm Standard.
Turb # 20 Std 5.63 Rdg 5.64 Lot# 9107 Exp 2/28/21

Params

Parameters	Temp	Cond	DO	pH	ORP	Turb	Other
210201 1015c	18.80	1.500ms/cm	4.53	7.67	71	0.71	
—— 1016c	18.79	1.500ms/cm	4.01	7.71	71	0.68	
—— 1017c	18.81	1.490ms/cm	4.16	7.71	71	0.73	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210201 1020c	8260	HCl	25732	13 VOAs	ALS
—— 1021c	11 (f3)	11	11		11

Continued from page

Read and Understood By

T. [illegible] Signed 2-1-21 Date

Signed 2-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-1-21 Page 1 of 1

Sample Location: 400.GW.125

Pertinent Notes (if any)

Analytical Requirement: 8260

XGMS

Sample Number	# of Containers	Sample Matrix*	Charge Number
210201 1020c	3	A	X
1021c	3	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:
T-D Z	2-1-21 / 1100		[signature]	2-2-21 / 0900

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

Marcus Ayala & Tony Tortez present. Weather is cloudy & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Parameters will be collected using a YSI MP-20 flowcell & water analyzer. Carboy G-3

Calibrations
DO - Cal in saturated air @ 644 mm/Hg.
PH - Cal using Fisher Buffers (4, 7, 10)
Conductivity - Cal using 1413 uS/cm STD solution.
Turb Meter - #7 STD - 3.48 NTU RDG - 5.24 NTU Lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (c)	Cond (ms/cm)	DO	pH	ORP	Turb (NTU)	DTW
1) 210202.0950c	20.66	2.07	2.55	8.08	4	1.03	N/A
2) ——— 0951c	20.69	2.06	2.47	8.09	3	0.71	"
3) ——— 0952c	20.71	2.07	2.38	8.10	3	0.69	"

Samples

Sample #	Analysis	Preserve	Container	Lot	DTW
210202.0955c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	N/A
———.0956c	" (FB)	"	"	"	"

IDW - 1 gal

Continued from page

Read and Understood By

Signed — Date — Signed — Date

2/2/21 — 2-3-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: 400-SU-150

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210202095SC	3	A	X							VGMO
0956C	3	L	X							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:
MS	2/2/21 @ 1100		Pam W Jumah	2-3-21 / 0930

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

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. in use. Probe #2167. Surface check performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210204 0935Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0936Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1040Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial Parameters
Time - 2102041250Y
PH - 8.62
Temp - 22.2°C
Cond - 1688 us/cm
Turb - 1.67 NTU's
pH pre - 7.06/10.03 (21.7°C)
pH post - 7.07/10.03
DTW - 261.09ft.
Atmos - 12.45 psia

Final
Time - 2102041331Y
PH - 8.40
Temp - 22.5°C
Cond - 1694 us/cm
Turb - 1.34 NTU's
pH pre - 7.02/9.98 (26.0°C)
pH post - 7.04/9.98
DTW - 261.25ft.
Atmos - 12.47 psia
IDW - ½ gal.

Meter ID
pH/cond - 13
Turb - 21
" Std - 56.8
" rdg - 57.7
" lot - 9107
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210204 1310Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1311Y	" (Dupl.)	"	"	"	"
——— 1312Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1330Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	25.26	25.21	25.20
	52.85	52.72	52.63
	52.84	52.65	52.56
	25.24	25.21	25.21

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/4/21 — Date

Peri Munch — Signed — 2-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/4/21 Page 1 of 1

Sample Location: 600-E-280

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals					Charge Number
210204 0935Y (EB)	3	A	✓							XGMD
0936Y (EB)	1	A		✓						u
1040Y (EB)	2	A			✓					u
1310Y	3	A	✓							u
1311Y (Dup.)	3	A	✓							u
1312Y	1	A		✓						u
1330Y	2	A			✓					u

Sample Location:

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	2/4/21 1400 hrs.		[signature]	2-8-21 / 0910

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

Tim Moore present. Samples will be collected at the dedicated sample port located on the EFFluent side of the system. The sample port will be purged for one minute prior to parameters and sample collection. Carboy "FF" used for field blanks.

Parameters	meter ID	Buffer	Lot	Exp
Time: 210209 1320	PH/Cond = 12	7	4002691	6/22
PH = 7.81	Turb = 20	10	4001405	6/22
Temp = 25.1°C	" STD = 5.63			
Cond = 1135 µs/cm	" RJG = 5.82			
Turb = 0.419	" Lot = 91017			
PH/Cal = 7.01-10.01 (23.7°C)	" Exp 2/28/2021			
PH/Cal = 7.02-10.02				

Samples

Sample #	Analysis	Preserve	Cont	Lot #	Lab
210209 1322	VOA by 8260 LL	Ice/HCL	(3) 40 mL vials		ALS
——— 1323	" FB	"	"		"
——— 1324	NDMA/BMN/Bromide/1,4-D	Ice	(1) 1 LT Amb		SWET
——— 1325	Low Level NDMA	"	"		"
——— 1326	" FB	"	"		"

NOTE: Dan Halvorsen & Tony Torrez present to collect samples on 02-09-2021

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
210209 0700	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial		ALS
——— 0701	NDMA LL	Ice	(1) 1L Amber		SUB

Continued from page

Read and Understood By

Signed — 2-9-2021 Date

Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B650 - EFF - 1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: U06	907	U044					Charge Number
2102090700	TB	3	A	X							
1322		3		X							
1323	FB	3		X							
1324		1			X						
0701	TB	1				X					
1325		1				X					
1326	FB	1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-9-2021 1600			2-10-21 0930

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

Tim Morse present. Samples will be Collected from the dedicated Sample port Located on the Influent Side of the System. The Sample port will be purged for One Minute prior to parameters and Sample Collection Using "PFI" used for Field blanks. System was Run @ Half Flow Pipes & There was a lot of Air in the System.

Parameters	Meter ID	Bottle	Lot	Exp
Time: 2102091403	PH/Cond: 12	1	4002691	8/22
PH = 7.42	Turb = 20	10	4001805	6/22
Temp = 24.2°C	" STD = 5.63			
Cond = 1110 uS/cm	" PH = 5.82			
Turb = 0.83 ntus	" Lot = 91017			
PH/Cal = 7.01-10.02	" Exp 7/27/2021			
PH/Post = 7.09-10.03				

Sample #	Analysis	Samples Preserve	Containers	2.7	Co
2102 091405	VOA by 8260	Ice/HCL	(3) 40 ml Vials		A
——— 1406	" FB	"	"		
——— 1407	NDMA/DMW/Bromide/by 607	Ice	(1) 1 LT Amb		Sa

NOTE: Dan Halvorsen & Tony Torrez were present to collect Samples on 02-09-2021.

Continued from page

Read and Understood By

Signed — 2-9-2021 Date

Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B650 INF-1

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	607						Charge Number
210291405	3	A	X							
14106 FB	3		X							
1407	1			X						

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-9-2021 1600			2-10-21 0930

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

Dan Halvorsen & Tony Torrez present. Samples will be collected from the duplicated sample port located on the effluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Jar bag 6 in use.

Parameters		Meter ID		Buffer	Lot	Exp
Time	= 2102090852	PH/COND	= 12	7		
PH	= 8.48	TURB	= 20	10		
Temp	= 23.4 °C	STD	= 5.63			
COND	= 1107 µS/cm	ROS	= 5.82			
TURB	= 0.73 NTUs	LOT	= 9011			
PH Pre	= 7.00 · 10.01 (14.7°C)	EXP	= 2/21			
PH Post	= 7.00 · 10.01					

SAMPLES

Sample #	Analysis	Preserv	Container	Lot	Lab
2102090854	VOA by 8260 LL	HCl	(3) 40ml Vials		ALS
0855	" " (FB)	"	"		"
0856	NDMA/10MN Bromacil by 607	ICE	(1) 1L Amber		SRL
0857	NDMA LL	"	"		"
0858	" " (FB)	"	"		"

Continued from page

Read and Understood By

Signed — Date: 2-9-2021

Signed — Date: 2-10-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: BLSS-EBF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOC	607	NDMA LL					Charge Number
										XGMD
210209 0854	3	A	X							
0855 FB	3		X							
0856	1			X						
0857	1				X					
0858 FB	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:
	2-9-2021 1100			2-10-21 / 0930

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

Dan Halvorsen & Tony Torrez present. Samples will be collected from a dedicated sample port located on the Influent side of the System. Sample port will be purged for one minute prior to parameter and sample collection. Carboy 6 in use.

Parameters		Meter ID		Buffer	Lot	Exp
Time	= 2102090842	pH/Cond	= 12	7		
pH	= 7.75	Turb	= 20	10		
Temp	= 22.2°C	" STD	= 5.63			
Cond	= 1152 us/cm	" 606	= 5.82			
Turb	= 0.86 Ntu's	" Lot	= 9101			
pHPre	= 7.00-10.01 (14.7°C)	" Exp	= 2/21			
pHPost	= 7.00 10.01					

SAMPLES

Sample #	Analysis	Preservative	Container	Lot	Lab
2102090844	VOA by 8260	HCl	(3) 40 ml Vial		DHS
0845	" " (FB)	"	"		"
0846	NDMA/DMN Bromacil by 607	Ice	(1) 1L amber		SRL

Continued from page

Read and Understood By

Signed

2-9-2021
Date

Signed

2-10-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B655-INF-2

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	Analytical Requirement: 609						Charge Number
210209 0844	3	A	X							XGMD
0845	3	1	X							
0846	1	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:
	2-9-2021 1100			2-10-21 / 0930

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

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 tube. 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 @ 639 mm/Hg.
Conductivity - calibrated using 1413us/cm std. solution
PH - calibrated using fisher buffers (7 - 10).
Turbidity meter # 4 std - 3.48 rdg - 3.58 lot - 91017 Exp - 2/28/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 210208 0900C	17.5	1.120	N/A	N/A	7.85	1.39	336.89
2) ——— 0902C	17.7	1.116	"	"	7.92	1.14	336.89
3) ——— 0904C	18.0	1.110	"	"	7.96	1.12	336.89

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210208 0906C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0907C	" (FB)	"	"	"	"
——— 0908C	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 0909C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210208 1115C	VOA by 8260	ice/HCL	(3) 40ml vials	21EH113A	ALS
——— 1116C	607/Bromacil	ice	(1) 1L Amber	21EH113B	SRI
——— 1117C	Total Metals	ice/HNO_3	(2) 125ml poly's	21EH113C	ALS

Modified Sampling Event

Initial Parameters - 336.74ft. Total Metal gallons purged - 1/4 gallon

* Flow cell unable to function properly. Crew monitored parameters with basic pH/cond meter. No ORP or DO will be collected.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/8/21 — Date

Jeri Wunderlich — Signed — 2-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page 1 of 1

Sample Location: BLM-21-400

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210208090 6C	3	A	✓							XGMD
0907C (FB)	3	A	✓							"
0908C	1	A		✓						"
0909C	2	A			✓					"
1115C (BC)	3	A	✓							"
1116C (BC)	1	A		✓						"
1117C (BC)	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 Dalton	2/8/21 1135hrs			2-9-21 / 0930

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be purged & sampled using a dedicated Teflon bladder pump Carboy G-3

	Initial	Final
	210204 1501c	210204/1520c
pH	7.35	7.37
Temp	20.0 c	21.6°c
Cond	1384 µs/cm	1383 µS/cm
Turb	1.09	0.99 NTU's
phpre	6.97/10.04(23.3)	7.01/10.05 (24.1°c)
phpost	7.00/10.06	7.00/10.07
DTW	330.90	330.95

METER ID's
pH/cond 601
Turb #7
" Std - 3.48
" Rdg = 3.73
" LOT# = 91017
" Exp = 2-28-21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210204 1305c	8260	Ice/HCl		(3) 40ml vials	ALS
1306c	" (FB)	"		"	"
1307c	6010	Ice		(1) 1Lt Amber	SRL
1308c	" (Dup)	"		"	"
1309c	~~Total Metals~~	~~Ice/HNO3~~		~~(2) 125ml poly~~	~~ALS~~
1310c	Anions/Alk	Ice		"	"
1311c	TDS	"		(1) "	"
1312c	Perchlorate	"		"	"
1313c	NO_2/NO_3	Ice/H_2SO_4		(1) 250ml poly	"

Continued from page

Read and Understood By

Craig M Zuccolo Signed 2/8/21 Date

Tom W Munch Signed 2-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-21 Page 1 of 1

Sample Location: Bldg-23-451

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	ANIONS / ALK	TDS	PERCHLORATE			Charge Number: X6MD
210204 1305c		3	A	X							
1306c FB		3		X							
1307c		1			X						
1308 Dup		1			X						
1310		2				X					
1311		1					X				
1312		1						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: NO2 / NO3							Charge Number
1313		1	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-[illegible]	2-4-21 / 1600		[signature]	2-8-21 / 0910

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

AL MONTES & ROB BURRUS PRESENT. WEATHER IS COOL & PARTLY CLOUDY. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES W/30 MINS BETWEEN PURGES. THE BUBBLER WAS SET @ 3 PSI AND STABILIZED. CARBOY G-5

INITIAL	FINAL	METERS
210202094SA	210202 1440A	PH/COND - 12
PG - 8.29	7.80	TURBMTR - 20
TEMP - 17.9°C	20.5°C	" STD - 5.63 NTU
COND - 1009 uS/cm	1017 uS/cm	" RDC - 5.43 NTU
PH PRE- 7.03/9.97 13.0°C	7.01/9.99 14.7°K	" LOT# - 91017
PH POST- 6.99/9.98	7.03/9.97	" EXP - 2-28-21
TURB - 1.43 NTU	0.37 NTU	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAS
210202 0947 A	VOA 8260	ICE HCL	2573-2	3-40ML VIALS	AS
0948 A	" " (FB)	"	"	"	"
0949 A	NDMA-DMN-3RD-607	ICE	108501	1LT AMBER	SR
1027 A	LL NDMA	"	"	"	SR
1028 A	" (FB)	"	"	"	"
1310 A	SVOA	"	"	2-1LT AMBER	AL
1428 A	TOTAL METALS	ICE HNO3	200707	2-125 P&A	"
1429 A	ANIONS/ALK	ICE-0 HEAD	NA	2- "	"
1430 A	TDS	ICE	"	1-250mL	"
1431 A	PERCHLORATE	ICE 2/3 FULL	"	"	"
1432 A	NO2 NO3	ICE-H2SO4		"	"

1DW-7gal

Continued from page NA

Read and Understood By

Signed — 2-2-21 Date

Signed — 2-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2·2·21 Page 1 of 1

Sample Location: BLM·32·543

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	20MA	LL 20MA	SVOA	T METALS			Charge Number
										XGMD
210202 0947 A	3	A	x							
0948 A FB	3	A	x							
0949 A	1	A		x						
1027 A	1	A			x					
1028 A FB	1	A			x					
1810 A	2	A				x				
1428 A	2	A					✓			

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	ANIONS ALK	TDS	PERCHLORATE	NO2 NO3				Charge Number
210202 1429 A	2	A	x							
1430 A	1	A		x						
1431 A	1	A			x					
1432 A	1	A				x				

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2·2·21 4:10pm			2-3-21 / 0930

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

ALMONTES & RB BURROWS PRESENT. WEATHER IS COOL & CLOUDY. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. ZONE WILL BE PURGED AT LEAST 4 TIMES W/ 30 MINS BETWEEN PURGES. BUBBLER WAS SET @ 3PSI AND STABLIZED. CARBOY 0-5

INITIAL PARAMETERS	FINAL
TIME - 210202 1000A	210202 1045A
PH - 8.40	8.01
TEMP - 18.7°C	19.4°C
COND - 970 uS/cm	1008 uS/cm
TURB - 0.39 NTU	0.22 NTU
PH PRE - 7.01/9.98 13.0°C	700 /9.93 20.0°C
PH POST - 6.98/9.98	7.01/9.99

METER ID
PH/COND - 12
TURB MTR - 20
" STD - 5.63 NTU
" EDC - 5.43
" LOT# - 9C01Y
" EXP - 2.28.21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210202 1002 A	VOA 8260	ICE HCl	3-40mL VIALS	2573.2	ALS
1003 A	" " (FB)	"	"	"	"
1004 A	LL NOMA	"	1LT AMBER	108501	"
1005 A	LL NOMA (DUP)	"	"	"	"
1006 A	" (FB)	"	"	"	"

10 W-Tgal

Continued from page N/A

Signed

2-2-21
Date

Read and Understood By

Signed

2-3-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2·2·21 Page 1 of 1

Sample Location: BLM·32·571

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL ZMA						Charge Number
										X6M7
210202 1002 A	3	A	x							
1003 A FB	3	A	x							
1004 A	1	A		x						
1038 A DUP	1	A		x						
1006 A 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:
	2·2·21 11:20am			2-3-21 / 0930

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

AL MONTES & ROB BURROWS PRESENT. WEATHER IS COOL & CLOUDY. THIS ZONE WILL BE PURGED & SAMPLED USING FLUTE SYSTEM. ZONE WILL BE PURGED AT LEAST 4 TIMES W/ 30 MINS BETWEEN PURGES. BUBBLER WAS SET AND STAPLED @ 3PSI. CARBOY G-5

INITIAL PARAMETERS	FINAL	METER ID
TIME - 210202 1009 A	210202 1018 A	PH/COND - 12
PH - 8.56	8.03	TURB MTR - 20
TEMP - 18.0 °C	19.3 °C	" STD - 5.63 NTU
COND - 965 uS/cm	967 uS/cm	" RPG - 5.43 NTU
TURB - 0.69 NTU	0.40 NTU	" LOT# - A1017
PH PRE - 7.00/4.97 13.1°C	7.05/4.98 16.1°C	" EXP - 2.28.21
PH POST - 6.96/4.98	7.01/9.99	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	SAF
210202 1010 A	VOA 8260	ICE. HCl	3·40 mL VIALS	2573·2	ALS
—— 1011 A	" " (FB)	"	"	"	"
—— 1012 A	" NDMA	ICE	1 LT AMBER	108501	ERI
—— 1013 A	" (FB)	"	"	"	"

IDW - 7 gal

Continued from page N/A

Read and Understood By

Signed 2·2·21 Date

Signed 2-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2.2.21 Page 1 of 1

Sample Location: BLM-32-632

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL NDMA						Charge Number
									XGMD	
210202 1010A	3	A	x							
1011A FB	3	A	x							
1012A	1	A		x						
1013A 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:
	2.2.21 11:20am			2-3-21 0930

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

Dan Halvorsen & Tony Torres present. The well will be purged & sampled from a sample port located next to the well head. It will be purged for 1 min prior to sampling. Carboy G-5

Parameters

2102100900
pH 7.38
Temp 22.8°c
Cond 1299 ms/cm
Turb 0.63 NTUs
phpre 7.06 / 10.03 / (5.72)
phpost 7.07 / 10.03

Meter ID's

pH/cond 12
Turb # 20
11 Std = 5.63
11 Adj = 5.81
11 Lot # = 91017
11 Exp = 2/21

Samples

Sample #	Analysis	Lot #	Cont	Preserv	Lab
2102100901	8260	2573	(3) 40ml vials	HCl/HCl	ALS
0902	11 (FB)	11	11	11	11
0903	6010	01080501	(1) 1LT Amber	HNO3	SAL
0904					

Continued from page

Read and Understood By

T. D. — Signed — 2/10/21 Date

Lori W. Munch — Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-1

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
										X6MA
210210B901	3	A	X							
0902 (FB)	3	A	X							
0903	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	2-10-21 / 1100		John W Jurnda	2-11-21 / 0915

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

50

PROJECT MPE-8

Notebook No. PFTS-#9

Continued from page _____

DAN HALVORSEN & TONY TORRES PRESENT. THIS WELL WILL BE PURGED FOR A MINUTE & SAMPLED FROM A PORT LOCATED NEXT TO THE WELL HEAD.

Carboy 6-5

PARAMETERS

210210 0930
pH ~~PE~~ 7.31
TEMP 22.5°C
COND 1231 µs/cm
TURB 29.8 NTUs *
pH PRE 7.05/10.06 (15.8°C)
pH POST 7.07/10.08

METER IDs

pH/COND 12
TURB #20
" STD = 5.83
" RDG = 5.81
" LOT # 91017
" EXP 2/21

SAMPLE #	ANALYSIS	SAMPLES PRESERV	LOT #	CONT	LAB
210210 0931	8260	HCl	2573	(3) 40 mL VIALS	ALS
0932	" (FB)	"	"	"	"
~~0933~~ 0933	" (Dup)	"	"	"	"
0934	6007		0108501	(1) LT AMBER	SNL

* WELL WAS TURNED ON 5 MINUTES PRIOR TO SAMPLING & TURBIDITY WAS IS ALWAYS HIGH ON START UP.

Continued from page

Read and Understood By

T. [signature] — Signed — 2-10-21 — Date

[signature] — Signed — 2-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-B

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260	6010						Charge Number
										X6mD
210210 0931	3	A	X							
— 0932 (FB)	3		X							
— 0933 (Dup)	3		X	X						
— 0934	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:
T. Z	2-10-21 / 1100		[signature]	2-11-21 / 0915

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

Dan Halvorsen & Tony Jones present. This well will be purged for a minute & sampled from a sample port next to the well head.

Parameters
210210 0915
pH 7.05
Temp 23.6
Cond 1250
Turb 0.90
pH pre 7.06 / 10.05 (15.8)
pH post 7.07 / 10.07

Meter ID's
pH/cond 12
Turb # 20
" Std = 5.603
" Rdg = 5.81
" Lot # = 91017
" Exp = 2/21

Carboy 6-5

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210210 0916	8260	Ice/HCl	2573	(3) 40ml VIALS	ALS
" 0917	" (FB)	"	"	"	"
" 0918	6010	HNO3	010850	(1) TAMBIEN	SRL
" 0919	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

Signed 2-10-21 Date

Signed 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-9

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6PPD						Charge Number
										X6MD
2102100916	3	A	X							
0917 (FB)	3	A	X							
0918	1	A		X						
0919 (Dup)	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. [illegible]	2-10-21 / 1100		[signature]	2-11-21 / 0915

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

52

PROJECT MPE-10

Notebook No. PFTS#9

Continued from page

Dan Halvorsen & Tony Toker present. This well will be purge for 1 min & sampled out of a port located next to the well head. Canary 6-5

Parameters	
210210	0945
pH	7.38
Temp	21.5°c
Cond	1209
Turb	0.47
pHpre	7.05/10.09 (16.3°)
pHpost	7.05/10.07

Meter ID's

pH/cond = 12

Turb = 20

11 Std 5.63

11 Adj = 5.81

11 Lot# = 91017

11 Exp = 2/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210210 0946	8260	Ice/HCl	2573	(3) 40mL vials	KAS
0947	11 (FB)	11	11	11	11
0948	6007	Ice	0108501	(1) 1L Amber	SRL

Continued from page

Read and Understood By

T. [signature] Signed — 2-10-21 Date

[signature] Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2.10.21 Page 1 of 1

Sample Location: MPE 10

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6010						Charge Number
										X6mD
210210 0946	3	A	X							
0947 (FB)	3	A	X							
0948	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:
T. D.	2-10-11/1100		[signature]	2-11-21 /0915

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

Dan Halvorsen & Tony Tarter present. This well will be purged for A-minute & Sampled From a Port located next to the well Head. Carboy G-5

Parameters	
210210 1100	
pH	7.58
Temp	23.8 c
Cond	960
Turb	1.05
phpre	7.08 (10.07) (16.3)
phpost	7.07.10.07

Meters	
pH/cond 12	
Turb # 20	
" std =	5.63
" rdg =	5.61
" Lot # =	91017
" Exp =	2/21

Samples

Sample #	Analysis	Lot #	Preserv	Cont	Lab
210210 1101	8260	2573	HCl/HCl	(3) 40mL VOAs	ALS
" 1102	"	"	"	"	"
" 1103	607	0108501	ICE	(1) 1Lt Amber	SRL

Apparently I was in the Central Time Zone when doing the Times. TT

Continued from page

Read and Understood By

T. [signature] Signed 2-10-21 Date

[signature] Signed 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: ~~AF~~ MPE-11

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
										X6MD
210210 1101	3	A	X							
1102 (FB)	3	A	X							
1103	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.	2/20/21 1100		[signature]	2-11-21 0915

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe#2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210203 0730Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0731Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210203 0855Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0856Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 2102030935Y
PH - 8.36
Temp - 21.3°C
Cond - 1189 us/cm
Turb - 0.47 NTU's
pH pre - 7.15/10.10 (16.7°C)
pH post - 7.13/10.11
DTW - 477.50ft.
Atmos - 12.70 psia

Final
Time - 2102031510Y
PH - 8.26
Temp - 21.8°C
Cond - 1170 us/cm
Turb - 0.48 NTU's
pH pre - 7.04/10.01 (24.3°C)
pH post - 7.06/10.01
DTW - 477.55ft.
Atmos - 12.68 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 13
Turb - 21
u std - 56.8
u rdg - 58.0
u lot - 91017
u Exp - 2/28/24

Buffers Lot Exp
7 4002G91 8/21
10 4001D05 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210203 1020Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1021Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Runs	1)	2)	3)	4)	5)	6)	7)
	17.65	17.59	17.50	17.44	17.36	17.24	17.22
	13.70	13.68	13.67	13.68	13.65	13.62	13.65
	13.70	13.66	13.68	13.62	13.62	13.63	13.61
	17.68	17.53	17.48	17.40	17.32	17.23	17.21

Continued from page _____

Read and Understood By

Craig Del Ferraro — Signed — 2/3/21 — Date

Lori V. Lynch — Signed — 2-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of 1

Sample Location: PL-7-480

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: Low Level/ NDMA	Charge Number
210203073OY (TB)	3	A	✓		XGMD
0731Y (TB)	1	A		✓	4
0855Y (EB)	3	A	✓		4
0856Y (EB)	1	A		✓	4
1020Y	3	A	✓		4
1021Y	1	A		✓	4

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	2/3/21 1525 hrs.		Jon Wunch	2-4-21 / 0915

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

Dan Halvorsen & Craig Del Ferraro present. Weather is partly cloudy & warm. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210202 1350y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1351y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 210202 1430y
PH - 8.04
Temp - 23.7°c
Cond - 1202 us/cm
Turb - 0.38 NTU's
pH pre - 7.04/10.02 (25.8°c)
pH post - 7.03/9.98
DTW - 477.35ft.
Atmos - 12.67 psia

Final
Time - 210202 1515y
PH - 7.94
Temp - 23.4°c
Cond - 1191 us/cm
Turb - 0.34 NTU's
pH pre - 7.05/10.00 (25.6°c)
pH post - 7.03/9.97
DTW - 477.50ft.
Atmos - 12.68 psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 13
Turb - 21
" std - 56.8
" rdg - 56.6
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/24
10	4001D05	6/24

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210202 1455y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1456y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Runs	1)	2)	3)
	~~54.65~~ cd	52.34	52.33
	52.36	47.88	47.90
	47.86	47.89	47.86
	47.81	52.36	52.31
	52.38		

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/2/21 — Date

Lori W Munch — Signed — 2-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: PL-7-560

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA						Charge Number
210202 1350Y (EB)	3	A	✓							XGM0
1351Y (EB)	1	A		✓						"
1455Y	3	A	✓							"
1456Y	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 Terzo	2/2/21 1540 hrs.			2-3-21 /0930

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

Dan Halvorsen & Craig DelFerraro present. Weather is cloudy & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210202074oy	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210202090 5y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0906y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time - 210202094 5y
PH - 8.30
Temp - 22.5°c
Cond - 1208 us/cm
Turb - 5.16 NTU's
pHpre - 7.13/10.10 (16.9°c)
pHpost - 7.10/10.11
DTW - 477.13ft.
Atmos - 12.70 psia

Final
Time - 210202130 5y
PH - 8.43
Temp - 22.3°c
Cond - 1185 us/cm
Turb - 3.38 NTU's
pHpre - 7.04/10.01 (24.3°c)
pHpost - 7.06/10.01
DTW - 477.35ft.
Atmos - 12.66 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 13
Turb - 2 lab
" std - ~~5.68~~ 56
" rdg - ~~5.66~~ 56
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210202103 5y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1036y	607 Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1105y	Low Level NDMA	"	"	"	"
——— 1106y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)	4)
	83.02	82.84	82.87	82.76
	78.93	78.85	78.89	78.83
	78.93	78.85	78.87	78.80
	82.98	82.84	82.79	82.72

Continued from page

Read and Understood By

Craig DelFerro — Signed — 2/2/21 — Date

Ron Unrunh — Signed — 2-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: PL-7-630

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals				Charge Number
210202 0740Y (TB)		1	A			✓					XGMD
0905Y (EB)		3	A	✓							"
0906Y (EB)		1	A			✓					"
1035Y		3	A	✓							"
1036Y		1	A		✓						"
1105Y		1	A			✓					"
1106Y		2	A				✓				"

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	2/2/21 1540 hrs.		Jon W Jumah	2-3-21 /0930

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

PROJECT Pl·12·570 WSI ENV·0053

Notebook No. D32 #119 (B)

Continued from page

Marcus Morales & Robert Burrows present. Weather is warm & breezy. 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 Gal·5

Calibrations 482.52'

DO·Cal in saturated air @ 639 mm/Hg.

pH·Cal using Buffers (4,7,10)

Conductivity·Cal using 1413 us/cm STD solution.

Turbidity Meter·#20· STD·5.63 NTU ROG·5.56 NTU Lot·9101T Exp·2/21

Parameters (time)	Temp(°C)	Cond (mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210208 1500 B	20.38	1.088	3.65	7.80	64	0.51	482.55'
2) —— 1502 B	20.47	1.092	3.71	7.76	63	0.69	:"
3) —— 1504 B	20.50	1.084	3.75	7.73	63	0.44	:"

Sample #	Analysis	Samples Preserve	Container	lot	Lab
210208 1510 B	VOA by 8260D	HCl/Ice	(3) 40 ml vials	2538	ATS
—— 1511 B	: (Dup)	:	:	:	:
—— 1512 B	: (FB)	:	:	:	:
—— 1513 B	607/Bromacil	Ice	(1) 1L Amber	108501	SPI
—— 1514 B	Low Level NWMA	:	:	:	:
—— 1516 B	: (Dup)	:	:	:	:
—— 1517 B	: (FB)	:	:	:	:
—— 1518 B	SVOA by 8270D	:	(2) :	:	ATS
—— 1519 B	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	:
—— 1520 B	Anions/Alk	Ice/ZeroHS	:	:	:
—— 1521 B	TDS by SM2540C	Ice	(1) :	:	:
—— 1522 B	Perchlorate 6850	Ice/1/3 HS	:	:	:
—— 1523 B	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly	200811	:

IDW ~ 2.5 gal

Continued from page

Read and Understood By

MS CJ — Signed — 2/8/21 Date

Lori Muench — Signed — 2-9-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page _____ of _____

Sample Location: P1-12.570

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	LL NDMA					Charge Number
210208151013		3	A	X							XGMD
1511B	(Dup)	3		X							
1512B	(FB)	3		X							
1513B		1			X						
1514B		1				X					
~~1515B~~ 1516B	(Dup)	1				X					
1517B	(FB)	1				X					

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: SVOA 8270	T. Metals	Anions/Alk	TDS	Perchlorate	NO2 NO3		Charge Number
210208151813		2	A	X							XGMD
1519B		2			X						
1520B		2				X					
1521B		1					X				
1522B		1						X			
1523B		1							X		

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/8/21 @ 1615		[signature]	2-9-21 / 0930

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

Marcus Ayalos & 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 tube. Water quality parameters will be monitored using a QED MP20 flow cell & water analyzer. Carboy G-5

Calibrations DTW - 482.50'

DO - Cal in saturated air @ 639 mm/Hg.
PH - Cal using Fisher Buffers (4, 7, 10)
Conductivity - Cal using 1413 us/cm STD. solution.
Turbidity Meter - #20 STD - 5.63 NTU ROG - 5.56 NTU Lot - 9017 Exp - 2/21

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210208 0940B	19.26	1.096	5.00	7.66	132	3.07	482.52'
2) —— 0942B	19.33	1.101	4.87	7.54	135	0.39	
3) —— 0944B	19.31	1.102	5.03	7.46	138	1.35	

Trip Blank Samples

Samples #	Analysis	Preserve	Container	lot	lab
210208 0700B	VOA by 8260	HCl / Ice	(3) 40ml vials	2538	ALS
0701B	Low Level NOMA	Ice	(1) 1L Amber	108501	SRI

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210208 0950B	VOA by 8260	HCl / Ice	(3) 40ml vials	2538	ALS
—— 0951B	: (FB)	:	:	:	:
—— 0952B	607 / Bromacil	Ice	(1) 1L Amber	108501	SRI
—— 0953B	Low Level NOMA	:	:	:	:
—— 0954B	: (FB)	:	:	:	:
—— 0955B	SVOA by 8270D	:	(2) :		ALS
—— 0956B	Total Metals	HNO3 / Ice	(2) 125ml poly	200707	:
—— 0957B	Anions / Alk	Ice / Zero HS	:	:	:
—— 0958B	TDS SM2540C	Ice	(1) :	:	:
—— 0959B	Perchlorate 6850	Ice / 1/3 HS	:	:	:
—— 1000B	NO2, NO3 353.2	H2SO4 / Ice	(1) 250ml poly	200811	:
	BC				
210208 1100B	Low Level NOMA	Ice	(1) 1L Amber	21CH114A	SRI

IDW - 2 gal

Continued from page

Read and Understood By

Signed — 2/8/21 Date — Signed — 2-9-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page 1 of 1

Sample Location: PI-12-800

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	LL NDMA					Charge Number
210208070013 (TB)	3	A	X							XGMD
070113 (TB)	1				X					
0950B	3		X							
0951B (FB)	3		X							
0952B	1			X						
0953B	1				X					
0954B (FB)	1				X					

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	SVOA 8270	T. Metals	Anions/AIK	TDS	Perchlorate	NO2 NO3	LL NDMA	Charge Number
210208095513	2	A	X							XGMD
0956B	2			X						
0957B	2				X					
0958B	1					X				
0959B	1						X			
1000B	1							X		
1100B (BC)	1								X	

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/8/21 @ 1100		[signature]	2-9-21 / 0930

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

Weews Aubos & Tony Torres 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. Parameters will be collected using a QED MP20 flow cell & water analyzer. Carboy Gr. 3

434.50'

Calibrations

DO- Cal in saturated air @ 644 mm/Hg.

PH- Cal using Fisher Buffers (4,7,10)

Conductivity- Cal using 1413 uS/cm STD solution.

Turb Meter- #7 STD - 3.48 NTU RDG - 5.24 NTU lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (°c)	Cond (mS/cm)	DO	PH	ORP	Turb (NTU)	DTW (ft)
1) 2102021450c	20.78	1.095	4.20	8.54	21	1.16	434.62
2) —— 1452c	20.77	1.095	4.46	8.50	21	0.98	"
3) —— 1454c	20.70	1.092	5.05	8.53	21	1.04	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2102021500c	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1501c	" (MS)	"	"	"	"
—— 1502c	" (FB)	"	"	"	"
—— 1503c	607/Bromacil	Ice	(1) 1L Amber	108501	SRI
—— 1504c	" (MS)	"	"	"	"
—— 1505c	Low Level NDMA	"	"	"	"
—— 1506c	" (FB)	"	"	"	"
—— 1507c	Total Metals	HNO3/Ice	(2) 125 ml poly	191129	ALS
—— 1508c	" (Dup)	"	"	"	"
—— 1509c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1510c	TDS by SM2540C	Ice	(1) "	"	"
—— 1511c	Perchlorate 6850	Ice/1/3 HS	"	"	"
—— 1512c	NO2 NO3 353.2	H2SO4/Ice	(1) 250 ml poly	200221	"

IDW - 2 gal

Continued from page

Read and Understood By

Signed — Date 2/2/21

Signed — Date 2-3-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page _____ of _____

Sample Location: St. 2 · 466

Sample Number	# of Containers	Sample Matrix*	8260C	607	LC UOMA					Charge Number
Pertinent Notes (if any)										
210202150OC	3	A	X							XGMD
1501C (MS)	3	|	X							|
1502C (FB)	3	|	X							|
1503C	1	|		X						|
1504C (MS)	1	|		X						|
1505C	1	|			X	~~X~~				|
1506C (FB)	1	|			X	~~X~~				|

Sample Location:

Sample Number	# of Containers	Sample Matrix*	T. Metals	Anions/Alk	TOC	Perchlorate	NO2 NO3			Charge Number
Pertinent Notes (if any)										
210202150?C	2	A	X							XGMD
1508C (Dup)	2	|	X							|
1509C	2	|		X						|
1510C	1	|			X					|
1511C	1	|				X				|
1512C	1	|					X			|

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/2/21 @ 1600		[signature]	2-3-21 0930

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

MARCUS MCALOS & TONY TORRES THE WEATHER IS COOL & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES WILL BE COLLECTED USING A TEFLON TUBE. CA2004 G-3

INITIAL		FINAL	
210204	0955E	210204/1010E	
pH	7.88		7.93
Temp	19.2		19.2
Cond	822 µs/cm		841 µs/cm
Turb	0.88		0.77 NTUs
phPre	7.10/10.09 (16.5)		7.05/10.01 (17.8)
phPost	7.09/10.10		7.09/10.06
DTW	455.45		455.45

METER IDs
pH/cond 101
Turb # 7
" Std = 3.48
" Rdg = 3.73
" Lot # 91017
" Exp = 2-28-21

SAMPLES

SAMPLE #	Analysis	Preserv	Lot #	Cont	Lab
210204/1000C	8260D(L)	ICE/HCl	25732	(3) 40mL VOAs	ALS
1001C	" (PB)	"	"	"	"
1002C	LLNDMA	ICE	108501	(1) 1LT Amber	SRL
1003C	" (PB)	"	"	"	
~~1004C~~					

TRIP BLANKS

SAMPLE #	Analysis	Preserv	Lot #	Cont	Lab
210204 0700C	8260D(L)	ICE/HCl	25732	(3) 40mL VOAs	ALS
0701C	LLNDMA	ICE	108501	(1) 1LT Amber	SRL

Continued from page

Read and Understood By

T-B Signed — 2-4-21 Date — Signed — 2-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-21 Page 1 of 1

Sample Location: ST-4-589

Analytical Requirement: 8260 (C) | CLND34

Charge Number: XXGMD

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 (C)	CLND34						
210204/0700C	3	A	X							
— 0701C	1	|		X						
— 1000C	3	|	X							
— 1001C	3	|	X							
— 1002C	1	|		X						
— 1003C	1	—		X						

Sample Location:

Analytical Requirement

Charge Number

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2-4-21		[signature]	2-8-21 / 0910

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

DAV. HALVORSEN & TONY TORRES PRESENT. THE WEATHER IS CLOUDY & COLD. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. THE SAMPLES WILL BE COLLECTED FROM A TEFLON DISCHARGE TUBE. PARAM'S WILL BE COLLECTED FROM A QED MP-20 FLOWCELL. CARBOY G-5 IN USE. WE GOT A LATE START DUE TO STI & HAS A G ISSUES. WELL TAKES ABOUT 45 MINS TO GET WATER FLOWING.

CALIBRATIONS
DO cal'd @ Bldg 638 in 639 mm/Hg SATURATED AIR
COND SENSOR CAL'd IN 1413 µs/cm STANDARD.
Turb # 20 STD=5.69 Rdg=5.64 LOT#=91017 Exp=2/21
pH SENSOR CAL'd USING THE 3pT CAL METHOD WITH 4, 7, 10 BUFFERS

PARAM'S

SAMPLE#	TEMP	COND	DO	pH	ORP	TURB	DTW
210217 1355 B	18.94	1081	4.93	7.59	68	0.88	422.19
" 1356 B	18.94	1082	4.71	7.59	68	0.94	422.19
" 1357 B	18.91	1082	4.84	7.59	68	0.91	422.19

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210217 1400 B	8260 (11)	ICE/HCl	2538	(3) 40 ml VIALS	~~STL~~ ALS
" 1401 B	" (FB)	"	"	"	"
" 1402 B	6010	ICE	108501	(1) 1LT AMBER	STL
" 1403 B	CLNDMA	ICE	"	"	"
" 1404 B	" (FB)	"	"	"	"
" 1405 B	TOTAL METALS	ICE/HNO_3	200707	(2) 125 ml poly	ALS
" 1406 B	" (FB)	"	"	"	"
" 1407 B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250 ml poly	"

TRIP BLANKS

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210217 0900 B	8260 (11)	ICE/HCl	2538	(3) 40 ml VIALS	ALS
" 0901 B	CLNDMA	ICE	108501	(1) 1LT AMBER	STL

Continued from page

Read and Understood By

T. [signature] — Signed — 2.17.21 — Date

[signature] — Signed — 2-18-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-17-21 Page 1 of 1

Sample Location: ST-5-481

Sample Number	# of Containers	Sample Matrix*	8260 (X)	LINDA	TOTAL METALS	607				Charge Number
										X6mS
210217 0900B	3	A	X							
0901B	1			X						
1400 B	3		X							
1401B	3		X							
1402	1					X				
1403	1			X						
1404	1			X						

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TOTAL METALS	NO2 / NO3						Charge Number
1405B	2	A	X							
1406B	2		X							
1407B	1			X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	2-17-21 / 1600			2-18-21 / 0925

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1315Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1316Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters

Time - 210201 1350Y
pH - 8.27
Temp - 21.3°C
Cond - 1214 us/cm
Turb - 0.89 NTU's
pHpre - 7.10/10.06 (17.9°C)
pHpost - 7.12/10.06
DTW - 472.00 ft.
Atmos - 12.74 psia

Final

Time - 210201 1536Y
PH - 8.21
Temp - 21.4°C
Cond - 1203 us/cm
Turb - 0.74 NTU's
pHpre - 7.09/10.03 (20.1°C)
pHpost - 7.11/10.04
DTW - 472.08 ft.
Atmos - 12.71 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 5.68
" rdg - 5.72
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002991	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1415Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1416Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
——— 1440Y	Low Level NDMA	"	"	"	"
——— 1510Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1511Y	Anions/Alk.	ice	"	N/A	"
——— 1512Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1513Y	Perchlorate by 6850	"	"	"	"
——— 1535Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-08-11	"

Runs	1)	2)	3)	4)	5)
	23.14	23.10	23.07	23.05	23.07
	41.46	41.41	41.42	41.44	41.43
	41.44	41.42	41.40	41.43	41.40
	23.11	23.13	23.09	23.06	23.05

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/1/21 — Date

Tom Mundt — Signed — 2-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/21 Page 1 of 1

Sample Location: ST-5-485

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions/Alk.			Charge Number
Pertinent Notes (if any)										
210201 1315Y (EB)	3	A	✓							XGMD
1316Y (EB)	1	A			✓					"
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1510Y	2	A				✓				"
1511Y	2	A					✓			"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)										
210201 1512Y	1	A	✓							XGMD
1513Y	1	A		✓						"
1535Y	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	2/1/21 1600hrs.		Jon W Munch	2-2-21 /0900

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Then in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210201 0745y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0746y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210201 0900y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0901y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210201 0940y
pH - 8.84
Temp - 20.4°c
Cond - 1018 us/cm
Turb - 3.54 NTU's
pHpre - 7.20 / 10.16 (13.4°c)
pHpost - 7.21 / 10.14
DTW - 471.86 ft.
Atmos - 12.78 psia

Final

Time - 210201 1105y
pH - 8.65
Temp - 20.7°c
Cond - 1007 us/cm
Turb - 1.87 NTU's
pHpre - 7.18 / 10.13 (14.8°c)
pHpost - 7.18 / 10.11
DTW - 472.00 ft.
Atmos - 12.76 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 5.68
" rdg - 5.72
" lot - 9/017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001205	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1005y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1006y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1035y	Low Level NDMA	"	"	"	"
——— 1036y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	AL

Runs	1)	2)	3)	4)
	97.41	97.32	97.28	97.21
	115.06	115.04	115.00	115.01
	115.07	115.06	114.99	114.96
	97.37	97.27	97.23	97.21

Continued from page

Read and Understood

Craig Del Ferro — 2/1/21 (Signed / Date)

Jon W. Munch — 2-2-21 (Signed / Date)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/21 Page 1 of 1

Sample Location: ST-5-655

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210201074 5Y (TB)	3	A	✓							XGMD
0746Y (TB)	1	A			✓					4
0900Y (EB)	3	A	✓							4
0901Y (EB)	1	A			✓					4
1005Y	3	A	✓							4
1006Y	1	A		✓						4
1035Y	1	A			✓					4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals							Charge Number
2102011036Y	2	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	2/1/21 1125 hrs.		Lori Lynch	2-2-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Parameters will be monitored using a standard pH/cond. meter. No QED Flow cell available. ORP & DO will not be monitored. Carboy G5.

Parameters (time)	temp (°c)	cond (us/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210311 1415B	20.2	1139	7.92	1.75	128.53
2) ——— 1418B	20.3	1146	7.90	1.49	128.53
3) ——— 1421B	20.5	1149	7.86	1.24	128.53

*pre cal - 7.02/10.05 (21.6°c) *post cal - 7.03/10.07
Turbidity meter #7 std - 4.60 std - 4.54 lot - 91017 Exp - 3/31/21
PH/Cond meter #61

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210311 1425B	VOA by 8260	ice/HCl	(3) 40ml vials	2583	ALS
——— 1426B	" (Dupl.)	"	"	"	"
——— 1427B	" (FB)	"	"	"	"
——— 1428B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1429B	" (FB)	"	"	"	"
——— 1430B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1431B	" (FB)	"	"	"	"
——— 1432B	Anions/Alk.	ice	"	N/A	"
——— 1433B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1434B	Perchlorate by 6850	"	"	"	"
——— 1435B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 127.50ft. Total gallons purged - 1

Continued from page

Read and Understood By

Craig Del Ferro 3/11/21 Per Munch 3-19-21
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: 100-HG-139

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210311 1425B		3	A	✓							XGMD
1426B (Dupl.)		3	A	✓							"
1427B (FB)		3	A	✓							"
1428B		1	A		✓						"
1429B (FB)		1	A		✓						"
1430B		2	A			✓					"
1431B (FB)		2	A			✓					"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perchlorate	NO_2 / NO_3				Charge Number
210311 1432B		2	A	✓							XGMD
1433B		1	A		✓						"
1434B		1	A			✓					"
1435B		1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTerzo	3/11/21 1500hrs.		[signature]	3-15-21 0920

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

PROJECT 200-B-240 ENV.0053

Notebook No. D32#121(C)

Continued from page

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. WATER QUALITY PARAM'S WILL BE COLLECTED FROM A QED MP-20 FLOW-THRU CARBOY 6-3

CALIBRATIONS

DO SENSOR cal'd in Collamm/Hg SATURATED AIR

COND SENSOR cal'd in 1413 µs/cm STANDARD

pH SENSOR cal'd in 4, 7, 10 buffers using THE 3pt cal METHOD

TURB #20 STD = 5.75 Rdg = 5.69 LOT# = 91017 Exp = 3/31/21

PARAM'S	TEMP	COND	DO	pH	ORP	TURB	DTW
1) 210305 1000c	21.44	1.260	4.22	8.66	-9	1.03	195.36
2) — 1001c	21.22	1.253	4.18	8.65	-9	1.25	195.55
3) — 1002c	21.30	1.257	4.15	8.66	-9	1.09	195.55

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	GOVT	LAB
210315 1003c	8260	ICE/HCl	(3) 40ml VIALS	ALS
— 1004c	" (FB)	"	"	"
— 1005c	6010	ICE	(1) LITER AMBER	JNF
— 1006c	8270D SUB A	"	(2) "	ALS
— 1007c	8081B PESTICIDES	"	(1) "	"
— 1008c	8151A HERBICIDES	"	" "	"
— 1009c	8290 DIOXINS/FURANS	"	" "	SNL
— 1010c	PCB's by 8082A	"	" "	ALS
— 1011c	PHENOLICS	ICE/H_2SO_4	(1) 250ml AMBER	"
— 1012c	TOTAL METALS	ICE/HNO3	(2) 125ml poly	"
— 1013c	SULFIDES	ICE/ZA/NaOH	(1) 500ml poly	"
— 1014c	CYANIDE	ICE/NaOH	(1) 250ml poly	"

Continued from page

Read and Understood By

T. [signature] 3-15-21 Date

[signature] Signed 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-15-21 Page 1 of 1

Sample Location: 200-B-240

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	6007	SVOA	PESTICIDES	HERBICIDES	DIOXINFURANS		Charge Number
										X(GMD)
210315 1003c	3	A	X							
1004c (FB)	3		X							
1005c	1			X						
1006c	2				X					
1007c	1					X				
1008c	1						X			
1009c	1							X		

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	PCB's	PHENOLICS	TOTAL METALS	SULFIDES	CYANIDE			Charge Number
1010c	~~1~~	A	X							
1011c	1			X						
1012c	2				X					
1013c	1					X				
1014c	1						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-[illegible]	3/15/21/1100		[signature]	3-16-21 / 0910

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

Notebook No. D32#121 c

ROJECT 200.D.240 W51.GW.0053 Continued from page N4

I MONTES & TONY TORREZ PRESENT. WEATHER IS COOL AND WINDY. THIS WEEK WILL SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A TEFLON DISCHARGE TUBE. WATER PARAMETERS WILL MONITORED WITH A QED MP-20 FLOWCELL ARROY-G-3

ALIBRATIONS

D - SATURATED AIR @ 644 mm/Hg IDW-2gal

ND - W/ 1413 us/cm STD.

H - W/ 4,7,10 BUFFERS SPT. METHOD

IRB MTR #20 STD - 573 us/cm RDC - 5 PSI/FT W/S LOT# - 9,017 EXP - 3.31.21

RAMETERS	TEMP(C)	COND(us/cm)	DO	PH	ORP	TURB NTU	FLOW
210316 1000 C	20.01	1.345	3.75	8.62	-39	2.25	NA
—— 1005 C	19.53	1.335	3.74	8.58	-39	2.11	"
—— 1010 C	19.69	1.335	3.79	8.58	-39	2.06	"

SAMPLES

AMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210316 1015 C	VOA 8260	ICE · HCl	3-40mL VIALS	2573-2	ALS
—— 1016 C	" (FB)	"	"	"	"
—— 1017 C	NDMA · DMN · 607	ICE	1LT AMBER	108501	SRL
—— 1018 C	TOTAL METALS	ICE · HNO_3	2-125mL Poly	260707	ALS
—— 1019 C	ANIONS/ALK	ICE · Ø HEAD	2- "	NA	"
—— 1020 C	TDS	ICE	1- "	"	"
—— 1021 C	PERCHLORATE	ICE · 2/3 Full	1- "	"	"
—— 1022 C	NO_2 NO_3	ICE · H_2SO_4	1- 250 Poly		"
—— 1330 C	NDMA 607 (BC)	ICE	1LT AMBER 21EH1116C	108501	SRL
—— 1331 C	TOTAL METAL (BC)	ICE · HNO_3	2-125 Poly 21EH1116D	260707	ALS

Continued from page NA

Read and Understood By

Signed — 3-16-21 Date — Signed — 3-17-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3.16.21 Page 1 of 1

Sample Location: 200 D 240

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 00200	2034 607	T METALS	AR625 ACK	TDS	PCB Soil		Charge Number: XGMO
210316 1015c	3	A	x							
—— 1016c (FB)	3		x							
—— 1017c	1			x						
—— 1018c	2				x					
—— 1019c	2					x				
—— 1020c	1						x			
—— 1021c	1							x		

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 2022 WC3	607	T. METALS					Charge Number
210316 1022c	1	A	x							
—— 1330c (BC)	1	A		x						
—— 1331c (BC)	2	A			x					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3.16.21 14:15 pm			3-17-21 / 0900

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

PROJECT 200·KU·150 WJI ENV·0013

Notebook No. D31 # 121(C)
Continued from page

Marcus Avalos & Robert Borrows present. Weather is breezy & 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 QED MJ·20 flow cell & water analyzer. Carboy. Gw

Calibrations

DO - Cal in saturated air @ 616 mm/Hg. DTW - 159.54'
pH - Cal using Oakton Buffers (4, 7, 10)
Conductivity - Cal using 1413 uS/cm STD solutions.
Turbidity Meter - # 21 STD - 66.5 NTU RDG - 55.9 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond (mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
210310 1430	22.34	1.175	1.03	7.68	49	5.79	159.60'
1431	22.35	1.170	1.01	7.74	43	5.08	-
1432	22.36	1.155	1.04	7.79	37	5.02	-

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
210310 1435	VOA by 8260	HCl/Ice	(3) 40 ml vials	25152	Als
1436	" (Dup)	"	"	"	"
1437	" (FB)	"	"	"	"
1438	607/Bromacil	Ice	(1) 1L Amber	108501	SPL
1439	SVOA by 8270D	"	(2) "		Als
1440	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	"
1441	Anions/Alk	Ice/ZeroHS	"	"	"
1442	TDS by SM2540C	Ice	(1) "	"	"
1443	Perchlorate 6850	Ice/½ HS	"	"	"
1444	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly		"

IOW - 1.5 gal

Continued from page

Read and Understood By

MR MR
Signed

3/10/21
Date

Signed

3-11-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: 200-KV-150

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6O7	SVOA 8270	T. Metals	Anions/Alk			Charge Number
210310 1435C	3	A	X							XGMD
1436C (Dup)	3		X							
1437C (FB)	3		X							
1438C	1			X						
1439C	2				X					
1440C	2					X				
1441C	2						X			

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO2/NO3					Charge Number
210310 1442C	1	A	X							XGMD
1443C	1			X						
1444C	1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
MSG	3/10/21 @ 1530		[signature]	3-11-21 / 0900

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

3-22-21

PROJECT 200-A-253 WSIENV-0053 Notebook No. B32#119B 41

Continued from page N/A

Frank Gilleson & Robert Burrows present. Weather is clear and windy. This well will be purged and sampled using A dedicated bladder pump. Carboy "G-3".

Calibration — DW-Ionion

DO sensor - Cal in saturated air @ 640 mmHg
Cond sensor - Cal with 1413 uS/cm STD
Ph sensor - Cal with 2 std ocktan (7 & 10)
Turbo - #200 STD-5.75 LOG-5.78 LOT# 91017 Exp- 3/31/21

Receivers (Time)	Temp(°C)	Cond(uS/cm)	DO	ORP	pH	Turb(NTU)	DTW(ft)
210322 1000B	21.07°C	1.111	2.24	8	7.88	0.34	195.85
—— 1005B	21.10°C	1.110	2.21	10	7.92	0.36	195.85
—— 1010B	21.08°C	1.111	2.23	12	7.94	0.38	195.85

Samples

Sample #	Analysis / Sample ID	Pres	LOT#	LAB	CONT
210322/1320	VOA by 8260	ICE/HCl	2573-1	ALS	(3) 40 mL vial
—— 1321B	" (FB)	ICE	"	"	"
—— 1322B	NOMA/DMB 10 by 607	"	0/24201E	SWRI	(1) Lt amber
—— 1323B	Anions/AIK	"	N/A	ALS	(2) 125 mL poly
—— 1324B	Perchlorate	"	"	"	(1) 125 mL poly
	Landfill				
—— 1325B	VOA by 8260 LF	ICE/HCl		HCl	(3) 40 mL vial
—— 1327B	" (TB)	"		"	(2) 40 mL vial
—— 1328B	EDB/DBCP 504.1	ICE/Na2S2O3		"	(2) 40 mL vial
—— 1329B	" (TB)	"		"	(1) 40 mL vial
—— 1326B	VOA by 8260 LF (Dup)	ICE/HCl		"	(3) 40 mL vial
—— 1330B	SVOA by 8270 F	ICE		"	(4) Lt amber
—— 1331B	Phenols	ICE/H2SO4		"	(1) Lt amber glass
—— 1332B	Cyanide 335.4	ICE/NaOH		"	(1) 500 mL poly
—— 1333B	Metals	ICE/HNO3		"	(1) 250 mL poly
—— 1334B	RADCM	ICE/HNO3		"	(2) 1 Lt poly
—— 1335B	TOC 9060(W)	ICE/HCl		"	(2) 40 mL amber

Continued from page 42

Read and Understood By

Signed — Date 3-22-21 — Signed — Date 3-23-21

Samples cont

Sample #	Analysis	Pres	Cont #	Lab cont
210322101SB	Cl, F, SO4, NO3, NO2, PO4, Si, P, H, TIC, TOC, TN 3500	ICE	N/A	HCl (1) 500 mL poly
1016B	" (Dup)	"	"	"
1017B	Ammonia/Alkalinity/TKN SM4500	ICE/H2SO4	"	"

Continued from page N/A

Read and Understood By

Signed — Date 3-22-21

Signed — Date 3-23-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-21-22 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cl, F, SO4, Total Phosphate, pH, Alkalinity as CaCO3	Analytical Requirement: Ammonia/Nitrate, TKN, Total N						Charge Number
										X PCCC
210322 1015B	1	A	X							"
— 1016B (Dup)	1	A	X							"
— 1017B	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:
[signature]	3-22-22 (1030)			

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOAs by 8260	Volatiles/Semi Vols by 8270	Anions A11K	Perchlorate				Charge Number
										X GMD
210322 1320B	W	A	X							"
—— /321B (FB)	3	A	X							"
—— /322B	1	A		X						"
—— /323B	2	A			X					"
—— /324B	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:
	3-22-21 (1500)			3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA by 8260 LF	EDB/DBCP	SVOA by 8270D	Phenols				Charge Number
210322 1325 B	3	A	X							
— 1326B (Dup)	3	A	X							
— 1327B (TB)	2	A	X							
— 1328B	2	A		X						
— 1329B (TB)	1	A		X						
— 1330B	4	A			X					
— 1331B	1	A				X				

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cyanide	Metals	Radium	TOC				Charge Number
210322 1332B	1	A	X							
— 1333B	1	A		X						
— 1334B	2	A			X					
— 1335B	2	A				X				

Relinquished by	Date / Time:		Accepted by:	Date / Time:
	3-22-21 (1500)			

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

Robert Burrows & Tony Tibler present. The weather is clear & cool. This well will be purged & sampled using a dedicated Teflon Bladder pump. Samples will be collected with a Teflon discharge Tube. Parameters collected with a QED mp.20 flowcell water Analyzer. Carboy G-3

Calibrations

Do sensor Cal'd in 640 mm/Hg saturated air
CondSensor Cal'd in 1413 µs/cm standard.
pH sensor Cal'd using 4, 7, 10 buffers in a 3pt method
Turb #20 std = 5.75 Rdg = 5.64 LOT # 9/017 Exp = 3/31/21

Param's	Temp	CondO	Do	pH	ORP	Turb	DTW
1) 210323 0915B	20.23	1.384	3.61	8.84	25	0.17	~~178.74~~
2) —— 0916B	20.11	1.3.81	3.74	8.73	25	0.20	179.34
3) —— 0917B	20.22	1.388	3.65	8.74	25	0.35	179.34

Samples

Sample #	Analysis	Preserv	Cont	Lab
210323 0920B	8260	ICE/HCl	(3) 40 ml vials	~~HEAL~~
—— 0921B	" (FB)	" ~~ICE/H2SO4/Na2S2O3~~	"	"
—— 0922B	CoD	ICE	(1) ICT amber	SRL
—— 0923B	Anions/ALK	"	(2) 125ml poly	ANS
—— 0924B	Perchlorates	"	(1) 125ml poly	"
—— 0925B	8260 LF	ICE/HCl	(3) 40 ml vials	HEAL
—— 0926B	EDB/DBCP	ICE/$Na_2S_2O_3$	(2) 40 ml vials	"
—— 0927B	SVOA Atrazine PAH's PCB's Pentachlorophenol BEHP	ICE	(4) ICT Amber	"
—— 0928B	" (Dup)	"	(2) ICT Amber	"
—— 0929B	Phenols	ICE/H_2SO_4	(1) ICT Amber	"
—— 0930B	Cyanide	ICE/NaOH	(1) 500ml poly	"
—— 0931B	Metals	ICE/HNO_3	(1) 250ml poly	"
—— 0932B	" (Dup)	"	(1) 250ml poly	"
—— 0933B	Ra 226/228	ICE/HNO_3	(2) ICT Poly	"
—— 0934B	TOC	ICE/HCl	(2) 40 ml vials	"
—— 0935B	Cl, F, SO4 Total phosphate pH, NO_3 as N NO_2 as N	ICE	(1) 500ml poly	"
—— 0936B	Ammonia, NO_2/NO_3, TKN Total N	ICE/H_2SO_4	(1) 500ml poly	"
~~—— 0937B~~	"			

Continued from page

Read and Understood By

F. D. Signed — 3.23.21 Date — Jon M Munch Signed — 3-23-21 Date

Samples Cont.	Analysis	Preserv	Cont	Lab
210323	Ammonia NO_2/NO_3 TKN TON	Ice/H_2SO_4	(1) 500ml poly	Heal

Trip Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0800B	8260	Ice/Hcl	(2) 40ml vials	Heal
— 0801B	EDB/DBCP	Ice/$Na_2S_2O_4$	(1) 40ml vial	Heal

Field Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0802B	8260	Ice/Hcl	(3) 40ml vials	Heal
— 0803B	EDB/DBCP	Ice/Na_2S	(2) 40ml vials	"
— 0804B	SVOA ATRAZINE PAH's BEHP PENTACHLOROPHENOL PCB's	Ice	(4) 1LT AMBERS	"
— 0805B	Phenols	Ice/H_2SO_4	(1) 1LT AMBER	"
— 0806B	Cyanide	Ice/NaOH	(1) 500ml poly	"
— 0807B	Metals	Ice/HNO_3	(1) 250ml poly	"
— 0808B	Ra226/228	"	(2) 1LT poly	"
— 0809B	Toc	Ice/Hcl	(2) 40ml vial	"
— 0810B	Cl F SO_4 Total Phosphate NO_2NO_3 TDS	Ice	(1) 500ml poly	Heal
— 0811B	Ammonia NO_2/NO_3/TKN ASN	Ice/H_2SO_4	(1) 500ml poly	"

Trip Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0900B	8260	Ice/Hcl	(2) 40ml vials	Heal
— 0901B	EDB/DBCP	Ice/$Na_2S_2O_4$	(1) 40ml vials	Heal

Continued from page

Read and Understood By

T. [signature] Signed — 3-23-21 Date — [signature] Signed — 3-23-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 1 of 2

Sample Location: 700-D-186

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260	6010	8270 - 0725 / DRX	PERCHLORATE	8260 SR	EDB / DBCP		Charge Number
210323 0920B		3	A	X							XGMD / XPCC
0921B		3		X							(FB)
0922B		1			X						
0923B		2				X					
0924B		1					X				
0925B		3						X			
0926B		2							X		

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	SVOA, ATTAINABLE PAH, PESTICHLOROPHENOL, PCB's, BEHP	PHENOLS	CYANIDE	METALS	RA226/228			Charge Number
0927B		4	A	X							
0928B		2		X							(Dup)
0929B		1			X						
0930B		1				X					
0931B		1					X				
0932B		1					X				~~(Dup)~~
0933B		2						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. Dg	3/23/21 / 1100		[signature]	3-24-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 2 of 3

Sample Location: 700.D.186

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TOC	Cl F SO4 Total phosphate pH NO3 NO2 TDS	Ammonia NO2/NO3 TKN Total N	8260	EB DBCP			Charge Number
										XGMD/XPCC
210323 0934 B	2	A	X							
0935 B	1	1		X						
0936 B	1	1			X					
0900 B						X				Trip Blanks
0901 B							X			Trip Blanks

Sample Location:

Pertinent Notes (if any)

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Tony Torrez	3/23/21 1100			3-24-21 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 3 of 3

Sample Location: 700-D-186

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	TOC	BTEX/OLF	EDB/DBCP	NO3/NO2	VOA/ABOA	Atrazine Pentachloronitrobenzene PAH's, PCB's, RCRA	Phenols	Charge Number
Pertinent Notes (if any)										XGMD/XPCC
210323	2	A	X							~~Trip Blanks~~ **
0800B	2			X						Trip Blanks
0801B	1				X					Trip Blanks
0802B	3					X				Field Blanks
0803B	2						X			Field Blanks
0804B	4							X		Field Blanks
0805B	1	+							X	Field Blanks

Sample Location:

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	Cyanide	Metals	Ra226/228	TOC	Cl, F, SO4 Total Phos NO2/NO3 TDS	Ammonia NO2/NO3 TKN Total N		Charge Number
Pertinent Notes (if any)										
0806B	1	A	X							Field Blanks
0807B	1			X						Field Blanks
0808B	2				X					Field Blanks
0809B	2					X				Field Blanks
0810B	1						X			Field Blanks
0811B	1						*	X		Field Blanks

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Tony Torrez	3/23/21/1100			3-24-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1325Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1326Y					QC

Initial Parameters
Time - 210322 1355Y
PH - 8.81
Temp - 20.9°C
Cond - 638 us/cm
Turb - 3.16 NTU's
pHpre - 7.10 / 10.06 (17.1°C)
pHpost - 7.13 / 10.07
DTW - 255.27 ft.
Atmos - 12.32 psia

Final
Time - 210323 1035Y
PH - 8.70
Temp - 19.5°C
Cond - 657 us/cm
Turb - 2.26 NTU's
pHpre - 7.10 / 10.14 (16.4°C)
pHpost - 7.13 / 10.11
DTW - 255.44 ft.
Atmos - 12.30 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Extreme dusty conditions during sampling.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1415Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1416Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
1440Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1441Y	VOA/MTBE/1,2,4,Tri.(TB)	ice / HCL	(2) 40ml vials	4118110	HEAL
1442Y	" 8260 (LF)	"	(3) "	0303101F	"
1443Y QC	SVOA/ATR/Pent./PAH	ice	(2) 1L Ambers	101920-1DK	"
210323 1010Y	PCBs/BEHP				

Runs	1)	2)	3)	4)	5)
	137.60	137.50	137.45	137.42	137.38
	144.35	144.33	144.29	144.31	144.28
	144.32	144.29	144.31	144.27	144.26
	137.52	137.49	137.43	137.45	137.35

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/23/21 — Date
Jon Munch — Signed — 3-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-535

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Perchlorate	VOA/MTBE				Charge Number
210322132 5Y (EB)	3	A	✓							XGMD
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1441Y (TB)	2	A				✓				"
1442Y	3	A				✓				"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelToro	3/22/21 1550 hrs.		[signature]	3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page 2 of 2

Sample Location: 700-H-535

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: SVOA/BEHP							Charge Number
2103231010Y	2	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	3/23/21 1115hrs		[signature]	3-24-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210323 1400y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

Initial Parameters
Time - 210323 1440y
PH - 8.85
Temp - 21.3°c
Cond - 858 us/cm
Turb - 0.73 NTU's
pHpre - 7.04 / 10.07 (21.0°c)
pHpost - 7.03 / 10.09
DTW - 255.44 ft.
Atmos - 12.27 psia

Final
Time - 210324 1315y
PH - 8.67
Temp - 20.8°c
Cond - 874 us/cm
Turb - 0.60 NTU's
pHpre - 7.16 / 10.19 (12.4°c)
pHpost - 7.14 / 10.20
DTW - 255.63 ft.
Atmos - 12.31 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" std - 4.60
" rdg - 4.48
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210323 1505y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1506y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1535y	Anions/Alk.	"	(2) 125ml polys	N/A	ALS
——— 1536y	Perchlorate by 6850	"	(1) 125ml poly	"	"

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210324 0815y	VOA+MTBE+1,2,4 Tri. (TB)	ice/HCL	(2) 40ml vials	59072	HEAL
——— 0817y	"	"	(3) "	"	"
——— 0818y	" (Dupl)	"	(3) "	"	"
——— 0816y	EDB ~~(Dupl)~~ DBCP (TB)	ice/SoTh	(1) 40ml vial	000021393	"
——— 0819y	EDB/DBCP 504.1 LF	"	(2) 40ml vials	"	"
——— 0820y	SVOA/ATR/PAH/PCB/BEHP Pentachlorophenol	ice	(4) 1L Ambers	N/A	"

Continued ~~from~~ page 75

Read and Understood By

Craig Del Ferraro — Signed — 3/24/21 — Date

Lori Munch — Signed — 3-25-21 — Date

Sample	Analysis	Preservative	Container	Lot	Lab
210324 0940Y	Phenols/9067W	ice/H_2SO_4	(1) 1L Amber	N/A	HEAL
1005Y	Cyanide/335.4	ice/NaOH	(1) 500ml poly	"	"
1030Y	Metals/200.7/200.8 245.1	ice/HNO_3	(1) 250ml poly	"	"
1031Y	Ra-226/228/903.1 904.0	ice/HNO_3	(2) 1L Poly's	N/A	"
1120Y	TOC/9060W	ice/HCL	(2) 40ml vials	59072	"
210323 1115Y	Cl, F, SO_4, PH, TDS Nitrate/Nitrite/Alk.	ice	(1) 500ml poly	N/A	"
210323 1116Y	Ammonia, NO_2/NO_3 TKN, total N	ice/H_2SO_4	(1) 500ml poly	N/A	"

Runs

1)	2)	3)	4)	5)
56.77	56.74	56.77	56.74	56.74
64.56	64.61	64.56	64.54	64.57
64.60	64.58	64.51	64.48	64.48
56.84	56.81	56.78	56.75	56.72

6)	7)	8)	9)	10)
56.85	56.82	56.86	56.75	56.73
64.67	64.65	64.64	64.62	64.62
64.65	64.66	64.64	64.61	64.60
56.78	56.75	56.74	56.71	56.70

11)	12)
56.71	56.68
64.61	64.61
64.64	64.64
56.68	56.68

Continued from page

Read and Understood By

Craig Del Terme — Signed — 3/24/21 — Date

Peri Munch — Signed — 3-29-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cl, F, SO4 / TDS / Alk.	Analytical Requirement: TKN / NO2 / NO3	Charge Number
210323 1115Y	1	A	✓		XPCC
1116Y	1	A		✓	4

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 Leftwich	3/23/21 1115hrs	[signature]	3-23-21 / 1130

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Anions / Alk.	Perchlorate				Charge Number
210323 1400Y (EB)	3	A	✓							XGMD
1505Y	3	A	✓							"
1506Y	1	A		✓						"
1535Y	2	A			✓					"
1536Y	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	3/23/21 1605 hrs.		Jon Mundt	3-24-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/24/21 Page _____ of _____

Sample Location: 700-H-350

Sample Number	# of Containers	Sample Matrix*	8260+MTBE	EDB	SVOA	Phenolics				Charge Number
Pertinent Notes (if any)										
210324 0815y (TB)	2	A	✓							XPCC
—— 0817y	3	A	✓							u
—— 0818y (Dupl.)	3	A	✓							u
—— 0816y (TB)	1	A		✓						u
—— 0819y	2	A		✓						u
—— 0820y	4	A			✓					u
—— 0940y	1	A				✓				u

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Cyanide	Metals	Ra-226/228	TOC				Charge Number
Pertinent Notes (if any)										
210324 1005y	1	A	✓							XPCC
—— 1030y	1	A		✓						u
—— 1031y	2	A			✓					u
—— 1120y	2	A				✓				u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	3/24/21 1135hrs.		Jori Munch	3-25-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1325Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1326Y					QC

Initial Parameters
Time - 210322 1355Y
PH - 8.81
Temp - 20.9°C
Cond - 638 us/cm
Turb - 3.16 NTU's
pHpre - 7.10 / 10.06 (17.1°C)
pHpost - 7.13 / 10.07
DTW - 255.27 ft.
Atmos - 12.32 psia

Final
Time - 210323 1035Y
PH - 8.70
Temp - 19.5°C
Cond - 657 us/cm
Turb - 2.26 NTU's
pHpre - 7.10 / 10.14 (16.4°C)
pHpost - 7.13 / 10.11
DTW - 255.44 ft.
Atmos - 12.30 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Extreme dusty conditions during sampling.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1415Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1416Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
1440Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1441Y	VOA/MTBE/1,2,4,Tri.(TB)	ice / HCL	(2) 40ml vials	4118110	HEAL
1442Y	" 8260 (LF)	"	(3) "	0303101F	"
1443Y QC	SVOA/ATR/Pent./PAH	ice	(2) 1L Ambers	101920-1DK	"
210323 1010Y	PCBs/BEHP				

Runs	1)	2)	3)	4)	5)
	137.60	137.50	137.45	137.42	137.38
	144.35	144.33	144.29	144.31	144.28
	144.32	144.29	144.31	144.27	144.26
	137.52	137.49	137.43	137.45	137.35

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/23/21 — Date
Jon Munch — Signed — 3-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-535

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Perchlorate	VOA/MTBE				Charge Number
210322132 5Y (EB)	3	A	✓							XGMD
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1441Y (TB)	2	A				✓				"
1442Y	3	A				✓				"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelToro	3/22/21 1550 hrs.		[signature]	3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page 2 of 2

Sample Location: 700-H-535

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: SVOA/BEHP							Charge Number
2103231010Y	2	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	3/23/21 1115hrs		[signature]	3-24-21 / 0900

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

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. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210322 0745Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

30 Min. Equipment Blanks - Carboy G.5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 0845Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0846Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI

Initial Parameters
Time - 210322 0950Y
PH - 8.67
Temp - 19.5°C
Cond - 714 us/cm
Turb - 2.67 NTU's
pHpre - 7.14/10.10 (14.0°C)
pHpost - 7.16/10.11
DTW - 255.10 ft.
Atmos - 12.33 psia

Final
Time - 210322 1110Y
PH - 8.51
Temp - 19.8°C
Cond - 730 us/cm
Turb - 1.80 NTU's
pHpre - 7.11/10.08 (15.0°C
pHpost - 7.13/10.07
DTW - 255.27 Ft.
Atmos - 12.31 psia
IDW - ½ gal.

Meter ID
pH/Cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 5/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1015Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1016Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI
——— 1040Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1041Y	VOA/MTBE/1,2,4Tri.(TB)	ice/HCL	(2) 40ml vials	411810	HEAL
——— 1042Y	" 8260 LF	"	(3) 40ml vials	0303101F	"
——— 1043Y	SVOA/Atr/Pent./PAH/PCB's BEHP	ice	(2) 1L Ambers	101920-1DK	"

Continued ~~from~~ page 72

Read and Understood By

Craig Del Ferro — Signed — 3/22/21 — Date

Jen Munch — Signed — 3-23-21 — Date

PROJECT 700-H-670 WII ENV-0020

Notebook No. D64 #127 (Y)

Continued from page 71

Runs	1)	2)	3)	4)
	196.57	196.54	196.42	196.29
	202.55	202.56	202.56	202.53
	202.53	202.38	202.54	202.39
	196.55	196.49	196.35	196.25

Continued from page

Read and Understood By

Craig DeFreese — Signed — 3/22/21 — Date

Jon Munck — Signed — 3-23-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-670

Sample Number	# of Containers	Sample Matrix*	8260	607	Perch/orate	8260/MTBE				Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210322 0745Y (TB)	3	A	✓							XGMD
0845Y (EB)	3	A	✓							〃
0846Y (EB)	1	A		✓						〃
1015Y	3	A	✓							〃
1016Y	1	A		✓						〃
1040Y	1	A			✓					〃
1041Y (TB)	2	A				✓				XPCC

Sample Location:

Sample Number	# of Containers	Sample Matrix*	8260/MTBE	8270/SVOA						Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210322 1042Y	3	A	✓							XPCC
1043Y	2	A		✓						〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/22/21 1125hrs		[signature]	3-23-21 0915

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

Frank Gallegos & Robert Burrows present. Weather is clear and windy. This well will be purged and sampled with a dedicated bladder pump. Samples will be taken first from the XGMD and the rest for landfill.

Carboy "G-3" 25-Gallons - DDW

Calibrations

DO sensor - Cal in Saturated Air @ 640 mm/Hg

Cond sensor - CAL with 1413 us/cm STD

Ph sensor - using Oakton Buffers (7 & 10)

Turbmeter - #200 STD-5.75 RDG-5.78 Lot#191017 Exp. 3/31/21

Parameters (Time)	Temp (°C)	Cond (ms/cm)	DO	ORP	Ph	Turb (NTU)	DTW
210322 0840B	20.83	1.275	4.94	40	7.77	0.57	121.84
—— 0845B	20.76	1.278	4.92	38	7.74	0.64	"
—— 0850B	20.80	1.274	4.91	39	7.76	0.48	"

Samples

Sample #	Analysis	Pres	Lot #	Lab Cont
210322 0900B	VOAs by 8260 (FB)	ICE/HCl	2573-1	VIALS (3) 40mL vial
—— 0901B	" (FB)	"	"	" "
—— 0907B	NDMA/DMN/Bromide by 607	ICE	01242018	500mL (1) Cl+ amber
—— 0903B	Anions/Alk	"	N/A	ALS (1) - 125mL poly
—— 0904B	Perchlorate	"	"	(1) 125mL poly
—— @		Landfill		
—— 0905B	VOAs + MTBE + 1,4 (8260LF)	ICE/HCl	N/A	VIALS (3) 40mL vial
—— 0906B	" (TB)	"	"	" (2) 40mL vial
—— 0908B	EDB/DBCP (504.1)	ICE/Na2SO3	"	" (2) 40mL vial
—— 0908B	" (Dup)	"	"	" (2) " "
—— 0909B	" (TB)	"	"	" (1) " "
—— 0910B	VOAs (8260LF) + 8310LF + 8082LF	ICE	"	" (4) 1 Liter Amber
—— 0911B	Phenols 9067M	ICE/H2SO4	"	" (1) Liter Amber
—— 0912B	Cyanide 335.4	ICE/NaOH	"	" (1) 500mL poly
—— 0913B	Metals 200.8/6020A/200.7/6010B/245.1/7470A/903.1/904.0	ICE/HNO3	"	" (1) 250mL poly
—— 0914B	Radium (Ra-226/228)	ICE/HNO3	"	" (2) 1 Liter poly
—— 0915B	TOC 9060M	ICE/HCl	"	" (2) 40mL amber w/ HCl

Continued from page 40

Read and Understood By

Signed — Date — Signed — Date

3-22-21 — 3-23-21

3-22-21

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PROJECT 7000-J-2000 WJSIENV-0053 Notebook No. DJ2-#1198
Continued from page 39.

46 hours samples

Samp ext	Analysis	Prep	LOTH	LAB CONT
210322 0916B	Cl, F, SO4 NO3AsN NO2AsN 300.0 CE TDS/Alkalinity 310.1CE 2540C		N/A	HALL (1) 500 mL poly
—— 0917B	Ammonia/NO3/NO2, TKN, TOTALN 350.1CE/353.2CE/351.2CE/H2SO4		..	HALL (1) 500 mL poly
—— 0918B	.. (Dup)		..	.. ..

Continued from page N/A

Read and Understood By

Signed — Date 3-23-21

Signed — Date 3-23-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 7-22-21 Page 1 of 1

Sample Location: 700-J-200

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	JOA by 8260	Fluoride (SM) Br, by 9607	Anions/ A1C	Perchlorate				Charge Number
210327090003	3	A	X							x BMD
— 0901B (FB)	3	A	X							"
— 0902B	1	A		X						"
— 0903B	2	A			X					"
— 0904B	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:
[signature]	3-22-21 (1030)		[signature]	3-23-21 / 0914

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA + MTBE 1,2,4 Trichlor	EDB/DBCP 504.1	5034	Phenols				Charge Number
										XPCC
210322 0905B	3	A	X							
0906B (TB)	2	A	X							
0907B	2	A		X						
0908B (Dup)	2	A		X						
0909B (TB)	1	A		X						
0910B	4	A			X					
0911B	1	A				X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cyanide	metals	Redcm	TOC	Cl, F, SO4, PH, Total Phosphate, NO2 As, NO3 TBS, ASP	Ammonia/NO2/NO3 TKN, TOTAL N		Charge Number
										X PCC
210322 0912B	1	A	X							
0913B	1	A		X						
0914B	2	A			X					
0915B	2	A				X				
0916B	1	A					X			
0917B	1	A						X		
0918B (Dup)	1	A						X		

Relinquished by:	Date / Time:		Accepted by:	Date / Time:

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

Tim Moore present. Samples will be collected from the dedicated sample port located on the EFFluent side of the system. The sample port will be purged for five minutes prior to parameters and sample collection. Code by "RFI" used for Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 210305 0520	pH/Cond #	7	4002 G91	8/22
pH 8.16	Turb #	10	4001 D05	9/22
Temp 24.7 C	" STD 9.67 NTU			
Cond 1095 uS/cm	" Rdg			
Turb 0.18 NTU	" Lot			
DO mg/L 7.00-10.00 (18.5 C)	" Exp			
pH Port				

Sample #	Analysis	Sample Preserv.	Container	Lot	Lab
210305 0525	VOCs by 8260 LC	Ice/HCl	(3) 40 ml Vials	2583	ALS
— 0526	" FB	"	"	"	"
— 0527	NDMA/Benz/Phenols by 607	Ice	(1) 1 LT Amb	810650 F	SW
— 0528	Low Level NDMA	"	"	"	"
— 0529	" FB	"	"	"	"

Continued from page

Read and Understood By

Signed — Date: 5 Mar 2021

Signed — Date: 3-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page 1 of 1

Sample Location: B50-EFF-1

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMN/BROMACIL 607	Low Level NDMA	Total Metals	Anions/Alk	TDS SM2540C	Charge Number
2103050525	3	A		X						XGMD
0526 FB	3			X						
0527	1				X					
0528	1					X				
0529 FB	1					X				

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO_2/NO_3 353.2						Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Tim Moore present. Samples will be Collected From The Dedicated Sample port located on The Influent side of The System. The Sample port will be purged For One Minute prior To Parameters And Sample Collection. Code "PFI" used For Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 2103 0530 0548	pH/Cond	7	4002691	6/22
pH 7.32	Turb	10	4002D05	6/22
Temp 24.0°C	" STD 9.67 NTU			
Cond 1103 us/cm	" Rdg 9.69 NTU			
Turb 0.53 NTU	" Lot A0334			
pH Pre 6.99-10.00 (21.8°C)	" Exp 3/31/2021			
pH Post				

Samples

Sample #	Analysis	Preserv.	Container	Lot	Lab
210305 0534	VOA by 8260	Ice/HCL	(3) 40 ml Vials	22583	ALS
—— 0555	" Dup	"	"	"	"
—— 0556	" FB	"	"	"	"
—— 0557	NDMA/1,4 dioxane/Bromide/1,4 by 607	Ice	(1) 1 Lt Amb	0108501F	SWRI
—— 0558	" Dup	"	"		"

Continued from page

Read and Understood By

Signed — Date: 5 MAR 2021

Signed — Date: 3-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 Mar 2021 Page 1 of 1

Sample Location: B650 - Inf-1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607 LOW LEVEL NDMA	TOTAL METALS	ANIONS / ALK	TDS SM2540C	Charge Number
210305 0554		3	A	X						XGMD
0555	DUP	3		X						
0556	FB	3		X						
0557		1				X				
0558	DUP	1				X				

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: PERCHLORATE 6850	NO_2/NO_3 353.2	Charge Number
						XGMD

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	5 MAR 2021 0910		3-8-21 / 0915

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

WSTF 381C (05/2016)

OJECT D655-EFF-2

Notebook No. PFTS #9

Continued from page _____

Tim Moore present. Samples will be collected from the indicated sample port located on the Effluent side of the system. The sample port will be purged for one minute prior to parameters and sample collection. Cooler "EFT" used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 2103050701	pH/cond	7	4002691	8/22
pH 8.47	Turb	10	4001305	8/22
Cond 23.4 ic	" STD 9.67 NTU			
Turb 0.26 NTU	" Lot 9.65 NTU A033			
DO/Temp 7.00-10.00 (19.5 ic)	" Exp 5/31/2021			
ORP	" Adj 9.65 NTU			
Post				

Sample #	Analysis	Samples Preserv	Container	Lot	Lab
2103050707	VOA by 8260LC	Ice/HCl	(3) 40mL Vials	2383	ALS
——— 0708	" FB	"	"	"	"
——— 0709	NBMA/BMA/Bromacil by 607	Ice	(1) 1LT Amb	0108501F	SGS
——— 0710	Low Level NBMA	"	"	"	"
——— 0711	" FB	"	"	"	"

Continued from page

Read and Understood By

Signed

5 MAR 2021
Date

Signed

3-8-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page _____ of _____

Sample Location: B655-EFF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607	LOW LEVEL NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	Charge Number
2103050707	3	A		X						XGMD
0708 FB	3			X						
0709	1				X					
0710	1					X				
0711 FB	1					X				

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO_2/NO_3 353.2						Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Tim Moore present. Samples will be Collected From The Dedicated Sample port located on The Influent Side of The System. The Sample port will be Eff. Purged for One Minute prior To parameters and Sample Collection. Cooler "PFT" used For Field Blanks.

Parameters		Meter ID		Buffer	Lot	Exp
Time:	2103050801	pH/cond		7	4002@91	8/22
pH	7.03	Turb		10	4001 Dos	6/22
Temp	22.9°C	"STD	9.67 NTU			
Cond	1096 uS/CM	"Rdg	9.68 NTU			
Turb	0.33 NTU	"Lot	A0334			
pH Cal	7.01-10.00 (20.5°C)	"Exp	3/31/2021			
pH Post						

Samples

Sample #	Analysis	Preserve	Containers	Lot	Lab
2103050806	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2583	ALS
—— 0807	" FB	"	"	"	"
—— 0808	NDMA/Bmm/Bromate/1,4 Dioxane by 607	Ice	(1) 1LT Amb	0108501F	SWET

Continued from page

Read and Understood By

Signed — Date: 5 MAR 2021

Signed — Date: 3-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page 1 of 1

Sample Location: B655 - Inf-2

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMNJ/BROMACIL 607 Low Level NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	Charge Number
2103050806		3	A	X						XGMD
0807	FD	3	A	X						
0808		1	A			X				

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO2/NO3 353.2					Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy, this well will be purged using a dedicated bladder pump. Samples will be collected using teflon discharge hose. Parameters will be monitored using a standard PH/Cond. meter (#61). No QED flow cell available – ORP & DO will not be monitored. Carboy G5 in use.

Turbidity meter #7 std-4.60 rdg-4.65 lot-91017 Exp-3/31/21
precal -7.04/10.07(19.9°C) postcal-7.04/10.09

Parameters (time)	temp (°C)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210315 1335B	20.6	~~7.84~~ 1.061	7.84	0.64	509.05
2) ——— 1338B	20.7	1.053	7.81	0.60	509.05
3) ——— 1341B	20.7	1.050	7.79	0.56	509.05

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210315 1345B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1346B	" (Dupl.)	"	"	"	"
——— 1347B	" (FB)	"	"	"	"
——— 1348B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1349B	" (Dupl.)	"	"	"	"
——— 1350B	Anions/Alk.	"	(2) 125ml poly's	N/A	ALS
——— 1351B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1352B	Perchlorate by 6850	"	"	"	"
——— 1353B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 509.05ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro Signed 3/15/21 Date

Lori Wunder Signed 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/21 Page 1 of 1

Sample Location: BLM-5-527

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Anions / Alk.	TDS				Charge Number
210315 1345 B		3	A	✓							XGMD
1346B (Dupl.)		3	A	✓							"
1347B (FB)		3	A	✓							"
1348B		1	A		✓						"
1349B (Dupl.)		1	A		✓						"
1350B		2	A			✓					"
1351B		1	A				✓				"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Perchlorate	NO_2 / NO_3						Charge Number
210315 1352 B		1	A	✓							XGMD
1353B		1	A		✓						"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	3/15/21 1430hrs.		[signature]	3-16-21 / 0910

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

Al monitored by Dan Halvorsen 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. Carboy #1 in use.

Calibrations:
Initial DTW: 495.57 ft.
Final " 495.71 ft.
TDW: 2 gal.
Do Sensor: In saturated air at 694 mm/Hg.
pH sensor = using a 3 pt. (4, 7, 10) Buffer method.
Conductivity: using a 1413 µS/cm STD. Solution.
Turbidity meter: #20 STD = 5.75 RDG = 5.59 LOT #: 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	Do	pH	ORP	Turb	DTW (ft.)
2103010930 C	20.52	1144	3.89	8.46	34	0.68	495.71
0932 C	20.51	1141	3.86	8.41	33	0.63	495.71
0934 C	20.52	1143	3.88	8.40	33	0.62	495.71

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	Lab
2103010940 C	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	25733.2	ALS
0941 C	" " (FB)	"	"	"	"
0942 C	NDMA/NDMA Bromacil by 607	Ice	(1) 1L Amber	108501	SRL
0943 C	NDMA LL	"	"	"	"
0944 C	" " (FB)	"	"	"	"
0945 C	Total metals	Ice/HNO3	(2) 125 ml Poly	20.07.07	ALS
0946 C	Anions/Alk	Ice	(2) "	N/A	"
0947 C	TDS by SM2540C	"	(1) "	N/A	"
0948 C	Perchlorate by 6850	"	(1) "	"	"
0949 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

Read and Understood By

Signed — Date: 3-1-2021
Signed — Date: 3-2-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-1-2021 Page 1 of 1

Sample Location: BLM-7-509

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOC	607	UOM & LL	Metals	Anions / Alk			Charge Number
				Analytical Requirement							XGMD
210301 0940 C		3	A	X							
0941 C	FB	3		X							
0942 C		1			X						
0943 C		1				X					
0944 C	FB	1				X					
0945 C		2					X				
0946 C		2						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	TDS	Perchlorate	NO2/NO3					Charge Number
				Analytical Requirement							
210301 0947 C		1	A	X							
0948 C		1			X						
0949 C		1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-1-2021 1100			3-2-21 0930

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

AT MW-53 3 DAY HALLOWEEN PRESENT. WEATHER IS COLD AND BREEZY. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A TEFLON DISCHARGE TUBE. PARAMETERS WILL BE MONITORED WITH A QED MP-20 FLOW CELL. CARBOY C-1

CALIBRATIONS
DO - SAT AIR @ 643 mm/Hg
PH - 3PT (4,7,10) BUFFERS
COND - W/ 1413 us/cm STD SOLUTION
TURB MTR. 21 STD - 66.5 NTU RDG - 63.8 NTU LOT# - 9101 EXP - 3/21

INITIAL DTW → 378.18 FT
IDW → 2 gal

PARAMETERS	TEMP C	COND	DO	PH	ORP	TURB	DTW (FT)
210302 1310 c	20.10	0.998 ms/cm	5.20	8.69	-58	2.82	378.39 FT
1315 c	19.76	0.993	5.31	8.76	-59	2.76	378.36
1320 c	19.80	0.999	5.01	8.90	-60	2.42	378.39

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210302 1330 c	VOA 8260	ICE HCL	3-40 mL VIALS	2573.2	ALS
1331 c	" " (FB)	" "	"	"	"
1335 c	NDMA-DMN-BLD-607	ICE	1 LT AMBER	108501	SEL
1336 c	" " " " (DUP)	"	"	"	"
1337 c	ANIONS/ALK	ICE-D HEAD	2-125 Poly	NA	ALS
1338 c	TDS	ICE	"	"	"
1339 c	PERCHLORATE	ICE 2/3 FULL	"	"	"
1340 c	NO_2 NO_3	ICE H_2SO_4	250 mL Poly	20.11.27	"

* NITROGEN RAN OUT IN A.M. - RE STOCKED
* FLOW CELL BATTERIES DIED IN P.M.

Continued from page NA

Read and Understood By

Signed — Date 3.2.21
Signed — Date 3-4-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3·2·21 Page 1 of 1

Sample Location: BW.9.419

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA 8260	NDMA.607	AN-22S.ALK	TDS	PERCHLORATE			Charge Number
			Analytical Requirement							XGMD
210302 1330c	3	A	X							
1331c (FB)	3	A	X							
1335c	1	A		X						
1336c (DUP)	1	A		X						
1337c	2	A			X					
1338c	1	A				X				
1339c	1	A					X			

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	2022 03							Charge Number
			Analytical Requirement							
210302 1340c	1	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3·2·21 11AM			3-3-21 0945

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

Dan Halvorsen & Robert Burrows 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 a QED MP-20 flowcell and water analyzer. Cartridge G1 in use.

Calibrations:

Initial DTW = 247.89 ft.
Final " = 248.42 ft.
IDW = 1.5 gal.

DO Sensor = In saturated air @ 644 mm/Hg.
pH Sensor = using a 3pt (4,7,10) Buffer method.
Conductivity = using a 1413 us/cm STD. Solution.
Turbidity Meter # 21 STD = 66.5 RDG = 67.2 LOT = 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb	DTW (Ft.)
210304 0900 C	20.12	1283	5.74	8.10	+32	0.24	248.39
—— 0902 C	20.15	1280	5.76	8.09	+31	0.27	248.39
—— 0904 C	20.11	1281	5.75	8.11	+31	0.26	248.39

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
210304 0910 C	VOA by 8260	Ice/HCl	(3) 40 ml Vial	25773-2	ALS
—— 0911 C	" " (FB)	"	"	~~108501~~	"
—— 0912 C	NDMA/DMP Bromacil by 607	Ice	(1) 1L Amber	108501	SRL
—— 0913 C	NDMA LL	"	"	"	"
—— 0914 C	" " (FB)	"	"	"	"
—— 0915 C	SVOA by 8270 D	"	(2) "		ALS
—— 0916 C	Total Metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	"
—— 0917 C	" " (Dup)	"	(2) "	"	"
—— 0918 C	Anions/Alk	Ice	(2) "	NULA	"
—— 0919 C	TDS by SM2540 C	"	(1) "	"	"
—— 0920 C	GRO by 8015 D	Ice/HCl	(3) 40 ml Vial	25773-2	"
—— 0921 C	DRO by 8015 D	Ice	(1) 1L Amber	NULA	"
—— 0922 C	Perchlorate by 6850	"	(1) 125 ml Poly	"	"
—— 0923 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

Read and Understood By

Signed — 3-4-2021 Date — Signed — 3-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-2021 Page 1 of 1

Sample Location: BLM 13-300

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOC	607	NDMA LL	SUB	metals			Charge Number
2103040910 C		3	A	X							XGMO
0911 C		3		X							
0912 C		1			X						
0913 C		1				X					
0914 C		1				X					
0915 C		2					X				
0916 C		2						X			

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	metals	Anions 9212	TOS	GRO	DRO	Perchlorate	NO2/NO3	Charge Number
2103040917 C		2	A	X							
0918 C		2			X						
0919 C		1				X					
0920 C		1					X				
0921 C		1						X			
0922 C		1							X		
0923 C		1								X	

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-4-2021 1600			3-8-21 0915

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

AC MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WINDY. THIS ~~WEATHER~~ WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. WATER QUALITY PARAM'S TAKEN WITH A QED MP·20 FLOWCELL. CARBOY B-3

~~PARAM'S~~ CALIBRATIONS

DO SENSOR cal'd in Collomm Hg SATURATED AIR

COND SENSOR 14.13 ms/cm STANDARD cal'd SENSOR

pH SENSOR 4, 7, 10 BUFFERS USED IN A 3pT CAL METHOD

TURB METER # ~~B-3~~ 20 STD = 5.75 Rdg = 5.69 LOT# = 91017 EXP = 3/31/21

PARAM'S	TEMP	COND	DO	pH	ORP	TURB	DTW
210315 1500c	20.31	1.328	6.25	8.85	-25	3.03	277.95 ft
— 1501c	20.27	1.330	5.80	8.85	-25	2.95	277.95
— 1502c	20.38	1.337	5.72	8.87	-25	2.87	277.95

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210315 1503c	8260	ICE/HCl	2753-2	(3) 40ml vials	ALS
— 1504c	" (FB)	"	"	"	"
— 1505c	607	ICE	108501	(1) 1 Amber	SMI
— 1506c	TOTAL METALS	ICE/HNO3	200707	(2) 125ml poly	ALS

Continued from page

Read and Understood By

J. [signature] Signed — 3-15-21 Date

[signature] Signed — 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ~~FH~~ 3-15-21 Page 1 of 1

Sample Location: Blm-14-327

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260	6007	TOTAL METALS					Charge Number
										X6MD
210315-1503c	3	A	X							
1504c (FB)	3		X							
1505c	1			X						
1506c	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:
[signature]	3/15/21 / 1600		[signature]	3-16-21 / 0910

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

b Tufts & Craig Del Ferraro present. Weather is clear & cool. This well will be rg-ed using a dedicated bladder pump. Samples will be collected using a teflon scharge hose. Water quality parameters will be monitored using a QED P-20 flow cell and water analyzer. Carboy GS in use.
*Packer pressure prior to sampling @ 15psi — 28psi for sampling.

alibrations
O - calibrated in saturated air @ 640 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
l - calibrated using Fisher buffers (7-10).
rbidity meter #7 std - 4.60 rdg - 4.68 lot - 91017 Exp - 3/31/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
2103100700B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0701B	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

arameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
2103100850B	20.38	0.649	3.71	62	8.04	0.51
——— 0855B	20.47	0.645	3.63	61	8.01	0.53
——— 0859B	20.55	0.638	3.50	62	7.96	0.44

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2103100900B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0901B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 0902B	Low Level NDMA	"	"	"	"
——— 0903B	SVOA by 8270D	"	(2) 1L Ambers	N/A	ALS
——— 0904B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 0905B	Anions/A/K.	ice	"	N/A	"
——— 0906B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0907B	Perchlorate by 6850	"	"	"	"
——— 0908B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"
——— 0909B	VOA by 8260 LL (FB)	ice/HCL	(3) 40ml vials	2573-2	"
——— 0910B	Low Level NDMA (FB)	ice	(1) 1L Amber	0124201E	SRI

No depth available. Packer holding @ 28psi. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro Signed 3/10/21 Date

Jori Munck Signed 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: BLM-42-569

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	SVOA	Total Metals			Charge Number
210310 0700B (TB)	3	A	✓							XGMD
0701B (TB)	1	A			✓					"
0900B	3	A	✓							"
0901B	1	A		✓						"
0902B	1	A			✓					"
0903B	2	A				✓				"
0904B	2	A					✓			"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Anions / Alk.	TDS	Perchlorate	NO2/NO3	8260 LL	LL NDMA		Charge Number
210310 0905B	2	A	✓							XGMD
0906B	1	A		✓						"
0907B	1	A			✓					"
0908B	1	A				✓				"
0909B (FB)	3	A					✓			"
0910B (FB)	1	A						✓		"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	3/10/21 1120hrs.		[signature]	3-11-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. 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 YSI 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 Fisher butters (7-10).
Turbidity meter #7 std-4.60 rdg-4.68 lot-91017 Exp-3/3/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
1) 210310 1020B	20.90	0.655	3.36	34	8.34	0.30
2) ——— 1024B	21.06	0.659	3.30	34	8.32	0.26
3) ——— 1028B	21.13	0.664	3.20	32	8.31	0.32

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210310 1030B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2583	ALS
——— 1031B	" (FB)	"	"	"	"
——— 1032B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRL
——— 1033B	Low Level NDMA	"	"	"	"
——— 1034B	" (FB)	"	"	"	"
——— 1035B	SVOA by 8270D	"	(2) 1L Ambers	N/A	ALS
——— 1036B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1037B	Anions/Alk.	ice	"	N/A	"
——— 1038B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1039B	Perchlorate by 6850	"	"	"	"
——— 1040B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

* No depth available Total gallons purged - 3

* Packer holding steady @ 28psi. Initial packer reading prior to sampling was 15psi. Packer inflated to 28psi for sample collection.

Continued from page

Read and Understood By

Craig Del Ferraro Signed 3/10/21 Date

Signed 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: BLM-42-709

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	SVOA	Total Metals			Charge Number
210310 1030B ~~FF~~		3	A	✓							XGMD
1031B (FB)		3	A	✓							"
1032B		1	A		✓						"
1033B		1	A			✓					"
1034B (FB)		1	A			✓					"
1035B		2	A				✓				"
1036B		2	A					✓			"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3				Charge Number
210310 1037B		2	A	✓							XGMD
1038B		1	A		✓						"
1039B		1	A			✓					"
1040B		1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/10/21 1120hrs.		Jon Munch	3-11-21 /0900

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

Bob Tufts & Craig DelFerraro present. Weather is clear, warm, & windy. 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 GS.

Modified Sampling Event

Calibrations

DO - calibrated in saturated air @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 4.60 rdg - 4.71 lot-91017 Exp - 3/31/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTUs)	DTW (ft)
1) 210309 1310B	21.89	1.389	5.31	122	6.93	6.06	168.75
2) ——— 1312B	22.02	1.382	5.12	121	6.98	5.13	168.85
3) ——— 1314B	22.08	1.370	4.94	120	7.04	4.60	168.96

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210309 1316B	VOA by 8260	ice/HCl	(3) 40ml vials	2573-2	ALS
——— 1317B	" (FB)	"	"	"	"
——— 1318B	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
——— 1319B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1320B	Anions/Alk.	ice	"	N/A	"
——— 1321B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1322B	Perchlorate by 6850	"	"	"	"
——— 1323B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 168.70ft.

Total gallons purged - 1/4 gal.

Continued from page

Read and Understood By

Craig DelFerraro 3/9/21
Signed Date

Signed 3-10-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21

Sample Location: BW-1-268

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk.	TDS	Perchlorate		Charge Number
~~210308~~CO 210309 1316B	3	A	✓							XGMD
1317B (FB)	3	A	✓							"
1318B	1	A		✓						"
1319B	2	A			✓					"
1320B	2	A				✓				"
1321B	1	A					✓			"
1322B	1	A						✓		"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	NO_2/NO_3							Charge Number
210309 1323B	1	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTerzo	3/9/21 1400 hrs.			3-10-21 / 0930

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

4
ROJECT BW-6-355 WI 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 Teflon discharge hose. Water quality parameters will be monitored using ~~QED M~~ a standard PH/cond. meter. No QED flow cell available - no DO or ORP will be monitored. Carboy G5 in use.

Parameters (time)	temp (°c)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210311 1025B	19.1	1022	8.30	0.76	246.12
2) ——— 1028B	19.1	1029	8.26	0.72	246.12
3) ——— 1031B	19.3	1033	8.24	0.63	246.12

* pre cal - 7.06/10.12 (17.6°c) * Post cal - 7.08/10.10

Sample	Analysis	Samples Preservative	Container	Lot	Lab
210311 1035B	VOA by 8260	ice/HCL	(3) 40ml vials	2583	ALS
——— 1036B	" (FB)	"	"	"	"
——— 1037B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRL

Initial DTW - 245.30ft. Total gallons purged - 2

* Turbidity meter #7 std-4.60 rdg-4.54 lot-91017 Exp-3/31/21
* PH/Cond. meter #61
* Smith regulator was replaced with a new Victor regulator prior to sampling. Model # for Victor - SR4F / S/N for Smith - 824. the ~~Smith~~ Victor regulator did not creep or sway from the original set pressure of 260psi at any time during the sampling event.

Continued from page

Read and Understood By

Craig Del Ferraro 3/11/21 Date
Signed Peter Munch 3-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: BW-6-355

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210311 1035B	3	A	✓							XGMD
1036B (FB)	3	A	✓							u
1037B	1	A		✓						u

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 McFerrand	3/11/21 1115hrs		[signature]	3-15-21 / 0920

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

Marcus Angles & Robert Burrows present. Weather is clear & cool. This
all will be purged using a dedicated bladder pump. Samples will be collected
sing of new teflon discharge tube. Water quality parameters will be
nitored using a QED MP-20 flow cell & water analyzer. Calibrated 6.3

Trip Blanks

mple #	Analysis	Preserve	Container	lot	lab
2103170730B	Low Level NOMA	Ice	(1) 1L Amber	01242016	SRI

rameters (time)	Temp (°C)	Cond (mS/cm)	DO	ORP	PH	Turb (NTU)
2103170855B	17.42	0.999	4.10	8	7.92	0.86
— 0857B	17.45	1.000	4.05	7	7.93	0.49
— 0859B	17.37	1.004	4.12	7	7.90	0.58

libration
- Cal in saturated air @ 637 mm/Hg
nductivity - Cal in ~~saturated~~ 1413 µS/cm STD
- Cal using Oakton Buffers (4.7, 10)

Samples

mple #	Analysis	Preserve	Container	lot	lab
2103170905B	VOA by 8260LL	HCl/Ice	(3) 40ml vials	25781	ALS
— 0906B	" (FB)	"	"	"	"
— 0907B	Low Level NOMA	Ice	(1) 1L Amber	01242016	SRI
— 0908B	" (FB)	"	"	"	"
— 0909B	Total Metals	HNO3/Ice	(2) 125 ml poly	200107	ALS

Initial DTW - 125.65' Final DTW - 125.80'

Turbidity Meter - #20 STD - 5.75 NTU RDG - 6.04 NTU Lot - 91017 Exp - 3/31/21

Continued from page

Read and Understood By

3/17/21 3-17-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/17/21 Page _____ of _____

Sample Location: Nasa 3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 77	LL NDMA	T. Mehls					Charge Number
210317073013 (TB)	1	A		X						XGMD
0905B	3		X							
0906B (FB)	3		X							
0907B	1			X						
0908B (FB)	1			X						
0909B	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:
[signature]	3/17/21 @ 0940		[signature]	3-17-21 / 1000

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

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. Parameters will be monitored using a standard PH/Cond meter (#61). No QED Flow cell available - no ORP or DO will be available Carboy G5 in use.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210315 0830B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

Parameters (time)	temp (°c)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210315 0945B	17.2	1.011	8.54	2.09	477.26
2) ——— 0948B	17.3	1.006	8.52	1.99	477.26
3) ——— 0951B	17.3	1.009	8.51	1.75	477.26

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210315 0955B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0956B	" (FB)	"	"	"	"
——— 0957B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRS

Turbidity meter #7 std - 4.60 rdg - 4.65 lot - 91017 Exp - 3/3/21

precal - 7.13/10.11 (16.0°c) postcal - 7.14 / 10.09

Initial DTW - 477.17 ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro Signed — 3/15/21 Date — Signed — 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/21 Page 1 of 1

Sample Location: PL-2-504

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210315 0830B (TB)	3	A	✓							XGMD
0955B	3	A	✓							4
0956B (FB)	3	A	✓							4
0957B	1	A		✓						4

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 M Foard	3/15/21 1100hrs.		Jon M Jumah	3-16-21 / 0910

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

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 tube. Water quality parameters will be monitored using a QED MP.20 flow cell & water analyzer. Calibrations

DTW- 447.82'

DO- Cal in saturated air @ 686 mm/Hg.
pH- Cal using Oakton Buffers (4,7,10)
Conductivity- Cal using 1413 uS/cm STD solution
Turbidity Meter- #21 STD- 666.5 NTU 120A- Lot- 9117 Exp- 3/21

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
210311070 0c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
— 0701c	Low Level NDMA	Ice	(1) 1L Amber	108501	SRI

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	pH	ORP	Turb (NTU)	DTW(ft)
1) 210311 0935c	18.69	1.103	5.70	8.63	24	0.35	447.90'
2) — 0937c	18.61	1.112	5.68	8.64	21	0.36	"
3) — 0939c	18.64	1.110	5.59	8.64	22	0.42	"

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
210311 0945c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
— 0946c	" (~~MS~~ Dup)	"	"	"	"
— 0947c	" (FB)	"	"	"	"
— 0948c	607/Bromacil	Ice	(1) 1L Amber	108501	SRI
— 0949c	Low Level NDMA	"	"	"	"
— 0950c	" (Dup)	"	"	"	"
— 0951c	" (FB)	"	"	"	"
— 0952c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS

Blind Controls

Sample #	Analysis	Preserve	Container	Lot	Lab
210311 0936c	Low Level NDMA	Ice	(1) 1L Amber	108501	SRI

Continued from page

Read and Understood By

Signed — 3/11/21 Date — Signed — 3-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: Pl. 4.464

Sample Number	# of Containers	Sample Matrix*	8260	607	LL DNA					Charge Number
210311070C	3	A	X							XGMD
0701C	1	↓			X					↓
0945C	3		X							
0946C (Dup)	3		X							
0947C (FB)	3		X							
0948C	1			X						
0949C	1	↓			X					↓

Sample Location:

Sample Number	# of Containers	Sample Matrix*	LL DNA	T. Metals						Charge Number
210311095OC (Dup)	1	A	X							XGMD
0951C (FB)	1	↓	X							↓
0952C	2			X						
1030C (TBC)	1	↓	X							↓

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3/11/21 @ 1030		[signature]	3-19-21 / 0920

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

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 #2167. Surface checks performed on probe prior to sampling.

Trip Blanks – Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210304 0725Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0726Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks – Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210304 0915Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0916Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time – 2103040935Y
PH – 8.50
Temp – 21.0°c
Cond – 874 us/cm
Turb – 0.82 NTU's
pH pre – 7.10 / 10.13 (16.0°c)
pH post – 7.08 / 10.14
DTW – 436.02 ft.
Atmos – 12.62 psia

Final
Time – 2103041131Y
PH – 8.38
Temp – 20.8°c
Cond – 890 us/cm
Turb – 0.76 NTU's
pH pre – 7.12 / 10.08 (16.6°c)
pH post – 7.11 / 10.06
DTW – 436.12 ft.
Atmos – 12.61 psia
IDW – ½ gal.

Meter ID
pH/cond – 61
Turb – 7
" std – 4.60
" rdg – 4.67
" lot – 9/017
" Exp – 3/31/21

Buffers	Lot	Exp
7	4002091	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210304 1025Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1026Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI
——— 1100Y	1,4 Dioxane by 8270D	"	(1) 250ml amb.	051820-1BMC	ALS
——— 1130Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Runs	1)	2)	3)	4)
	24.85	24.82	24.79	24.76
	23.37	23.33	23.35	23.39
	23.35	23.35	23.36	23.36
	24.81	24.82	24.78	24.78

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/4/21 — Date

Jeri Munch — Signed — 3-5-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/4/21 Page 1 of 1

Sample Location: PL-8-455

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Dioxane					Charge Number
210304 0725Y (TB)	3	A	✓							XGMD
0726Y (TB)	1	A		✓						4
0915Y (EB)	3	A	✓							4
0916Y (EB)	1	A		✓						4
1025Y	3	A	✓							4
1026Y	1	A		✓						4
1100Y	1	A			✓					4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals							Charge Number
210304 1130Y	2	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fernd	3/4/21 1145 hrs.		Jon W Jmuch	3-8-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Ben. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210303 0830Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0831Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210303 0930Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0931Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters

Time - 210303 1010Y
PH - 8.42
Temp - 22.2°C
Cond - 1062 us/cm
Turb - 1.39 NTU's
pHpre - 7.15/10.13 (14.0°C)
pHpost - 7.16/10.11
DTW - 435.65 ft.
Atmos - 12.67 psia

Samples were a bit aerated.

Final

Time - 210303 1113Y
PH - 8.38
Temp - 22.0°C
Cond - 1071 us/cm
Turb - 1.14 NTU's
pHpre - 7.07/10.11 (16.5°C)
pHpost - 7.05/10.12
DTW - 435.79 ft.
Atmos - 12.69 psia
IDW - 1/2 gal.

Meter ID

PH/Cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.65
" Lot - 9107
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1040Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1041Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL
——— 1110Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	051820-18mc	ALS
——— 1111Y	* " (M.S.) *	"	"	"	"
——— 1112Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Runs 1) 90.66 88.25 2) 90.58 88.28 3) 90.51 88.61
88.30 90.64 88.31 90.54 88.28 90.51

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/3/21 — Date
Lori Wunch — Signed — 3-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/21 Page 1 of 1

Sample Location: PL-8-605

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL UDMH	Dioxane	Total Metals				Charge Number
210303 0830Y (TB)		3	A	✓							XGMD
0831Y (TB)		1	A		✓						4
0930Y (EB)		3	A	✓							4
0931Y (EB)		1	A		✓						4
1040Y		3	A	✓							4
1041Y		1	A		✓						4
1110Y		1	A			✓					4

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Dioxane	Total Metals						Charge Number
210303 1111Y (MS)		1	A	✓							XGMD
1112Y		2	A		✓						4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/3/21 1130hrs.		[signature]	3-4-21 /0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes, Gen. in use. Probe# 2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210308 0815y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 0816y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210308 0910y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0911y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210308 0955y
PH - 8.25
Temp - 23.4°c
Cond - 920us/cm
Turb - 2.16 NTU's
pH pre - 7.08 / 10.05 (18.4°c)
pH post - 7.10 / 10.04
DTW - 436.12ft.
Atmos - 12.73psia

Final

Time - 210308 1314y
PH - 8.31
Temp - 23.0°c
Cond - 937us/cm
Turb - 1.40 NTU's
pH pre - 7.02 / 9.98 (26.0°c)
pH post - 7.04 / 9.97
DTW - 436.30ft.
Atmos - 12.69 psia
IDW - ½ gals.

Meter ID

pH/Cond - 61
Turb - 7
" std - 4.60
" rdg - 4.74
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210308 1020y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1021y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1022y	Low Level NDMA	"	"	"	"
——— 1055y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1310y	Anions / Alk.	ice	"	N/A	"
——— 1311y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1312y	Perchlorate by 6850	"	"	"	"
——— 1313y	NO_2/NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Continued ~~from~~ on page 70

Read and Understood By

Craig Del Ferraro — Signed — 3/8/21 — Date

Lori Munck — Signed — 3-9-21 — Date

PROJECT PL-8-780 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page 69

Runs

1)	2)	3)	4)
166.27	166.25	166.12	165.99
164.26	164.26	164.28	164.25
164.24	164.25	164.27	164.21
166.24	166.21	166.12	165.97

Continued from page

Read and Understood By

Craig Del Favero — Signed — 3/8/21 — Date

Tori Mundt — Signed — 3-9-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page 1 of 1

Sample Location: PL-8-780

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA					Charge Number
210308 0815Y (TB)	3	A	✓							XGMD
0816Y (TB)	1	A			✓					u
0910Y (EB)	3	A	✓							u
0911Y (EB)	1	A			✓					u
1020Y	3	A	✓							u
1021Y	1	A		✓						u
1022Y	1	A			✓					u

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals	Anions/AHK	TDS	Perchlorate	NO_2/NO_3			Charge Number
210308 1055Y	2	A	✓							XGMD
1310Y	2	A		✓						u
1311Y	1	A			✓					u
1312Y	1	A				✓				u
1313Y	1	A					✓			u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/8/21 1345hrs.			3-9-21 / 0900

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

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 # 2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1330Y	VOA by 8260 LL	ice / HCl	(3) 40ml vials	2573-2	ALS
——— 1331Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time - 210303 1420Y
PH - 8.57
Temp - 25.0°C
Cond - 848us/cm
Turb - 2.87 NTU's
pHpre - 7.03/9.97 (27.0°C)
pHpost - 7.02/9.95
DTW - 435.79ft.
Atmos - 12.63psia

Final
Time - 210303 1522Y
PH - 8.40
Temp - 24.6°C
Cond - 842us/cm
Turb - 1.90 NTU's
pHpre - 6.99/9.99 (27.6°C)
pHpost - 7.01/9.95
DTW - 436.02ft.
Atmos - 12.61psia
IDW - 1/2 gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.65
" lot - 910/7
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1450Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1451Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1520Y	Low Level NDMA	"	"	"	"
——— 1521Y	Total Metals	ice / HNO_3	(2) (25ml) poly's	20-07-07	ALS

Runs	1)	2)	3)
	247.08	247.02	246.96
	244.51	244.51	244.52
	244.50	244.48	244.51
	247.06	247.04	246.94

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/3/21 — Date
Jon Munch — Signed — 3-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/21 Page 1 of 1

Sample Location: PL-8-965

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals			Charge Number
Pertinent Notes (if any)			Analytical Requirement						
210303133OY (EB)	3	A	✓						XGMD
1331Y (EB)	1	A			✓				"
1450Y	3	A	✓						"
1451Y	1	A		✓					"
1520Y	1	A			✓				"
1521Y	2	A				✓			"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFrend	3/3/21 1545hrs		[signature]	3-4-21 0900

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

0
ROJECT PC-11-470

Notebook No. D32 #120 (A)
Continued from page _____

Marcus Avalos & Tony Torrez present. The weather is clear & cool. This zone will be purged & sampled with a flute system. This zone will be purged a min of 4 times. Samples collected from a dedicated Teflon discharge tube Purge pressure set @ 22 psi & sample pressure set @ 20 psi. Flow meter set @ 3 psi Bubbler stable @ 8 psi. The first 350 mls will be discharge will be discarded. Carboy 0-5

	Initial	Final
	210302 1015A	210302 1301 A
pH	8.13	7.27
Temp	15.0 °c	19.8 °c
Cond	1137 µs/cm	1158 µs/cm
Turb	0.24 NTUs	0.58 NTUs
µpmp	6.95 / 9.99 (16.6 °c	7.15 / 10.10 (19.8 °)
µpos	7.05 / 9.99	7.12 / 10.11
IDW		

Meter ID's
pH/cond = 12
Turb = 20
" Std = 5.75
" Rdg = 5.60
" Lot # = 91017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210302 1016A	8260 all	ice/HCl	2573-2	(3) 40 ml vials	ALS
—— 1017A	" (FB)	"	"	"	"
—— 1018A	CLNOMA	ice	108501	(1) 1L amber	SRL
—— 1019A	" (FB)	"	"	"	"
—— 1300A	SVOA Sim	ice	N/A	(1) 250ml amber	ALS

Purged 2 times prior to sampling since 1st purge had a bad smell.

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-2-21 — Date

[illegible] — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: P1-11-470

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260LC	LCMSA	SIMSUOA					Charge Number
										X6MD
210302 1046A	3	A	X							
— 1047A (F3)	3		X							
— 1048A	1			X						
— 1049A F3	1			X						
— 1300A	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	3-2-21 1600		[signature]	3-3-21 0945

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

Marcus Avalos & Tony Tovar present. The weather is clear & cool. This zone will be purged & sampled with a Flute system. This zone will be purged a min of 4 times. Samples will be collected from a dedicated Teflon discharge tube. Purge pressure set @ 22 psi & sample pressure @ 20 psi. Flow meter set @ 3 psi & Bubbler stable @ 8 psi. The first 350mls of discharge will be discarded prior to sampling. Carboy G-5

	Initial	Final
	210302 1030A	210302 1313A
pH	8.17	7.15
Temp	16.7 c	18.0
Cond	1133 µs/cm	1136
Turb	0.84 NTUs	0.66
phpre	7.05 / 10.03 (16.7 c)	7.00 / 10.00 (20.5 c)
phpost	7.04 / 10.03	7.03 / 10.00
IDW		

Meter ID's

pH/Cond = 12

Turb # - 20

" Std = 5.75

" Rdg = 5.65

" Lot # = 91017

" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210302 1031A	8260 (11)	ICE/HCl	2573-2	(3) 40ml vials	ALS
—— 1032A	" (FB)	"	"	"	"
—— 1033A	CLVOmm	ICE	108501	(1) 1L amber	SRI
—— 1034A	" (FB)	"	"	"	"
—— 1311A	SVOA-Sim	ICE	N/A	(1) 250ml amber	ALS
—— 1312A	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] — Signed — 3-2-21 — Date

[signature] — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: PL-11-530

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 (	(1,2,3-TCP)	SIM 504					Charge Number
											X6MD
210302 1031A				X							
1032A (FB)				X							
1033A					X						
1034A (FB)					X						
1311A						X					
1312A (Dup)						X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	3-2-21 / 1600		[signature]	3-3-21 / 0945

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

MARCUS AVALOS & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 PSI SAMPLE PRESSURE SET @ 20 PSI. FLOW METER SET @ 3 PSI & BUBBLER STABLE @ 8 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-5

	INITIAL	FINAL
	210302 1045A	210302 1331A
pH	7.88	7.27
Temp	16.4°C	19.8°C
Cond	1141 µs/cm	1168 µs/cm
Turb	0.44	0.38 NTU's
phpre	7.06 / 10.03 (16.6)	7.17 / 10.11 (18.7°)
phpost	7.06 / 10.05	7.12 / 10.10
IDW		

METER ID's
pH/cond = 12
Turb # 20
" STD = 5.75
" Rdg = 5.65
" LOT # = 91017
" Exp = 3/31/21

Samples Preserved

Sample #	Analysis	Preserv	LOT #	CONT	Lab
210302 1046A	8260D(L)	ICE/HCl	2573-2	(3) 40mL VOA's	ALS
1047A	" (FB)	"	"	"	"
1048A	LL NO3 A	ICE	108561	(1) 1L Amber	SRI
1049A	"	"	"	"	"
1330A	5VOA-SIM	"	NA	(1) 250mL Amber	ALS

Continued from page

Read and Understood By

T. [signature] — Signed
3-2-21 — Date
[signature] — Signed
3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: P1-11-710

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	CrZnP4	SIM 5004					Charge Number: X6m0
210302 1046A		3	A	X							
— 1047A (FB)		3		X							
— 1048A		1			X						
— 1049A (FB)		1			X						
— 1330A		1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	3-2-21 1600		[illegible] Munch	3-3-21 0945

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

AL Montes & Tony Tovar present. The weather is clear & cool. This zone will be purged & sampled using a Flute System. This zone will be purged a min of 4 times with 30 mins between purges. Samples collected from a dedicated Teflon discharge hose. Purge pressure set @ 22 psi & Sample pressure set @ 20 psi flow meter set @ 3 psi & Bubbler stable @ 8 psi. The first 350 mls will be discarded prior to sampling. Carboy 6.

Initial	Final
210304~~0845~~ 0846A	210304 0826A
pH 7.39	7.43
Temp 17.3	17.4
Cond 1049	1046 µs/cm
Turb 0.48	0.37 NTU's
phpre 7.03/10.01/14.8	7.00/10.01 (14.8)
pHpost 7.06/10.03	7.01/10.02

Meter ID's
pH/cond = 12
Turb # 20
" Std = 5.75 NTU's
" Rdg = 5.69 NTU's
" Lot # = 9/017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210304 0846A	8260 LL	ICE/HCl	2573-2	(3) 40ml vials	ALS
0847A	" (FB)	"	"	"	"
0848A	LCNOMA	ICE	108501	(1) 1LT Amber	SRL
0849A	" (FB)	"	"	"	"
~~T1 0925 0850A~~ T1 0925A	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 3-4-21 Date

Lori Munch Signed — 3-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-21 Page 1 of 1

Sample Location: PC-11-820

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 87606-1	Analytical Requirement: CLNDM9						Charge Number: X6MS
210304 0846A	3		X							
0847A	3		X							
0848A	1			X						
0849A (F3)	1			X						
0925A (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:
T-D	3/4/21/1100		Jon W Munch	3-8-21 / 0915

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

PROJECT PI-11-~~DEC~~ IT 980

Notebook No. D32#120(A)

Continued from page _____

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM THE DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE IS SET @ 22 PSI & SAMPLE PRESSURE SET @ 20.5 PSI. FLOWMETER SET @ 3 PSI & BUBBLER STABLE @ 8 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING Carboy 6-

INITIAL	FINAL
210304 0900A	210304 0905A
pH 8.21	8.23
TEMP 17.5°C	17.6
COND 977	977 µS/cm
TURB 0.30 NTUs	0.32 NTU's
ph pre 7.00/9.99 (14.4°C)	7.00/9.99 (14.8°C)
ph post 7.01/10.03	7.01/10.00

METER ID's
pH/Cond = 12
Turb # 20
" STD = 5.75 NTUs
" Rdg = 5.69 NTU's
" LOT # = 91017
" EXP = 3/31/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210304 0901A	8260 (1)	ICE/HCl	2573-2	(3) VOA VIALS	ALS
" 0902A	" (FB)	"	"	"	"
" 0903A	LL NDMA	ICE	108501	(1) L AMBER	SRL
" 0904A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-4-21 — Date

[illegible] — Signed — 3-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-21 Page _____ of _____

Sample Location: PI-11-980

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	LCNDMA						Charge Number: X6MD
210304 0901 A	3	A	X							
0902 A (FB)	3		X							
0903 A	1			X						
0904 (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.	3/4/21/1100			3-8-21 / 0915

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

PROJECT ST-4-481 ENV-0053

Dan Heussner + Al montes 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. Carboy #1 in use.

Calibrations:

Initial DTW = 456.80 ft
Final DTW = 456.96
EOW =

DO sensor: In saturated air @ 644 mm/Hg.
pH sensor: using a 3 pt. (4,7,10) Buffer method.
Conductivity: using a 1413 µS/cm STD. Solution.
Turbidity meter # STD: ROS: LOT # Exp:

Parameters (Time)	Temp	Cond.	DO	pH	ORP	Turb	DTW (ft.)
1030 0948 C	20.28	1071	6.31	9.23	-15	0.416	456.96
0950 C	20.25	1074	6.35	9.18	-16	0.48	456.96
0952 C	20.27	1070	6.30	9.21	-16	0.47	456.96

SAMPLES

SAMPLE #	Analysis	Preserve	Container	LOT	LAB
1030 0955 C	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	2573-2	ALS
0956 C	" " (FB)	"	"	"	"
0957 C	NDMA LL	Ice	(1) 1L Amber	108501	SRL
0958 C	" " (FB)	"	"	"	"
0959 C	Total metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	ALS
1000 C	" " (DUP)	"	"	N/A	"
1001 C	Anions/NH3	Ice	"	"	"
1002 C	TDS by SM2540C	"	(1) "	"	"
1003 C	Perchlorate by 6850	"	(1) "	"	"
1004 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

Read and Understood By

Signed — 3-3-2021 Date

Signed — 3-4-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-3-2021 Page 1 of 1

Sample Location: ST-4-481

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOA	VOA <4	Total Metals	Anions/DIC				Charge Number
											XGMD
2103030955C		3	A	Y							
0956C	FB	3		Y							
0957C		1			Y						
0958C	FB	1			Y						
0959C		2				Y					
1000C	DUP	2				Y					
1001C		2					Y				

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	TDS	Perchlorate	NO3/NO2					Charge Number
2103031002C		1	A	Y							
1003C		1			Y						
1004C		1				Y					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-3-2021 1100			3-4-21 /0900

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

PROJECT ST-4-690 ENV.0053

Notebook No. D32#118

Continued from page NA

A/ MONTES & DAN HACKORSEN PRESENT. WEATHER IS SUNNY AND BREEZY. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A NEW TEFLON DISCHARGE TUBE. PARAMETERS WILL BE MONITORED WITH A QED MP20 FLOWCELL. CARBOY G-1

CALIBRATIONS

DTW - 455.66 FT

DO - SATURATED AIR @ 643 mm/Hg — IDW - 2 gal

PH - 3PT BUFFER (4, 7, 10)

COND - W/ 1413 us/cm Sol. STD

TURBMTR - 20 STD - 66.5 NTU RDG - 63.8 NTU LOT# - 91017 EXP - 3-21

PARAMETERS	TEMP °C	COND us/cm	DO	PH	ORP	TURB NTU	DTW FT
210302 1450 c	20.05	0.853	4.91	9.10	-36	1.74	455.70
1455 c	20.01	0.847	4.60	9.11	-36	1.59	455.70
1500 C	19.92	0.851	4.69	9.19	-36	1.62	455.70

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
210302 1501 c	LL VOA 8260	ICE, HCL	3-40 mL VIALS	2573.2	ALS
1502 c	" (FB)	"	"	"	"
1503 c	NDMA-DMD-BROOT	ICE	1LT AMBER	108501	SRL
1504 c	LL NDMA	"	"	"	"
1505 c	" (FB)	"	"	"	"
1506 c	TOTAL METAL	ICE-HNO3	2-125 mL Poly		ALS
1507 c	ANIONS/ALK	ICE-0 HEAD	125 mL Poly	NA	"
1508 c	TDS	ICE	"	"	"
1509 c	PERCHLORATE	ICE-2/3 FULL	"	"	"
1510 c	NO_2NO_3	ICE-H_2SO_4	250 mL Poly	20-11-27	"

Continued from page NA

Signed

3-2-21

Date

Read and Understood By

Signed

3-4-21

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3·2·21 Page 1 of 1

Sample Location: ST.4.650

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA-8021B	2MA 607	LC 2MA	T METALS	ANIONS			Charge Number
										XGMD
210302 1501C	3	A	X							
1502C FB	3	A	X							
1503C	1	A		X						
1504C	1	A			X					
1505C FB	1	A			X					
1506C	2	A				X				
1507C	2	A					X			

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	TDS	PERCHLORATE	300.0					Charge Number
210302 1508C	1	A	X							
1509C	1	A		X						
1510C	1	A			X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3.2.21 4pm			3-3-21 / 0945

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

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THE ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE IS SET @ 22 ~~8~~ psi SAMPLE PRESSURE SET @ 20 ~~7~~ psi. FLOW METER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 350 mls will be discarded prior to sampling. carboy 6-~~1~~

	INITIAL	FINAL
	210309 0955A	210309 1051A
pH	~~7.24~~ 8.04	8.03
Temp	~~20.0~~ °C 18.0°c	19.7
Cond	~~1355~~ 1347	1343
Turb	~~1445~~ 0960NTUs	0.77
ph pre	6.99/10.01(22.2°)	7.01/10.02(21.0°)
ph post	7.00/10.00	7.00/1000

METER ID's

pH / Cond = 13

Turb # 21

" std = 66.5

" rdg = 58.3

" Lot # = 91017

" Exp = 3/31/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210309 0956A	8260DLL	ICE/HCl	257732	(3) 40mL VIALS	ALS
— 0957A	" (FB)	"	"	"	"
— 0958A	LCMSMSA	ICE	108501	(1) LITER AMBER	SVL
— 0959A	" (FB)	"	"	"	"
— 1030A	SVOA-SIM	"	N/A	(1) 250mL AMBER	ALS

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-9-21 — Date

[illegible] — Signed — 3-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page 1 of 1

Sample Location: ST-6.528

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	1,1-DMA	SW0A5,M					Charge Number
										XGMD
210309 0956A	3	A	X							
0957A (FB)	3		X							
0958A	1			X						
0959A (FB)	1			X						
1030A					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	3-9-21 / 1100		Jon Munch	3-10-21 / 0930

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

PROJECT ST. 6 ~~824~~ TI 568

Notebook No. D57#120(A)

Continued from page _____

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLATE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE WILL BE SET @ 22psi & SAMPLE PRESSURE SET @ 20psi. FLOWMETER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLING. Carboy 6-1

	Initial	Final
	210309 0925A	210309 1008A
pH	8.03	8.03
Temp	19.4°C	19.8
cond	1251 µs/cm	1255 µs/cm
Turb	0.87 NTU's	0.78
pH/pre	7.00/10.01(20.1)	7.00/10.00(21.2)
pH post	7.01/10.03	7.01/10.03

METER ID's
pH/cond = 13
Turb # 21
" std = 66.5
" Rdg = 58.3
" Lot # = 91017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210309 0926A	8260 II	Ice/HCl	2573-2	(3) 40ml Vials	ALS
0927A	" (FB)	"	"	"	"
0928A	" NDMA	Ice	108501	(1) 1LT Amber	SRI
0929A	" (FB)	"	"	"	"
1005A	" (Dup)	"	"	"	"
1006A	SW04-Sim	"	N/A	(1) 250ml Amber	ALS
1007A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. P. — Signed — 3-9-21 Date

Lori Munck — Signed — 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page 1 of 1

Sample Location: ST-6-568

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	R601C	LINDA	SU0454					Charge Number
										X6MS
210309 0926A	3	A	X							
0927A FB	3		X							
0928A	1			X						
0929A FB	1			X						
1005A Dup	1			X						
1006A	1				X					
1007A 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:
T. [illegible]	3-9-21 / 1100		[signature] Lunch	3-10-21 / 0930

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

PROJECT ST-6-678

Continued from page

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED WITH A FLUTE SYSTEM. THIS ZONE WILL BE PURGED 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED WITH A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 psi & SAMPLE PRESSURE SET @ 20 psi. FLOW METER SET @ 3 psi & BUBBLER STABLE @ 7 psi. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-1

INITIAL		FINAL	METER ID's
210309 0944A		210309 1046A	pH/cond 13
pH	8.03	8.08	Turb # 21
Temp	19.4	21.9°c	" STD = CoCo.5
Cond	1251 µs/cm	1255 µs/cm	" RDG = 58.3
Turb	0.77	0.73	" LOT # = 9101
pH PRE	7.00/10.10	7.01/10.03 (21.8	" EXP = 3/31/21
pH POST	7.00/10.03	7.02/10.01	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210309 0945A	8260(L)	HCl/HCl	2573-2	(3) 40ml VIALS	ALS
— 0946A	" (F3)	"	"	"	"
— 0947A	LL/NAA	HCl	108501	(1) LT AMBER	SRL
— 0948A	" (F3)	"	"	"	"
— 1045A	5030A SIM	"	N/A	(1) 250ml AMBER	ALS

Continued from page

Read and Understood By

T. D. — Signed — 3-9-21 — Date

Lori Mundt — Signed — 3-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page _____ of _____

Sample Location: ST. 6.678

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260	CLXSMA	SO4 S					Charge Number
											XGMD
210309 0945A		3	A	X							
0946A FB		3		X							
0947A		1			X						
0948A FB		1			X						
1045A		1				X					

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. Dg	3/9/21 / 1100		[signature]	3-10-21 / 0930

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

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 PSI SAMPLE PRESSURE SET @ 20 PSI. FLOW METER SET @ 3 PSI & BUBBLER STABLE @ 7 PSI. THE FIRST 350 mls will BE DISCARDED PRIOR TO SAMPLING. Carboy G-

INITIAL		FINAL	
	210311 0940A		210311 1015A
pH	8.56		8.58
TEMP	18.5		18.7
COND	1127		1125
TURB	0.38 NTU's		0.43 NTU's
pH pre	7.00/10.00 (17.6°C)		7.02/10.01
pH post	7.00/10.01		7.00/10.01

METER ID's
pH/cond = 12
Turb # 20
" STD = 5.75
" RDG = 5.89
" LOT # = 91017
" Exp = 7/31/21

Trip Blanks

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 0700A	8260 (L	ICE/HCl	2573-2	(3) 40ml VIALS	ALS
— 0701A	(LNOMA	ICE	108501	(1) 1LT AMBER	SRT

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 0941A	8260 (L	ICE/HCl	2573-2	(3) 40ml VIALS	ALS
— 0942A	" (FB)	"	"	"	"
— 0943A	(LNOMA	ICE	108501	(1) 1LT AMBER	SRT
— 0944A	" (FB	"	"	"	"

Continued from page

Read and Understood By

Signed — Date 3-11-21

Signed — Date 3-15-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-11-21 Page 1 of 1

Sample Location: ST-6-824

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260C	1,1-DM						Charge Number
										X6MD
210311070004 (TB)	3	A	X							
0701A (TB)	1		X	X						
0941A	3		X							
0942A (FB)	3		X							
0943A	1			X						
0944A (FB)	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:
	3-11-21 / 1100			3-15-21 / 0920

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

WSTF 381C (05/2016)

AL MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 psi & SAMPLE PRESSURE SET @ 20 psi. FLOWMETER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 3 TO 4 L/S WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-

	INITIAL	FINAL	METER ID's
	210311 1000 A	210311 1030A	pH/COND = 12
pH	8.64	8.68	TURB #20
TEMP	17.7°C	18.1	" STD = 5.75
COND	1063	1048	" RDG = 5.89
TURB	3.08	2.73	" CAL # = 91017
phpre	7.05/10.02 (19.2°C)	7.05/10.05 (19.7°)	" EXP = 3/31/21
phpost	7.05/10.01	7.03/10.01	

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 1001A	8260D(	ICE/HCl	2[illegible]32	(3) 40 mL VIALS	ALS
1002A	"	"	"	"	"
1003A	1,4 DIOXANE	ICE	108501	(1) 1LT AMBER	SRI
1004A	"	"	"	"	"

Continued from page

Read and Understood By

T. [signature] — Signed — 3-1-21 — Date

[signature] — Signed — 3-16-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-11-21 Page 1 of 1

Sample Location: ST-6-970

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 97601	Analytical Requirement: NDMA						Charge Number: XGMD
210311 1001A		3	A	X							
1002A (FB)		3		X							
1003A		1			X						
1004A (FB)		1	—		X						

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-Zz	3/11/21 1100		Jon M Lunch	3-15-21 0920

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

Dan Halvorsen + DI monitors present. Weather is partly cloudy 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. Corday G-1 in use.

Initial DTW = 420.92 ft.
Final " = 421.11
IDW = 2 gal.

Calibrations:
DO Sensor: In saturated air @ 644 mm/Hg.
pH Sensor: using a 3pt. (4,7,10) Buffer method.
Conductivity: using a 1413 us/cm STD. Solution.
Turbidity meter: # 20 STD = 5.75 ROG = 5.59 Lot # 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb.	DTW (ft)
210301 1400 c	20.91	1091	4.75	9.16	-23	0.21	421.11
——— 1402 c	20.90	1089	4.71	9.10	-22	0.23	421.11
——— 1404 c	20.90	1087	4.72	9.13	-23	0.22	421.11

SAMPLES

Sample #	Analysis	Preservative	Container	Lot	Lab
210301 1410 c	VOAs by 8260 LL	Ice/HCl	(3) 40 ml VOA	2573-2	NLS
——— 1411 c	" " (MS)	"	"	"	"
——— 1412 c	" " (FB)	"	"	"	"
——— 1413 c	Bromacil by 6007	Ice	(1) 1L Amber	108501	SRL
——— 1414 c	" " (MS)	"	"	"	"
——— 1415 c	NDMA LL	"	"	"	"
——— 1416 c	" " (MS)	"	"	"	"
——— 1417 c	" " (MSD)	"	"	"	"
——— 1418 c	" " (FB)	"	"	"	"
——— 1419 c	Total Metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	NLS

Continued from page

Read and Understood By

Signed — 3-1-2021 Date — Signed — 3-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-1-2021 Page 1 of 1

Sample Location: WW-1-452

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	607	200.8 LL					Charge Number
										XGMD
2103011410	3	A	X							
1411 (MS)	3	|	X							
1412 (FB)	3	|	X							
1413	1	|		X						
1414 (MS)	1	|		X						
1415	1	|			X					
1416 (MS)	1	|			X					

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 200.8 LL	Metals						Charge Number
2103011417C (MSD)	1	A	X							
1418C (FB)	1	|	X							
1419C	2	|		X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3-1-2021 1600		[signature]	3-2-21 / 0930

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

PROJECT WW. 2.489 WJI ENV. 0053

Notebook No. 032 # 121 (C)

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 tube. Water quality parameters will be monitored using a QED MP.20 flow cell & water analyzer. Packer inflated to 25 psi. Carboy Gr. 1 in use.

Calibrations

DO - Cal in saturated air @ 616 mm/Hg

PH - Cal using Oakton Buffers (4,7,10)

Conductivity - Cal using 1413 uS/cm STD solutions.

Turbidity Meter - #21 STD - 66.5 NTU RDG - 59.7 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond ( )	DO (mg/L)	PH	ORP	Turb (NTU)	DTW (ft)
1) 210308 0950c	20.09	1.001	3.04	7.28	118	2.27	N/A
2) —— 0952c	20.19	1.113	3.51	7.11	120	3.21	"
3) —— 0954c	20.21	1.031	3.68	7.23	122	3.34	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210308 1000c	VOA by 8260LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1001c	" (FB)	"	"	"	"
—— 1002c	607/Bromacil	Ice	(1) 1L Amber	108501	SPL
—— 1003c	Low Level NDMA	"	"	"	"
—— 1004c	" (FB)	"	"	"	"
—— 1005c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS
—— 1006c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1007c	TDS by SM2540C	Ice	(1) "	"	"
—— 1008c	Perchlorate by 6850	Ice/1/3 HS	"	"	"
—— 1009c	NO2, NO3 by 353.2	H2SO4/Ice	(1) 250 ml poly		"

IDW - 2.5 gal

Continued from page

Read and Understood By

Signed — Date 3/8/21

Signed — Date 3-9-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page 1 of 1

Sample Location: WW-2-489

Analytical Requirement: 8260LL | 607 | LL NDMA | T. Metals | Anions/AK

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260LL	607	LL NDMA	T. Metals	Anions/AK			Charge Number
2103081000C	3	A	X							XGMD
1001C (FB)	3		X							
1002C	1			X						
1003C	1				X					
1004C (FB)	1				X					
1005C	2					X				
1006C	2						X			

Sample Location:

Analytical Requirement: TDS | Perchlorate | NO2, NO3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO2, NO3					Charge Number
2103081007C	1	A	X							XGMD
1008C	1			X						
1009C	1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3/8/21 @ 1110		[signature]	3-9-21 / 0900

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

Marcus Anables & Robert Burrows present. Weather is breezy & 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 QED MP·20 flow cell & water analyzer. Packer inflated to 25 psi. Carboy G·1 in use.

Calibrations

DO - Cal in saturated air @ 616 mm/Hg.

pH · Cal using Oakton Buffers (4,7,10)

Conductivity - Cal using 1413 us/cm STD solutions

Turbidity Meter - #21 STD - 66.5 NTU RDG - 59.7 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond (ms/cm)	DO (mg/L)	pH	ORP	Turb (NTU)	DTW (ft)
1) 210308 1510c	21.10	0.963	3.07	8.03	100	2.76	NA
2) —— 1512c	21.05	0.969	2.89	7.97	102	1.97	"
3) —— 1514c	21.40	0.974	2.95	8.04	99	1.78	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210308 1520c	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1521c	" (FB)	"	"	"	"
—— 1522c	607/Biomacil	Ice	(1) 1L Amber	108501	SRI
—— 1523c	Low Level NDMA	"	"	"	"
—— 1524c	" (FB)	"	"	"	"
—— 1525c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS
—— 1526c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1527c	TDS by SM2540c	Ice	(1) "	"	"
—— 1528c	Perchlorate 6850	Ice/1/3 HS	"	"	"
—— 1529c	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly		"

IDW - 3 gal

Continued from page

Read and Understood By

Signed — Date 3/8/21

Signed — Date 3-9-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page _____ of _____

Sample Location: WW. 2-664

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	607	EL NONA	T. Metals	Anions/Alk			Charge Number
210308\520C	3	A	X							
1521C (FB)	3	|	X							
1522C	1	|		X						
1523C	1	|			X					
1524C (FB)	1	|			X					
1525C	2	|				X				
1526C	2	|					X			

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO2 NO3					Charge Number
210308\527C	1	A	X							
1528C	1	|		X						
1529C	1	|			X					
		|								
		|								
		|								
		|								

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
MJ CW	3/8/21 1600		John W Jumah	3-9-21 / 0900

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

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 # 4955. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210302 0810y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0811y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210302 0905y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0906y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210302 0950y
PH - 7.85
Temp - 20.6°c
Cond - 1118 us/cm
Turb - 0.95 NTU's
pH pre - 7.13 / 10.18 (13.3°c)
pH post - 7.13 / 10.19
DTW - 407.94 ft.
Atmos - 12.40 psia

Final

Time - 210302 1111y
PH - 7.95
Temp - 21.0°c
Cond - 1127 us/cm
Turb - 0.83 NTU's
pH pre - 7.06 / 10.10 (16.7°c)
pH post - 7.04 / 10.11
DTW - 408.13 ft.
Atmos - 12.38 psia
IDW - 1 gal.

Meter ID

pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.70
" lot - 9/017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210302 1015y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1016y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1017y	Low Level NDMA	"	"	"	"
——— 1045y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1046y	Anions/Alk.	ice	"	N/A	"
——— 1047y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1048y	Perchlorate by 6850	"	"	"	"
——— 1110y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Continued ~~from~~ on page 64

Read and Understood By

Craig Del Ferro — Signed — 3/2/21 — Date

Ron Munch — Signed — 3-3-21 — Date

PROJECT WW-3-469 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page 63

Runs	1) 41.81	2) 41.52	3) 41.35	4) 41.32
	39.59	39.55	39.57	39.53
	39.56	39.54	39.55	39.54
	41.44	41.26	40.91	40.98

Continued from page

Craig Del Zenno — Signed — 3/2/21 Date

Read and Understood By

Signed — 3-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/21 Page 1 of 1

Sample Location: WW-3-469

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
210302 0810Y (TB)	3	A	✓							XGMD
——— 0811Y (TB)	1	A			✓					"
——— 0905Y (EB)	3	A	✓							"
——— 0906Y (EB)	1	A			✓					"
——— 1015Y	3	A	✓							"
——— 1016Y	1	A		✓						"
——— 1017Y	1	A			✓					"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210302 1045Y	2	A	✓							XGMD
——— 1046Y	2	A		✓						"
——— 1047Y	1	A			✓					"
——— 1048Y	1	A				✓				"
——— 1110Y	1	A					✓			"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig McFarland	3/2/21 1130hrs.		[signature]	3-3-21 /0945

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 2 steam cleaned & triple rinsed, stainless steel Sample tubes. Gen. in use. Probe #4955. Surface checks performed on probe prior to sampling. Entire Carboy #3 was triple rinsed due to potential contamination.

Trip Blanks – Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210301 0825Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0826Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks – Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210301 0920Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0921Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI
——— 0922Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial Parameters

Time – 210301 1000Y
PH – 8.09
Temp – 20.8°C
Cond – 1100 us/cm
Turb – 0.80 NTU's
pH pre – 7.16 / 10.13 (14.7°C)
pH post – 7.17 / 10.11
DTW – 407.64 ft.
Atmos – 12.40 psia

Final

Time – 210301 1056Y
PH – 8.14
Temp – 21.1°C
Cond – 1093 us/cm
Turb – 0.74 NTU's
pH pre – 7.08 / 10.10 (16.2°C)
pH post – 7.10 / 10.07
DTW – 407.79 ft.
Atmos – 12.41 psia
IDW – 1 gal.

Meter ID

pH/cond – 61
Turb – 7
" Std – 4.60
" rdg – 4.68
" lot – 9/017
" Exp – 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1025Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1026Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1027Y	Low Level NDMA	"	"	"	"
——— 1055Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)		2)		3)	
	85.13	82.92	84.87	82.85	84.71	82.84
	82.90	85.02	82.85	84.62	82.86	84.50

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/1/21 — Date

Lori W Mumch — Signed — 3-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/21 Page 1 of 1

Sample Location: WW-3-569

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210301082SY (TB)	3	A	✓							XGMD
0826Y (TB)	1	A			✓					4
0920Y (EB)	3	A	✓							4
0921Y (EB)	1	A			✓					4
0922Y (EB)	2	A				✓				4
1025Y	3	A	✓							4
1026Y	1	A		✓						4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL NDMA	Total Metals						Charge Number
210301102TY	1	A	✓							XGMD
1055Y	2	A		✓						4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTorro	3/1/21 1115hrs		Jon Munch	3-2-21 0930

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

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 #4955. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1300Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
—— 1301Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 210301 1340Y
pH - 8.18
Temp - 22.7°C
Cond - 1019 us/cm
Turb - 2.47 NTU's
pHpre - 7.08/10.04 (17.7°C)
pHpost - 7.10/10.03
DTW - 407.79 ft.
Atmos - 12.37 psia.

Final
Time - 210301 1441Y
PH - 8.03
Temp - 22.5°C
Cond - 1012 us/cm
Turb - 1.64 NTU's
pHpre - 7.08/10.05 (18.2°C)
pHpost - 7.05/10.07
DTW - 407.94 ft.
Atmos - 12.39 psia
IDW - 1 gal.

Meter ID
pH/Cond - 61
Turb - 7
u std - 4.60
u rdg - 4.68
u lot - 91017
u Exp - 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1405Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
—— 1406Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
—— 1407Y	Low Level NDMA	u	u	u	u
—— 1435Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 1436Y	*u (M,S)*	u	u	u	u
—— 1437Y	Anions/Alk.	ice	u	N/A	u
—— 1438Y	TDS by SM2540C	u	(1) 125ml poly	u	u
—— 1439Y	Perchlorate by 6850	u	u	u	u
—— 1440Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	u

Runs	1)	2)	3)
	146.04	145.78	145.58
	143.74	143.71	143.72
	143.74	143.71	143.71
	145.67	145.40	145.40

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/1/21 — Date

Tom Murdock — Signed — 3-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/21 Page 1 of 1

Sample Location: WW-3-710

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals				Charge Number
210301 1300Y (EB)	3	A	✓							XGMD
1301Y (EB)	1	A			✓					"
1405Y	3	A	✓							"
1406Y	1	A		✓						"
1407Y	1	A			✓					"
1435Y	2	A				✓				"
1436Y (MS)	2	A				✓				"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Anions/NH4	TDS	Perchlorate	NO2/NO3				Charge Number
210301 1437Y	2	A	✓							XGMD
1438Y	1	A		✓						"
1439Y	1	A			✓					"
1440Y	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeTemo	3/1/21 1530hrs.			3-2-21 / 0930

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 2 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
210302 1325y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1326y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210302 1405y
PH - 8.34
Temp - 23.5 °c
Cond - 1068 us/cm
Turb - 3.54 NTU's
pHpre - 7.01 / 10.04 (20.7 °c)
pHpost - 7.03 / 10.04
DTW - 408.13 ft.
Atmos - 12.30 psia

Final

Time - 210302 1515y
PH - 8.16
Temp - 23.1 °c
Cond - 1045 us/cm
Turb - 2.27 NTU's
pHpre - 7.06 / 10.04 (21.2 °c)
pHpost - 7.07 / 10.03
DTW - 408.30 ft.
Atmos - 12.28 psia
IDW - 1 gal.

Meter ID

pH/cond - 61
Turb - 7
" std - 4.60
" rdg - 4.70
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

* Samples were very aerated.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210302 1440y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1441y	607 / Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1442y	Low Level NDMA	"	"	"	"
——— 1510y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1511y	Anions / Alk.	ice	"	N/A	"
——— 1512y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1513y	Perchlorate by 6850	"	"	"	"
——— 1514y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)
	261.28	260.76	260.70
	261.11	260.72	260.71
	260.02	259.64	259.58
	260.00	259.63	259.55

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/2/21 — Date

Jeri W Munch — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/21 Page 1 of 1

Sample Location: WW-3-978

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions/Alk			Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210302 1325Y (EB)	3	A	✓							XGMD
1326Y (EB)	1	A			✓					u
1440Y	3	A	✓							u
1441Y	1	A		✓						u
1442Y	1	A			✓					u
1510Y	2	A				✓				u
1511Y	2	A					✓			u

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210302 1512Y	1	A	✓							XGMD
1513Y	1	A		✓						u
1514Y	1	A			✓					u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terzo	3/2/21 1540hrs			3-3-21 /0945

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

b Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This ll will be purged using a dedicated bladder pump. Samples will be collected ing a dedicated tygon discharge hose. Water quality parameters will be onitored using a QED MP-20 flow cell and water analyzer. Carboy G3.

alibrations
O - calibrated in saturated air @ 638 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
t - calibrated using Oakton buffers (7-10).
rbidity meter #20 std - 5.71 rdg - 5.62 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
210421 0815C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

rameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (Ft.)
210421 0925C	18.95	1.51	3.13	113	8.46	2.15	130.50
——— 0928C	19.07	1.50	2.81	109	8.50	1.92	130.55
——— 0931C	19.21	1.53	2.57	107	8.53	1.78	130.61

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210421 0935C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0936C	" (FB)	"	"	"	"

Initial DTW - 130.00 Ft. Total gallons purged - 1/2 gal.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/21/21 Date

Jen Miranda — Signed — 4-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/21/21 Page 1 of 1

Sample Location: 400-FV-131

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210421081SC (TB)	3	A	✓							XGMD
0935C	3	A	✓							"
0936C (FB)	3	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	4/21/21 1115 hrs.		[signature]	4-22-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy.. this well will be purged using a dedicated bladder pump. Samples will be collected using a dedicated tygon 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 @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std- 5.71 rdg-5.62 lot-91017 Exp-4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210421 1400C	21.95	1.96	2.07	+7	9.05	0.90	140.40
2) ——— 1403C	22.02	1.98	1.98	-4	9.05	0.84	140.43
3) ——— 1406C	22.09	1.98	1.92	-3	9.08	0.82	140.49

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210421 1410C	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1411C	" (FB)	"	"	"	"

Initial DTW = 139.84ft. Total gallons purged = 1/2 gallon

Continued from page

Read and Understood By

Craig Del Ferraro Signed 4/21/21 Date

Lori Munch Signed 4-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/21/21 Page 1 of 1

Sample Location: 400-HV-147

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210421 1410C	3	A	✓							XGMD
1411C (FB)	3	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	4/21/21 1430hrs.		Ron Mund	4-22-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This well will be purged dry prior to sampling. Samples will be collected using a teflon bailer after recovery. Carboy G3 in use.

Total depth - 148.40ft.
Initial DTW - 145.00ft.
Start purge - 0640 hrs.
Stop purge - 0648 hrs.
Total gallons purged - .7
Final DTW - 145.61ft.

Meter ID	Buffers	Lot	Exp
pH/Cond - 13	7	4002A91	8/21
Turb - 20	10	4001D05	6/21
" Std - 5.71			
" rdg - 5.83			
" lot - 91017			
" Exp - 4/30/21			

Initial Parameters
Time - 210427 0810B
pH - 7.76
Temp - 20.1°C
Cond - 2.42 ms/cm
Turb - 17.6 NTU's
pH pre - 7.11 / 10.08 (18.1°)
pH post - 7.09 / 10.10
DTW - 145.36ft.

Final
Time - 210427 0840B
pH - 7.68
Temp - 19.8°C
Cond - 2.44 ~~uS~~ ms/cm
Turb - 8.75 NTU's
pH pre - 7.12 / 10.06 (17.6°C)
pH post - 7.11 / 10.09
~~DTW~~ ——— cd

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210427 0815B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 0816B	" (FB)	"	"	"	"
—— 0817B	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
—— 0818B	" (FB)	"	"	"	"
—— 0819B	Chloride by 300.0	"	(1) 125ml poly	"	ALS
—— 0820B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210427 0730B	VOA by 8260	ice/HCL	(3) 40ml vials	21EH118A	ALS
—— 0731B	607/Bromacil	ice	(1) 1L Amber	21EH118B	SRI

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/27/21 — Date

Jon Munch — Signed — 4-27-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/27/21 Page 1 of 1

Sample Location: 600-G-138

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Chloride					Charge Number
Pertinent Notes (if any)										
210427 0730B (BC)	3	A	✓							XGMD
0731B (BC)	1	A		✓						"
0815B	3	A	✓							"
0816B (FB)	3	A	✓							"
0817B	1	A		✓						"
0818B (FB)	1	A		✓						"
0819B	1	A			✓					"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: NO_2/NO_3							Charge Number
Pertinent Notes (if any)										
210427 0820B	1	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/27/21 0920 hrs.		[signature]	4-27-21 /0900

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

50
PROJECT B050 - EFF. 1

Notebook No. PFTS #9
Continued from page _____

AL MONTES & TONY TORREZ PRESENT. SAMPLES WILL BE COLLECTED FROM A DEDICATED SAMPLE PORT ON THE EFFLUENT SIDE. THE SAMPLE PORT WILL BE PURGED FOR 1 MIN. PRIOR TO SAMPLING. CARBOY

PARAM'S

pH	8.69
TEMP	25.6°C
COND	1085 µs/cm
TURB	1.75
pH PRE	7.04 / 9.98 (22.5°)
pH POST	7.04 / 10.01
210414 1405	

METER ID'S

pH/COND	12
TURB #	21
" SAL	570
" RDG	555
" LOT #	91017
" EXP	4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210414 1406	8260DLL	ICE/HCl	2573	(3) 40ml VIALS	ALS
1407	" (FB)	"	"	"	"
1408	6007	ICE	108501	(1) 1L AMBER	SAL
1409	CNDMA	"	"	"	"
1410	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. D. Signed — 4-14-21 Date — Jon Munch Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page _____ of _____

Sample Location: B650 - Eff-1

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260LL	607	LLNMA					Charge Number: X6mD
210414 1406	3	A	X							
1407 FB	3		X							
1408	1			X						
1409 FB	1				X					
1410	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. Dy	4-14-21 1600		Jon W Lynch	4-15-21 0900

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

AL MONTES & TONY TORRES PRESENT. SAMPLES WILL BE COLLECTED FROM A DEDICATED SAMPLE PORT ON THE INFLUENT SIDE OF THE SYSTEM. SAMPLE PORT WILL BE PURGED FOR 1 MIN OFF PRIOR TO SAMPLING. Carboy

Param's	
pH	7.41
Temp	25.5
Cond	1080 µs/cm
Turb	2.79
pH pre	7.04/9.96 (22.6°C)
pH post	7.02/10.00

210414 1415

METER ID's

pH/Cond 12
Turb # 21
" STD = 57.0
" Rdg = 55.5
" Lot # = 91017
" Exp = 4/30/21

SAMPLES

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210414 1416	82600	1/2 HCl	2573	(3) 40ml VIALS	ALS
" 1417	" (FB)	"	"	"	"
" 1418	" (Dup)	"	108501	"	"
" 1419	6010	ICE	"	(1) LT amber	SRL

Continued from page

Read and Understood By

T. D. — Signed — 4-14-21 Date

Pam Munch — Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page 1 of 1

Sample Location: B66-INF-1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6097	Charge Number
210414 1416		3	A	X		XGMA
— 1417 FB		3		X		
— 1418		3		X		
— 1419		1			X	

Sample Location:

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

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T-Dz	4/14/21/1600	[signature]	4-15-21 / 0900

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

PROJECT B655-Eff-2

Notebook No. PFTS #9

Continued from page ____

AL Montes & Tony Torrez present. Samples will be collected from a dedicated sample port. Located @ the effluent side of the system. The sample ports will be purged for 1 mine prior to sample collection. Gaiboy #

Params	
210414/1325	
pH	8.76
Temp	24.5
Cond	~~10.7~~ 1124 µs/cm
Turb	0.71 NTU's
pH pre	7.02/10.01 (22.3°C)
pH post	7.02/10.01

Meter I.D's	
pH/cond	12
Turb #	21
" Std	= 5720
" Rdg	= 55.5
" Lot #	= 91017
" Exp	= 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210414/1326	8260LL	ICE/HCl	2573-2	(3) 40ml vials	ACS
1327	" (FB)	"	"	"	"
1328	6007	ICE	108501	(1) 1LT Amber	SRI
1329	LLNOMA	"	"	"	"
1330	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. D. — Signed — 4-14-21 Date

Jon W Munch — Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page 1 of 1

Sample Location: B655-Eff-2

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	4302					Charge Number
										X6mD
210414 1326	3	A	X							
— 1327 (FB)	3		X							
— 1328	1			X						
— 1329	1				X					
— 1330 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. Dg	TG 4/14/21/1600		[signature]	4-15-21 / 0900

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

AC Montes & Tony Torrez present. Samples will be collected from a dedicated sample port on the influent side of the system. The sample port will be purged for 1 min prior to sampling. Carboy #

Params

2/04/14 1345

pH	7.61
Temp	24.5
Cond	1143 µs/cm
Turb	0.89 NTU's
pH pre	7.02 / 10.00 (22.3)
pH post	7.01 / 10.01

Meter ID's

pH/Cond = 12
Turb # 21
" Rdg = 55.5
" Std = 57.0
" Lot # 91017
" Exp = 4/30/21

Samples

Sample #		Analysis	Preserv	Lot #	Cont	Lab
2/04/14	1346	8260	1:1 HCl	2573	(3) 40mL VOAs	ALS
"	1347	" (F,B)	"	"	"	"
"	1348	Cl07	1:1	108501	(1) 1LT Amb Gl	SRI

Continued from page

Read and Understood By

T. [signature] Signed — 4-14-21 Date

[signature] Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21

Sample Location: B655-INF. 2

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 607	Charge Number
210414 1346		3	A	X		XGMD
1347 FB		3		X		
1348		1			X	

Sample Location:

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

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. Day	4-14-21 1600	[signature]	4-15-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & windy. 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.

Calibrations
DO - calibrated in saturated air @ 640 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.79 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210414 1415C	21.01	1.52	3.19	~~98~~ -30	8.42	1.68	360.10
2) ——— 1418C	21.13	1.53	3.03	-34	8.41	1.58	360.10
3) ——— 1421C	21.19	1.58	2.89	-39	8.38	1.47	360.10

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210414 1425C	VOA by 8260 ~~Low~~	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1426C	" (FB)	"	"	"	"
——— 1427C	Low Level NDMA	ice	(1) 1L Amber	N/A	SPI
——— 1428C	" (FB)	"	"	"	"

Initial DTW - 360.04 ft Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro 4/14/21 Date Signed Pete Munch 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/21 Page 1 of 1

Sample Location: BLM-6-488

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: LL NDMA						Charge Number
Pertinent Notes (if any)										
210414 1425C	3	A	✓							XGMD
1426C (FB)	3	A	✓							"
1427C	1	A		✓						"
1428C (FB)	1	A		✓						"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	4/14/21 1510hrs.		[signature]	4-15-21 /0900

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

Marcus Avalos & Robert Burrows present. Weather is breezy & cool. This well will be purged 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 analyzers.

DTW - 494.90'

Trip Blanks

Sample #	Analysis	Preserve	Container	lot	lab
210401124513	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25731	A|S
—— 12463	Low Level NOMA	Ice	(1) 1L Amber	0124201E	JRI

Parameters (time)	Temp(°C)	Cond (ms/cm)	DO	ORP	PH	Turb(NTU)	DTW(ft)
1) 210401 1340B	20.12	1.119	4.82	170	6.97	2.17	494.92
2) —— 1342B	20.19	1.123	4.78	173	6.95	0.68	"
3) —— 1344B	20.14	1.119	4.82	170	6.98	1.27	"

Calibrations

DO - Cal in saturated air @ 645 mm/Hg.

Conductivity - Cal using 1413 uS/cm STD

PH - Cal using Oakton Buffers (4,7,10)

Turbidity Meter - #20 STD - 5.71 NTU RDG - 5.62 NTU lot - 91017 Exp - 4/30/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210401 1350	VOA by 8260	HCl/Ice	(3) 40ml vials	25731	A|S
—— 1351	" (FB)	"	"	"	"
—— 1352	Low Level NOMA	Ice	(1) 1L Amber	0124201E	JRI
—— 1353	" (FB)	"	"	"	"

TDW - 2 3/4 gal

Continued from page

Read and Understood By

Signed — Date 4/1/21

Signed — Date 4-5-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/21 Page 1 of 1

Sample Location: BIM-10-517

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA	Charge Number
210401124SB (TB)	3	A	X		XGMD
1246B (TB)	1			X	
1350B	3		X		
1351B (FB)	3		X		
1352B	1			X	
1353B (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:
[signature]	4/1/21 @ 1530	[signature]	4-6-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, and breezy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Chen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1330Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1331Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI

Initial Parameters	Final	Meter ID	
Time - 210407 1405Y	Time - 210407 1501Y	pH/cond - 61	
PH - 8.33	PH - 8.39	Turb - 7	
Temp - ~~24.3°C~~ CD 23.4°C	Temp - 23.7°C	u std - 6.27	
Cond - 1139 us/cm	Cond - 1127 us/cm	u rdg - 6.22	
Turb - 4.68 NTU's	Turb - 3.31 NTU's	u lot - 91017	
pH pre - 7.01/9.98 (28.6°C)	pH pre - 6.96/9.93 (30.5°C)	u Exp - 4/30/21	
pH post - 6.99/9.98	pH post - 6.97/9.93		
DTW - 368.25ft.	DTW - 368.33ft.	Buffers Lot	Exp
Atmos - 12.24psia	Atmos - 12.21 psia	7 4002991	8/21
	IDW - 1/2 gal.	10 400IDO5	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1430Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1431Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI
——— 1500Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	23.89	23.80	23.79
	25.06	25.08	25.10
	24.98	24.97	25,01
	23.85	23.81	23.82

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/7/21 — Date

Lori Munda — Signed — 4-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/7/21 Page 1 of 1

Sample Location: BLM-39-385

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals				Charge Number
210407133oy (EB)	3	A	✓						XGMD
1331y (EB)	1	A		✓					"
1430y	3	A	✓						"
1431y	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 DeFerno	4/7/21 1525 hrs.		[signature]	4-8-21 / 0845

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Hen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210407090oy	VOA by 8260	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0901y	Total Metals	ice/HNO_3	(2)125ml poly's	20-07-07	"

Initial Parameters	Final	Meter ID
Time - 2104070945y	Time - 2104071050y	pH/Cond - 61
PH - 8.23	PH - 8.12	Turb - 7
Temp - 21.3	Temp - 21.5°c	" Std - 6.27
Cond - 694 us/cm	Cond - 680 us/cm	" rdg - 6.22
Turb - 2.06 NTU's	Turb - 1.60 NTU's	" lot - 9107
pHpre - 7.13/10.09 (16.4°c)	pHpre - 7.06/10.04 (19.0°c)	" Exp - 4/30/21
pHpost - 7.13/10.08	pHpost - 7.07/10.02	
DTW - 368.10ft.	DTW - 368.25ft.	Buffers Lot Exp
Atmos - 12.20 psia	Atmos - 12.21 psia	7 4002G91 8/21
	IDW - ½ gal.	10 4001D05 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1015y	VOA by 8260	ice/HCL	(3)40ml vials	2573-1	ALS
——— 1016y	" (Dupl.)	"	"	"	"
——— 1017y	607/Bromacil	ice	(1)1L Amber	0124201E	SRI
——— 1045y	Total Metals	ice/HNO_3	(2)125ml poly's	20-07-07	ALS
——— 1046y	Anions/Alk.	ice	"	N/A	"
——— 1047y	TDS by SM2540C	"	(1)125ml poly	"	"
——— 1048y	Perchlorate by 6850	"	"	"	"
——— 1049y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1)250ml poly	21-03-03	"

Runs	1)	2)	3)	4)
	100.04	99.99	99.95	N/A
	97.35	97.17	97.04	
	97.30	97.13	96.96	
	100.06	100.00	99.97	

Continued from page

Read and Understood By

Craig Del Ferraro 4/7/21 Dan Mumah 4-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/7/21 Page 1 of 1

Sample Location: BLM-39-560

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals	Anions / Alk				Charge Number
210407090 0Y (EB)		3	A	✓							XGMD
0901Y (EB)		2	A			✓					"
1015Y		3	A	✓							"
1016Y (Dupl.)		3	A	✓							"
1017Y		1	A		✓						"
1045Y		2	A			✓					"
1046Y		2	A				✓				"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO_2/NO_3					Charge Number
210407104 7Y		1	A	✓							XGMD
1048Y		1	A		✓						"
1049Y		1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeFerro	4/7/21 1120hrs.		[signature]	4-8-21 /0845

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

JJ MONTES & TONY TORREZ PRESENT. WEATHER IS VERY WINDY & COOL. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL TAKEN FROM A TEFLON DISCHARGE TUBE. CARBOY G-1

METER ID

COND/PH MTR - 12

TURB MTR. - 21

" ST 0. - 57.0 NTU

" RDG - 56.1 NTU

" LOT# - 91017

" EXP - 4.30.21

1DW - 2gal

DTW - 523.70 FT

PARAMETERS	TEMP (°C)	COND (µS/cm)	PH	TURB (NTU)	DTW ft
210401 1020c	10.5°C	957	8.71	0.80	523.65 ft
——— 1025c	10.8°C	957	8.63	0.92	"
——— 1030c	10.9°C	958	8.50	0.84	"

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210401 1031c	VOA LL 8260	ICE · HCL	3 · 40ML VIALS	25737-2	ALS
——— 1032c	" (FB)	"	"	"	"
——— 1033c	NDMA · DMN · 8270 SIM	ICE	1LT AMBER	108501	SKL
——— 1034c	LL NDMA	"	"	208501	"
——— 1035c	" (FB)	"	"	"	"
——— 1036c	TOTAL METALS	ICE · HNO_3	2 · 125mL Poly	200707	ALS
——— 1037c	ANIONS · ALK	ICE · 0 HEAD	125mL Poly	NA	"
——— 1038c	TDS	ICE	"	"	"
——— 1039c	PERCHLORATE	ICE · 2/3 FULL	"	"	"
——— 1040c	NO_2 NO_3	ICE · H_2SO_4	"	2	"

Continued from page NA

Read and Understood By

Signed — Date 4.1.21

Signed — Date 4.5.21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.1.21 Page 1 of 1

Sample Location: BLM.40.517

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	VOA LL	607	LL NDMA	TOT MET.	PFAS 537 A-K			Charge Number
										XGMO
210401 1031C	3	A	X							
1032C (FB)	3		X							
1033C	1			X						
1034C	1				X					
1035C (FB)	1				X					
1036C	2					X				
1037C	2						X			

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	PEACH.	N02 N03					Charge Number
210401 1038C	1	A	X							
1039C	1	A		X						
1040C	1	A			X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.1.21 11:10			4-5-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This well will be purged using a dedicated bladder pump. Samples will be collected using a Teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy GS in use.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210412 1245C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1246C	Low Level NOMA	ice	(1) 1L Amber	N/A	SRI

Calibrations

DO - calibrated ~~using~~ in saturated air @ 639 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.80 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210412 1400C	20.95	0.619	4.80	~~7.1~~	7.96	0.61	522.73
2) ——— 1403C	20.85	0.617	4.50	33	7.99	0.63	522.73
5) ——— 1406C	20.89	0.613	4.34	33 34	8.01	0.50	522.73

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210412 1410C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1411C	" (FB)	"	"	"	"
——— 1412C	Low Level NOMA	ice	(1) 1L Amber	N/A	SRI
——— 1413C	" (FB)	"	"	"	"
——— 1414C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 1415C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1416C	Perchlorate by 6850	"	"	"	"
——— 1417C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 521.73ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/12/21 — Date

Lori Munch — Signed — 4-13-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/12/21 Page 1 of 1

Sample Location: BLM-40-595

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Anions/Alk.					Charge Number
210412 1245C	(TB)	3	A	✓							XGMD
" 1246C	(TB)	1	A		✓						"
" 1410C		3	A	✓							"
" 1411C	(FB)	3	A	✓							"
" 1412C		1	A		✓						"
" 1413C	(FB)	1	A		✓						"
" 1414C		2	A			✓					"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO_2/NO_3					Charge Number
210412 1415C		1	A	✓							XGMD
" 1416C		1	A		✓						"
" 1417C		1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig McFarland	4/12/21 1520 hrs.		[signature]	4-13-21 / 0915

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

OJECT BLM-40-688 WJI ENV-0053 Notebook No. D32 # 121(c)
Continued from page

ob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. is well will be purged using a dedicated bladder pump. Samples will collected using a teflon discharge hose. Water quality parameters will monitored using a QED MP20 flow cell and water analyer. Carboy G3.

alibrations
O - calibrated in saturated air @ 640 mm/Hg.
onductivity - calibrated using 1413 us/cm std. solution.
H - calibrated using Fisher buffers (7-10).
urbidity meter #20 std - 5.71 rdg - 5.79 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
210414 1000C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1001C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI

rameters (time)	temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
210414 1055C	20.80	0.800	3.98	1	8.21	0.81	510.21
—— 1058C	20.86	0.794	3.80	0	8.17	0.78	510.21
—— 1101C	20.93	0.788	3.64	-2	8.15	0.72	510.21

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210414 1105C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1106C	" (FB)	"	"	"	"
—— 1107C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
—— 1108C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
—— 1109C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 1110C	Perchlorate by 6850	"	"	"	"
—— 1111C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"
—— 1112C	Low Level NDMA (FB)	ice	(1) 1L Amber	N/A	SRI

Initial DTW - 509.96ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

4/14/21
Date

Signed

4-15-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/21 Page 1 of 1

Sample Location: BLM-40-688

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA						Charge Number
Pertinent Notes (if any)										
210414 1000C (TB)	3	A	✓							XGMD
1001C (TB)	1	A		✓						"
1105C	3	A	✓							"
1106C (FB)	3	A	✓							"
1107C	1	A		✓						"
1112C (FB)	1	A		✓						"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perch/orate	NO_2/NO_3				Charge Number
Pertinent Notes (if any)										
210414 1108C	2	A	✓							XGMD
1109C	1	A		✓						"
1110C	1	A			✓					"
1111C	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	4/14/21 1135 hrs.		[signature]	4-15-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. 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 @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.64 lot - 91017 Exp - 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 210420 1410C	21.83	1.119	3.56	68	8.92	1.59	353.90
2) ——— 1413C	21.91	1.108	3.38	67	8.95	1.28	353.90
3) ——— 1416C	22.03	1.102	3.22	64	8.96	1.23	353.90

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210420 1420C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1421C	" (FB)	"	"	"	"
——— 1422C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRL
——— 1423C	" (Dupl.)	"	"	"	"
——— 1424C	" (FB)	"	"	"	"
——— 1425C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 1426C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1427C	Perchlorate by 6850	"	"	"	"
——— 1428C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 353.04ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/20/21 — Date

Ron Munch — Signed — 4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: BLM-41-420

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Anions/AIK	TDS				Charge Number
210420 1420C	3	A	✓							XGMD
1421C (FB)	3	A	✓							4
1422C	1	A		✓						4
1423C (Dupl.)	1	A		✓						4
1424C (FB)	1	A		✓						4
1425C	2	A			✓					4
1426C	1	A				✓				4

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
210420 1427C	1	A	✓							XGMD
1428C	1	A		✓						4

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig M Foard	4/20/21 1530hrs.	Jon Munch	4-21-21 / 0910

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

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 YSI MP-20 flow cell and water analyzer. Carboy G3 in use.

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 #20 std - 5.71 rdg - 5.64 lot - 910/7 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
210420 0915C	20.81	1.056	2.29	-398	8.44	4.46	392.66
——— 0918C	20.87	1.051	2.11	-400	8.49	3.82	392.66
——— 0921C	20.94	1.043	2.00	-403	8.53	3.18	392.66

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210420 0925C	VOA by 8260 LL	ice/HCl	(3) 40ml vials	2573-1	ALS
——— 0926C	" (FB)	"	"	"	"
——— 0927C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRL
——— 0928C	" (Dupl.)	"	"	"	"
——— 0929C	" (FB)	"	"	"	"
——— 0930C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 0931C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0932C	Perchlorate by 6850	"	"	"	"
——— 0933C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(2) 250ml poly	21-03-03	"

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210420 1120C	Low Level NDMA	ice	(1) 1L Amber	21EH117A	SRL

Initial DTW - 392.31 ft.

Total gallons purged - 3

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/20/21 — Date

Geri Nunch — Signed — 4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: BLM-41-670

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Anions/Alk	TDS				Charge Number
210420 0925C	3	A	✓							XGMD
0926C (FB)	3	A	✓							"
0927C	1	A		✓						"
0928C (Dupl.)	1	A		✓						"
0929C (FB)	1	A		✓						"
0930C	2	A			✓					"
0931C	1	A				✓				"

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Perchlorate	NO_2/NO_3	LL NDMA					Charge Number
210420 0932C	1	A	✓							XGMD
0933C	1	A		✓						"
1120C (BC)	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terro	4/20/21 1130hrs.		[signature]	4-21-21 /0910

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

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. Carboy #3 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 #20 std - 5.71 rdg - 5.67 lot-91017 Exp 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	pH	Turb (NTU's)	DTW (ft)
210419 0940c	20.65	2.37	2.44	0	8.36	46.2	173.60
——— 0943c	20.71	2.42	2.31	-3	8.39	41.8	173.68
——— 0946c	20.74	2.44	2.23	-5	8.41	35.0	173.76

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210419 0950c	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0951c	" (FB)	"	"	"	"
——— 0952c	607/Bromacil	ice	(1) 1L Amber	0124201E	SPL
——— 0953c	Total Metals	ice/HNO_3	(2) 125ml poly's	19-11-29	ALS
——— 0954c	" (Dup.)	"	"	"	"
——— 0955c	Anions/A/K	ice	"	N/A	"
——— 0956c	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0957c	Perchlorate by 6850	"	"	"	"
——— 0958c	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 172.50 ft. Total gallons purged - 4

Water was very turbid - crew purged the well until turbidity began to lower from 70 NTU's.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/19/21 — Date

Signed — 4-20-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/19/21 Page 1 of 1

Sample Location: BW-3-180

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk	TDS			Charge Number
210419 0950C	3	A	✓							XGMD
0951C (FB)	3	A	✓							"
0952C	1	A		✓						"
0953C	2	A			✓					"
0954C (Dupl.)	2	A			✓					"
0955C	2	A				✓				"
0956C	1	A					✓			"

Pertinent Notes (if any)

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
210419 0957C	1	A	✓							XGMD
0958C	1	A		✓						"

Pertinent Notes (if any)

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeFreno	4/19/21 1120hrs.		[signature]	4-20-21 /0900

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

WSTF 381C (05/2016)

DAN HALVORSEN & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED WITH A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 2YB psi & SAMPLE PRESSURE SET @ 227psi. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3psi & STABLE 5psi

	INITIAL	FINAL
	210408 0830A	210408 0845A
pH	8.45	8.47
TEMP	19.2°C	19.3°C
COND	1310 µs/cm	1310 µs/cm
TURB	0.44 NTUs	0.59 NTUs
PHPRE	7.02/19.95 (18.3°C)	7.02/19.95 (19.1)
PHPOST	7.03/19.98	7.02/19.95

METER ID's
pH/COND = 73
TURB # 20
" STD = 5.71
" RDG = 5.59
" LOT # = 9/017
" EXP = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0831A	8260LL	ICE/HCl	(3) 40ml VIALS	2573-2	ALS
0832A	" (FB)	"	"	"	"
0833A	LLNOMA	ICE	(1) LT AMBER	108501	SRL
0834A	" (FB)	"	"	"	"
0835A	SVOA-SIM	"	(1) 250ml AMBER	N/A	ALS

TRIP BLANKS

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0700A	8260LL	ICE/HCl	(3) 40ml VIALS	2573-2	ALS
0701A	LLNOMA	ICE	(1) LT AMBER	108501	SRL

* ADDED 3.5 GALLONS TO INSIDE OF THE FLUTE PRIOR TO PURGING DUE TO BUBBLER STABALIZING @ 1.5 psi & NOT ABOVE THE 3psi THAT FLUTE SUGGESTS.

Continued from page

Read and Understood By

T. [signature] — Signed — 4-8-21 — Date

[signature] — Signed — 4-12-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 Page 1 of 1

Sample Location: JER-1-483

Sample Number	# of Containers	Sample Matrix*	8260	LVOA	SVOA SIM					Charge Number
Pertinent Notes (if any)										X6MD
210408831A	3	A	X							
0832A (FB)	3		X							
0833A	1			X						
0834A (FB)	1			X						
0835A	1				X					
0700A	3		X							
0701A	1			X						

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	4/8/21 / 1100		[illegible]	4-12-21 / 0900

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

DAN HALVORSEN & TONY TOCCA PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 24 PSI & SAMPLE PRESSURE SET @ 22 PSI THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3 PSI & STABLE @ 5 PSI

INITIAL		FINAL	METER ID's
210408 0850A		210408 0905A	pH/Cond = 73
pH	8.38	8.41	Turb # 20
TEMP	20.0°C	20.1°C)	" STD: 5.71
Cond	1382 µs/cm	1379 µs/cm	" adj: 5.59
Turb	0.29	0.21	" LOT #: 91017
pH pre	6.99/9.92 (19.8°C)	7.05/9.98 (19.6°C)	" EXP: 4/30/21
pH post	7.04/9.90	7.06/9.97	

Samples

Sample #	Analysis	Preserv	Cont	Lot #	Lab
210408 0851A	8260II	Ice/HCl	(3) 40ml vials	2573.2	ALS
—— 0852A	" (FB)	"	"	"	"
—— 0853A	LCNDMA	Ice	(1) LT Amber	108501	SRL
—— 0854A	" (FB)	"	"	"	"
—— 0855A	Sim-SVOA	"	(1) 250ml Amber	N/A	ALS
—— 0856A	" (Dup)	"	"		"

Continued from page

Read and Understood By

T. D. Signed — 4.8.21 Date — Signed — 4-12-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 Page 1 of 1

Sample Location: JER-1-563

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	CLNO3A	SUO4 SIM					Charge Number
210408 0851A		3	A	X							X6MD
0852A (FB)		3		X							
0853A		1			X						
0854A (FB)		1			X						
0855A		1				X					
0856A Dup		1	↓			X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
				4-12-21 / 0900

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

PROJECT JER-1-~~638~~ 683

Notebook No. D37#120(a)

Continued from page

DAN HALVORSEN & TONY TOFTEZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 248 PSI & SAMPLE PRESSURE SET @ 227 PSI THE FIRST 350 mls DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3 PSI & STABLE @ 5 PSI

	INITIAL	FINAL
	210408 0910A	210408 0917A
pH	8.31	8.38
Temp	19.7°C	19.9°C
Cond	1381 µS/cm	1383 µS/cm
Turb	0.54 NTU's	0.43 NTU's
pH PRE	7.04/10.00 (21.0°)	7.02/9.97 (21.3°C)
pH POST	7.03/9.96	7.05/9.97

METER ID's

pH/cond = 73
Turb # 20
" std = 5.71
" rdg = 5.59
" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0911A	8260 (11)	HCl to pH<2	(3) 40ml VIALS	2573-2	ALS
" 0912A	" (FB)	"	"	"	"
" 0913A	6010MA	HNO3 to pH<2	(1) 1LT AMBER	108501	SRL
" 0914A	" (FB)	"	"	"	"
" 0915A	SUOA-Sim	"	(1) 250ml AMBER	N/A	ALS

Continued from page

Read and Understood By

Signed — Date 4-8-21

Signed — Date 4-12-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 ✓ Page 1 of 1

Sample Location: JER-1-~~638~~ 683

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LC	LC XGMA	SUOA 5 m					Charge Number: XGmD
210408 0911A	3	A	X							
0912A (PB)	3		X							
0913A	1			X						
0914A (PB)	1			X						
0915A	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. [illegible]	4-8-21 / 1100		[illegible]	4-12-21 / 0900

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

Marcus Avalos & Tony Torres present. This well will be purged & sampled using a Flute sampling system. The weather is clear & warm This zone will be purged at least 4 Times prior to sampling. Purge pressure set @ 26.5 psi & Sample pressure set @ 24. Samples collected from A dedicated Teflon discharge Tube. Bubbler set @ 3psi & Stable @ 6.5 psi. Carboy 65

INITIAL	FINAL
210420 0950A	210420 1010A
pH 7.87	7.81
Temp 20.9°C	20.8°
Cond 1032 µs/cm	1034 µs/cm
Turb 084 NTU's	0.78
pHpre 7.01/10.00(17.9	7.04/10.03 (18.2)
pHpost 7.00/10.02	7.00/10.03

METER ID's
pH/Cond = 12
Turb # 21
" Std 57.0
" Rdg 57.0 NTU's
" Lot # 91017
" Exp 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 0951A	8260 11	Cool/HCl	~~B72~~ 2573	(3) VOA Vials	ALS
0952A	" (FB)	"	"	"	"
0953A	CLNDm4	ICE	108501	(1) 1LT Amber	SRL
0954A	" (FB)	"	"	"	"
0955A	5270A-SIM	"	N/A	(1) 250ml Amber	ALS

Continued from page

Read and Understood By

T. [signature] Signed — 4-20-21 Date

[signature] Signed — 4-21-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: SER-2-534

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LC	LINDA	SU045 in					Charge Number
											X6MS
210420 0951A		3	A	X							
0952A (FB)		3		X							
0953A		1			X						
0954A (FB)		1			X						
0955A		1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
FD	4-20-21/1100		[signature]	4-21-21 /0910

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be purged & sampled using a Flute sample system. This zone will be purge at least 4 times prior to sampling. Purge Pressure set @ 265 psi & Sample pressure set @ 244. The bubblers was set @ 3psi & stable @ 6.5 psi. Carboy 65

	Initial	Final	Meter ID's
	210420/1015A	210420 1025A	pH/Cond = IR
pH	7.83	7.78	Turb II 21
Temp	21.4°C	21.6	" Std 57.0
Cond	1020	1017 µs/cm	" Rdg 57.6
Turb	0.86 NTU's	0.84 NTU's	" Lot# 91017
pH pre	7.01 / 10.04 (17.8:)	7.03 / 10.02 (17.9:)	" Exp 4/30/21
pH post	7.02 / 10.03	7.01 / 10.00	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 1016A	8260 II	1:1 HCl	2573-2	(3) 40 ml vials	ALS
1017A	" (FB)	"	"	"	"
1018A	UNMA	Ice	1085.1	(1) 1LT Amber	SRI
1019A	" (FB)	"	"	"	"
1020A	" (Dup)	"	"	"	"
1021A	SVOA-Sims	"	N/A	(1) 250 ml Amber	ALS

Continued from page

Read and Understood By

T. [signature] — Signed
4-20-21 — Date
[signature] — Signed
4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-20-21 Page 1 of 1

Sample Location: JEN 2-584

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8760	CINM4	SU045in					Charge Number
										X6mD
210420 1016A			X							
1017A (FB)			X							
1018A				X						
1019A (FS)				X						
1020A (Dup)				X						
1021A					X					
					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:
T. [illegible]	4-20-21 / 1100		[illegible]	4-21-21 / 0910

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be sampled & purged using a Flute sampling system. This zone will be purged at least 4 Times. Purge pressure set @ 865 psi & sample pressure set @ 244 psi. Samples collected from a Teflon discharge Tube. Bubbler set @ 3 psi & Stable @ 6.5 psi. Canopy OS

	Initial	Final	Meter ID's
	210420 1030A	210420 1045A	pH/cond 12
pH	7.79	7.75	Turb # 21
Temp	21.2°c	21.2°c	" STD = 57.0
Cond	1058 ms/cm	1061 ms/cm	" RDG = 57.6
Turb	0.72 NTU's	0.76 NTU's	" LOT # 9/1017
pH pre	7.00/10.01 (18.5)	7.02/10.03 (18.7)	" Exp 9/30/21
pH post	7.01/10.03	7.03/10.04	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 1031A	8260 (11)	Ice/HCl	2573-2	(3) 40ml vials	ALS
1032A	" (FB)	"	"	"	"
1033A	(11) NDMA	Ice	108561	(1) 1L amber	SRL
1034A	" (FB)	"	"	"	"
1035A	SVOA-Sim	"	N/A	(1) 250ml amber	ALS
1036A	" (FB)	"	N/A	"	

Continued from page

Read and Understood By

T. [signature] Signed 4.20.21 Date

[signature] Signed 4-21-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-20-21 Page 1 of 1

Sample Location: JER-2-684

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	UNDMH	SVOA-SIM 8270					Charge Number
										X6MD
210420103IA	3		X							
1032A (FB)	3		X							
1033A ~~EFB~~	1			X						
1034A (FB)	1			X						
1035A	1				X					
1036A (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	4.20.21/1100		[signature]	4-21-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & windy. this well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. 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 @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.82 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (Ft.)
1) 210413 1350C	21.38	1.097	5.40	-4	8.50	0.51	411.82
2) ——— 1353C	21.45	1.083	5.25	-3	8.48	0.42	411.82
3) ——— 1356C	21.42	1.078	5.09	-3	8.48	0.33	411.82

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210413 1400C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1401C	" (FB)	"	"	"	"
——— 1402C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
——— 1403C	*" (M.S.)*	"	"	"	"
——— 1404C	*" (MSD)*	"	"	"	"
——— 1405C	" (FB)	"	"	"	"
——— 1406C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial DTW - 411.70ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/13/21 — Date

Jeri Munch — Signed — 4.14.21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/13/21 Page 1 of 1

Sample Location: JP-1-424

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Total Metals					Charge Number
210413 1400C	3	A	✓							XGMD
1401C (FB)	3	A	✓							"
1402C	1	A		✓						"
1403C (MS)	1	A		✓						"
1404C (MSD)	1	A		✓						"
1405C (FB)	1	A		✓						"
1406C	2	A			✓					"

Pertinent Notes (if any)

Sample Location:

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

Pertinent Notes (if any)

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Tenno	4/13/21 1520 hrs.			4-14-21 0900

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

ob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. This well ll be purged using a dedicated bladder pump. Samples will be collected using eflon discharge hose. Water quality parameters will be monitored ing a QED MP-20 flow cell and water analyzer. Carboy C3 in use.

alibrations
O - calibrated in saturated air @ 641 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
I - calibrated using Fisher buffers (7-10).
rbidity meter #20 std-5.71 rdg-5.82 lot-91017 Exp-4/30/21

rameters (time)	temp (°c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
210413 0950C	20.06	1.143	5.55	7.84	49	0.44	412.82
—— 0953C	20.14	1.138	5.16	7.85	49	0.40	412.82
—— 0956C	20.21	1.129	4.90	7.85	49	0.26	412.82

Samples

ample	Analysis	Preservative	Container	Lot	Lab
20413 1000C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1001C	" (FB)	"	"	"	"
—— 1002C	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
—— 1003C	* " (MS) *	"	"	"	"
—— 1004C	Low Level NDMA	"	"	"	"
—— 1005C	" (FB)	"	"	"	"
—— 1006C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 1007C	Anions/Alk.	ice	"	N/A	"
—— 1008C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 1009C	Perchlorate by 6850	"	"	"	"
—— 1010C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial ~~Parameter~~ cd
DTW — 412.77 Ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/13/21 Date

Jon Munch — Signed — 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/13/21 Page 1 of 1

Sample Location: JP-2-447

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
Pertinent Notes (if any)										
210413 1000C	3	A	✓							XGMD
1001C (FB)	3	A	✓							"
1002C	1	A		✓						"
1003C (MS)	1	A		✓						"
1004C	1	A			✓					"
1005C (FB)	1	A			✓					"
1006C	2	A				✓				"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perchlorate	NO_2/NO_3				Charge Number
Pertinent Notes (if any)										
210413 1007C	2	A	✓							XGMD
1008C	1	A		✓						"
1009C	1	A			✓					"
1010C	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Ferrel	4/13/21 1120hrs.		Jon Lunch	4-14-21 / 0900

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

Bob Tufts & Craig Del Ferraro 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 and water analyzer. Carboy G3 in use. Packer inflated and holding at 28psi.

Calibrations
DO - calibrated in saturated air @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std-5.71 rdg-5.81 lot-91017 Exp-4/30/21

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
104150750C	VOA by 8260 LL	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0751C	Low Level NDMA	ice	(1)1L Amber	N/A	SRI

Parameters (time)	temp(°C)	cond(ms/cm)	DO	PH	ORP	Turb(NTU's)
2104150855C	20.02	1.096	5.01	8.43	61	0.31
——— 0858C	20.14	1.101	4.91	8.40	61	0.29
——— 0901C	20.22	1.098	4.63	8.40	60	0.26

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
104150905C	VOA by 8260 LL	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0906C	" (FB)	"	"	"	"
——— 0907C	Low Level NDMA	ice	(1)1L Amber	N/A	SRI
——— 0908C	" (FB)	"	"	"	"

No depth to water available.
Purging will be set on a long refill cycle to minimize drawdown.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/15/21 — Date — Signed — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/15/21 Page 1 of 1

Sample Location: JP-3-509

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA	Charge Number
210415 0750C (TB)		3	A	✓		XGMD
0751C (TB)		1	A		✓	"
0905C		3	A	✓		"
0906C (FB)		3	A	✓		"
0907C		1	A		✓	"
0908C (FB)		1	A		✓	"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/15/21 1120 hrs.		[signature]	4-19-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & 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 a QED MP-20 Flow cell and water analyzer. Carboy G3 in use. Packer inflated and holding at 28psi.

Calibrations

DO - calibrated in saturated air @ 638 mm Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.81 lot - 91017 Exp - 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
1) 210415 1025C	20.42	0.678	5.97	23	8.75	0.62
2) ——— 1028C	20.54	0.689	5.43	24	8.71	0.55
3) ——— 1031C	20.62	0.693	5.12	24	8.68	0.47

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210415 1035C	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1036C	" (FB)	"	"	"	"
——— 1037C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
——— 1038C	" (FB)	"	"	"	"

* No depth to water available. Purging will be set on a long refill cycle to minimize drawdown.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/15/21 — Date

Signed — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/15/21 Page 1 of 1

Sample Location: JP-3-689

Analytical Requirement: 8260 LL; LL NDMA

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Charge Number
210415 1035C	3	A	✓		XGMD
1036C (FB)	3	A	✓		4
1037C	1	A		✓	4
1038C (FB)	1	A		✓	4

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 Fermo	4/15/21 1120 hrs.			4-19-21 / 0900

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

WSTF 381C (05/2016)

Al Montes & Tony Tocce present. The well will be sampled from a dedicated sample port located next to the well head. Sample port will be purged for 1 min prior to sampling.

PARAMETERS

210415	1430
pH	7.76
Temp	26.8°c
Cond	1057
Turb	21.7 / 23.8 / 22.4
pH pre	7.04 / 10.05 (25.5°c)
pH post	7.05 / 10.04

METER ID's
pH/cond #12
Turb # 21
" STD = 57.0
" Rdg = 56.4
" LOT # = 910717
" Exp = 4-30-21

SAMPLES

SAMPLE #	Analysis	Preserv	LOT #	Cont	Lab
210415 1431	8260	Ice/HCl	2573-2	(3) 40ml vials	ALS
— 1432	"	"	"	"	"
— 1433	607	Ice	108501	(1) LT Amber	SVL
— 1434	Total metals	Ice/HNO_3	N/A	(2) 125ml p.b.	ALS
— 1435	Anions/Alk	Ice	"	" "	"
— 1436	TDS	"	"	(1) "	"
— 1437	Perchlorates	"	"	" "	"
— 1438	NO2/NO3	Ice/H_2SO_4	"	(1) 250ml p.b.	"
					"

Continued from page

Read and Understood By

T. [signature] Signed — 4.15.21 Date — [signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-2

Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals	Anions / Alk	TDS	Perchlorates		Charge Number: XGMD
Sample Number										
210415 1431			X							
1432 FB			X							
1433				X						
1434					X					
1435						X				
1436							X			
1437								X		

Sample Location:

Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: NO2/NO3							Charge Number
Sample Number										
1438			X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4.15.21 / 1600			4-19-21 / 0900

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

AC montes + Tony Tower present. Samples will be collected from the dedicated sample port located next to well head. Sample port will be purged for 1 min prior to TB sampling. Carboy

PARAMETERS

~~tp~~ 210415 0925
pH 7.76
Temp 23.6
Cond 1158 µs/cm
Turb 0.92 NTU's
pH pre 7.05 / 10.01 (20.4°C
pH post

METER I.D's

pH/cond = 12
Turb #21
" std = 57.0 NTU's
" rdg = 56.4 NTU's
" LOT # 91017
" Exp: 4/30/21

SAMPLES

Sample #	Analysis	Preserv	LOT #	Cont	Lab
210415 0930	8260	HCl/HCl	2573	(3) 40ml vials	ALS
0931	" (FIB)	"	"	"	"
0932	6007	ICE	108501	(1) 1 LTAmber	SRL

Continued from page

Read and Understood By

T. D. — Signed — 4.15.21 Date

Jon Munch — Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-3

Pertinent Notes (if any)

Analytical Requirement: 8260, 6007

Charge Number: XGMD

Sample Number	# of Containers	Sample Matrix*	8260	6007						Charge Number
210415 0930	3	A	X							
0931 (FB)	3	A	X							
0932	1	A		X						

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Charge Number

Sample Number	# of Containers	Sample Matrix*								

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D.	4-15-21 / 1100		[signature]	4-19-21 / 0900

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

Al Montes & Tony Torres present. This well will be sampled from a dedicated sample port located next to the well head. Sample port will be purged for 1 min prior to sampling.

Parameters

210415-0949
pH 7.27
Cond 1100
Turb 11.3 NTU's
Temp 24.2
pH pre 7.03/10.01 (20.5°C)
pH post 7.04/10.00

Meter ID's

pH/Cond = 12
Turbo # 21
" Std = 57.0
" Rdg = 560.4
" Exp = 9/01/7
" Exp = 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210415-0950	8260	Iced	2573-7	(3) 40ml Vials	ALS
0951	" (FB)	"	"	"	"
0952	" (Dup)	"	"	"	"
0953	607	Ice	108507	(1) 1 Liter Amber	ALS
0954	" (Dup)	"		"	

Continued from page

Read and Understood By

T. [signature] Signed — 4-15-21 Date

[signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PTE-44

Analytical Requirement: 8260 | 607

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607						Charge Number
										XGmD
210415 0950	3	A	X							
0951 FB	3		X							
0952 Dup	3		X							
0953	1			X						
0954 Dup	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:
J. D	4/15/21/1100			4-19-21 /0900

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

AL MONTES & TONY TORRES PRESENT. THIS WELL WILL BE SAMPLED USING A SAMPLE PORT LOCATED @ THE WELL HEAD. THE SAMPLE PORT WILL BE PURGED FOR 1 min Carboy 6.

PARAMETERS

210415 1033
pH 7.75
COND 951
TEMP 25.3°C
TURB 2.56 NTU's
pH PRE 7.05/10.00 (21.8°C
pH POST 7.04/10.03

METER ID's

pH/COND = 12
TURB # 21
" STD = 5.7.0
" Rdg = 56.4
" LOT # = 91017
" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210415 1030	8260	ICE/HCl	2573-2	(3) 40ml VOAs	ALS
1031	"	"	"	~~(1) 1LT Amber~~ "	"
1032	607	ICE	108501	(1) 1LT Amber	SRL

Continued from page

Read and Understood By

T. [signature] 4.15.21
Signed Date

[signature] 4-19-21
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-5

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6007						Charge Number
Pertinent Notes (if any)										X6mS
210415 1030	3	A	X							
1031 FB	3		X							
1032	1	L		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-DB	4-15-21 / 1100		[signature]	4-19-21 / 0900

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

PROJECT Pfe-7

Notebook No. PFS #9

Continued from page _____

AL MONTES & TONY TORREZ PRESENT. SAMPLES COLLECTED FROM A DEDICATED SAMPLE PORT LOCATED NEAR THE WELL HEAD. SAMPLE PORT WILL BE PURGED FOR 1 MIN PRIOR TO SAMPLING

PARAMETERS	
210415	1315
pH	8.55
Temp	24.9 °C
Cond	1102 uS/cm
Turb	1.89 NTUs
pH pre	10.06 / 7.01 (24.5 °C)
pH post	7.04 / 10.05

METER ID's

pH / cond = 12

Turb # 21

" STD = 57.0

" Rdg = 56.4

" Lot # = 91017

" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS		PRESERV	LOT #	CONT	LAB
210415	1320	8260	ICE HCl	2573-2	(3) 40 mL VIALS	ACS SRL
———	1321	" (FB)	"	"	"	"
———	1322	8011	ICE	108501	(1) LGT AMBER	"
———	1323	LL NAPHA	"	"	"	"
———	1324	" (FB)	"	"	"	"
———	1325	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 4-15-21 Date

[signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-7

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6007	1CW034					Charge Number
										XGMD
210415 1320	3	A	X							
1321 FB	3		X							
1322	1			X						
1323	1				X					
1324	1				X					
1325	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. Dy	4-15-21 / 1600		Jon W Lunch	4-19-21 / 0900

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

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 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 #20 std - 5.71 rdg - 5.67 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210419 1300C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1301C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI

Parameters (time)	temp (c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 210419 1445C	21.67	1.024	6.19	8.87	8	1.13	486.20
2) ——— 1448C	21.78	1.016	5.95	8.84	10	0.95	486.20
3) ——— 1451C	21.90	1.012	5.70	8.80	13	0.91	486.20

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210419 1455C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1456C	u (Dupl.)	u	u	u	u
——— 1457C	u (FB)	u	u	u	u
——— 1458C	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
——— 1459C	Low Level NDMA	u	u	u	u
——— 1500C	u (FB)	u	u	u	u
——— 1501C	Total Metals	ice/HNO_3	(2) 125ml poly's	19-11-29	ALS
——— 1502C	Anions/Alk.	ice	u	N/A	u
——— 1503C	TDS by SM2540C	u	(1) 125ml poly	u	u
——— 1504C	Perchlorate by 6850	u	u	u	u
——— 1505C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	u

Initial DTW - 486.14ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

4/19/21
Date

Jon Mundt
Signed

4-20-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/19/21 Page 1 of 1

Sample Location: PL-1-486

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
Pertinent Notes (if any)										
210419 1300C (TB)	3	A	✓							XGMD
1301C (TB)	1	A			✓					"
1455C	3	A	✓							"
1456C (Dupl.)	3	A	✓							"
1457C (FB)	3	A	✓							"
1458C	1	A		✓						"
1459C	1	A			✓					"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	LL NDMA	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3		Charge Number
Pertinent Notes (if any)										
210419 1500C (FB)	1	A	✓							XGMD
1501C	2	A		✓						"
1502C	2	A			✓					"
1503C	1	A				✓				"
1504C	1	A					✓			"
1505C	1	A						✓		"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Deltuno	4/19/21 1620hrs			4-20-21 / 0900

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

PROJECT PL-6-545 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page _____

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use Probe # 2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1335y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1336y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters

Time - 2104081407y
PH - 8.43
Temp - 24.8°c
Cond - 998 us/cm
Turb - 1.30 NTU's
pHpre - 6.97/10.01 (28.0°c)
pHpost - 6.95/9.99
DTW - 468.34 ft.
Atmos - 12.36 psia

Final

Time - 2104081525y
PH - 8.34
Temp - 24.5°c
Cond - 1009 us/cm
Turb - 0.88 NTU's
pHpre - 6.94/9.98 (29.7°c)
pHpost - 6.96/10.01
DTW - 468.45 ft.
Atmos - 12.38 psia
IDW - ½ gal.

Meter ID

pH/Cond - 61
Turb - 7
" Std - 6.27
" rdg - 6.26
" lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1435y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1436y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1500y	Low Level NDMA	"	"	"	"
——— 1501y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)	4)
	49.33	49.35	49.34	49.25
	56.15	56.14	56.16	56.17
	56.13	56.14	56.16	56.13
	49.38	49.34	49.37	49.21

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/8/21 — Date

Signed — 4-12-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/8/21 Page 1 of 1

Sample Location: PL-6-545

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210408133 5y (EB)	3	A	✓							XGMD
1336y (EB)	1	A			✓					"
1435y	3	A	✓							"
1436y	1	A		✓						"
1500y	1	A			✓					"
1501y	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	4/8/21 1550hrs.			4-12-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210408 0925Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0926Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters	Final	Meter ID		
Time - 2104081000Y	Time - 2104081116Y	pH/cond - 61		
PH - 8.21	PH - 8.15	Turb - 7		
Temp - 23.5°C	Temp - 23.3°C	"	Std - 6.27	
Cond - 965 us/cm	Cond - 958 us/cm	"	rdg - 6.26	
Turb - 1.51 NTU's	Turb - 1.17 NTU's	"	lot - 91017	
pHpre - 7.06/10.10 (19.3°C)	pHpre - 7.01/10.06 (21.0°C)	"	Exp - 4/30/21	
pHpost - 7.03/10.11	pHpost - 7.01/10.04			
DTW - 468.15ft.	DTW - 468.34ft.	Buffers	Lot	Exp
Atmos - 12.28psia	Atmos - 12.25psia	7	4002G91	8/21
	IDW - 1/2 gal.	10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1025Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1026Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1050Y	Low Level NDMA	"	"	"	"
——— 1051Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1115Y	" (Dupl.)	"	"	"	"

Runs	1)	2)	3)	4)
	128.04	127.99	127.95	127.94
	135.05	135.12	135.11	135.10
	135.04	135.12	135.10	135.12
	128.09	127.99	127.99	127.98

Continued from page

Read and Understood By

Craig Del Ferraro 4/8/21

Signed Date

Lori Munch 4-12-21

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/8/21 Page 1 of 1

Sample Location: PL-6-725

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals			Charge Number
Pertinent Notes (if any)									
210408 0925Y (EB)	3	A	✓						XGMD
0926Y (EB)	1	A			✓				"
1025Y	3	A	✓						"
1026Y	1	A		✓					"
1050Y	1	A			✓				"
1051Y	2	A				✓			"
1115Y (Dup.)	2	A				✓			"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig del Fierro	4/8/21 1135 hrs.		[signature]	4-12-21 / 0900

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

PROJECT PL-10-484 WJI ENV-0020 Notebook No. D64#127 (y)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & breezy. This zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210406084 5Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0846Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters

Time - 2104060920Y
PH - 8.49
Temp - 22.1°C
Cond - 1102 us/cm
Turb - 0.88 NTU's
pHpre - 7.10/10.08 (16.9°C)
pHpost - 7.12/10.07
DTW - 463.61 ft.
Atmos - 12.44 psia

Final

Time - 2104061037Y
PH - 8.43
Temp - 22.5°C
Cond - 1085 us/cm
Turb - 0.80 NTU's
pHpre - 7.05/10.03 (19.1°C)
pHpost - 7.03/10.05
DTW - 463.69 ft.
Atmos - 12.42 psia
IDW - ½ gal.

Meter ID

pH/Cond - 61
Turb - 7
" std - 6.27
" rdg - 6.36
" lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2104060945Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0946Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI
——— 0947Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	901121-06	ALS
——— 1010Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1011Y	Anions/Alk.	ice	"	N/A	"
——— 1012Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1035Y	Perchlorate by 6850	"	"	"	"
——— 1036Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Runs	1)	2)	3)	4)
	24.37	24.39	24.37	24.36
	22.19	22.16	22.18	22.18
	22.16	22.15	22.16	22.20
	24.37	24.34	24.36	24.37

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/6/21 — Date

Jon Mundt — Signed — 4-7-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/6/21 Page 1 of 1

Sample Location: PL-10-484

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Dioxane	Total Metals	Anions/Alk.			Charge Number
210406 0845Y (EB)	3	A	✓							XGMD
0846Y (EB)	1	A		✓						"
0945Y	3	A	✓							"
0946Y	1	A		✓						"
0947Y	1	A			✓					"
1010Y	2	A				✓				"
1011Y	2	A					✓			"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
210406 1012Y	1	A	✓							XGMD
1035Y	1	A		✓						"
1036Y	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terme	4/6/21 1120hrs.		[signature]	4-7-21 /0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, warm, & windy. this zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks- Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210405 1355Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1356Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters	Final	Meter ID	
Time- 2104051430Y	Time- 2104051524Y	pH/cond - 61	
PH - 8.25	PH - 8.36	Turb - 7	
Temp - 25.1°C	Temp - 24.8°C	" std - 6.27	
Cond - 1107us/cm	Cond - 1117us/cm	" rdg - 6.32	
Turb - 1.41 NTU's	Turb - 1.04 NTU's	" lot - 91017	
pHpre - 6.97/10.03 (28.1°C)	pHpre - 6.94/10.01 (28.8°C)	" Exp - 4/30/21	
pHpost - 6.99/10.03	pHpost - 6.96/10.03		
DTW - 463.48ft.	DTW - 463.61ft.	Buffers	Lot / Exp
Atmos - 12.48psia	Atmos - 12.49psia	7	4002691 / 8/21
	IDW - 1/2 gal.	10	4001D05 / 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210405 1455Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1456Y	*" (MS)*	"	"	"	"
——— 1457Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI
——— 1458Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	051820-18MC	ALS
——— 1459Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1520Y	Anions/ A/K.	ice	"	N/A	"
——— 1521Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1522Y	Perchlorate by 6850	"	"	"	"
——— 1523Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Runs	1)	2)	3)
	71.28	71.34	71.23
	69.02	69.09	69.03
	68.99	69.09	69.02
	71.33	71.32	71.18

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/5/21 — Date

Jon Munch — Signed — 4-6-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 1 of 1

Sample Location: PL-10-592

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Dioxane	Total Metals				Charge Number
210405 1355y (EB)	3	A	✓							XGMD
1356y (EB)	1	A		✓						"
1455y	3	A	✓							"
1456y (MS)	3	A	✓							"
1457y	1	A		✓						"
1458y	1	A			✓					"
1459y	2	A				✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk	TDS	Perchlorate	NO_2/NO_3				Charge Number
210405 1520y	2	A	✓							XGMD
1521y	1	A		✓						"
1522y	1	A			✓					"
1523y	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/5/21 1540hrs			4-6-21 / 0830

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. this zone will be sampled using 2 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling. Sampling event delayed due to strong, gusty winds.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210401 1415Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1416Y	Low Level NDMA	ice	(1) 1L Amber	01242015	SRI

Initial Parameters
Time - 210401 1450Y
PH - 8.47
Temp - 22.8°C
Cond - 1011 us/cm
Turb - 3.75 NTU's
pH pre - 7.04 / 10.09 (22.7°C)
pH post - 7.04 / 10.07
DTW - 462.95 ft.
Atmos - 12.42 psia

Final
Time - 210405 0900Y
PH - 8.53
Temp - 21.6°C
Cond - 1027 us/cm
Turb - 2.83 NTU's
pH pre - 7.06 / 10.09 (19.4°C)
pH post - 7.05 / 10.11
DTW - 463.26 ft.
Atmos - 12.45 psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 61
Turb - 7
" Std - 6.27
" rdg - 6.34
" Lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210401 1515Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1516Y	607/Bromacil	ice	(1) 1L Amber	01242015	SRI
210405 0830Y	Low Level NDMA	"	"	"	"
——— 0831Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0832Y	Anions / Alk.	ice	"	N/A	"
——— 0833Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0834Y	Perchlorate by 6850	"	"	"	"
——— 0835Y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)	4)
	167.45	167.44	167.37	167.34
	167.65	167.70	168.33	168.26
	167.61	167.69	168.29	168.21
	167.40	167.40	167.37	167.32

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/5/21 — Date

Jon Munch — Signed — 4-6-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/21 Page 1 of 2

Sample Location: PL-10-813

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA					Charge Number
210401141SY (EB)	3	A	✓							XGMD
1416Y (EB)	1	A			✓					u
1515Y	3	A	✓							u
1516Y	1	A		✓						u

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	4/1/21 ~~1335~~ CD 1535 hrs.		Jon Lund	4-6-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 2 of 2

Sample Location: PL-10-813

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL UDMH	Total Metals	Anions/Alk.	TDS	Perchlorate	NO2/NO3	Charge Number
210405 0830Y	1	A	✓						XGMD
0831Y	2	A		✓					"
0832Y	2	A			✓				"
0833Y	1	A				✓			"
0834Y	1	A					✓		"
0835Y	1	A						✓	"

Pertinent Notes (if any)

Sample Location:

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

Pertinent Notes (if any)

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Torro	4/5/21 1120 hrs.	Jon W Munch	4-6-21 / 0830

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

Bob Tufts & Craig Del Ferrero present. Weather is clear, warm, & breezy. this zone will be sampled using 2 triple rinsed, stainless steel sample tubes, Gen. in use. Probe#4951. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210405 0740Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0741Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210405 0940Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0941Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters
Time - 2104051025Y
PH - 8.77
Temp - 24.4°C
Cond - 1014us/cm
Turb - 1.40 NTU's
pHpre - 7.04 / 10.06 (22.4°C)
pHpost - 7.01 / 10.05
DTW - 463.26ft.
Atmos - 12.42psia

Final
Time - 2104051310Y
PH - 8.67
Temp - 24.4°C
Cond - 1030 us/cm
Turb - 1.17 NTU's
pHpre - 6.98 / 10.02 (27.3°C)
pHpost - 6.95 / 10.03
DTW - 463.48 Ft.
Atmos - 12.40psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 61
Turb - 7
" std - ~~4.60~~ 6.27 CO
" rdg - 6.32
" Lot - 9/017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2104051050Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1051Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1052Y	Low Level NDMA	"	"	"	"
——— 1305Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1306Y	Anions/Alk.	ice	"	N/A	"
——— 1307Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1308Y	Perchlorate by 6850	"	"	"	"
——— 1309Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/5/21 — Date

Peter Munch — Signed — 4-6-21 — Date

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PROJECT PL-10-962 WJF ENV-0020

Notebook No. D64 # 127(4)

Continued from page 77

Runs

1)	2)	3)
231.91	231.89	231.86
239.09	239.07	239.09
239.09	239.06	239.08
231.89	231.92	231.83

Continued from page

Read and Understood By

Craig Del Zenno
Signed

4/5/21
Date

Signed

4-6-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 1 of 1

Sample Location: PL-10-962

Analytical Requirement: 8260 LL | 607 | LL NDMA

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
210405 0740Y (TB)	3	A	✓							XGMD
0741Y (TB)	1	A			✓					4
0940Y (EB)	3	A	✓							4
0941Y (EB)	1	A			✓					4
1050Y	3	A	✓							4
1051Y	1	A		✓						4
1052Y	1	A			✓					4

Sample Location:

Analytical Requirement: Total Metals | Anions/Alk. | TDS | Perchlorate | NO_2/NO_3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
210405 1305Y	2	A	✓							XGMD
1306Y	2	A		✓						4
1307Y	1	A			✓					4
1308Y	1	A				✓				4
1309Y	1	A					✓			4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/5/21 1540hrs.		[signature]	4-6-21 /0830

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

OJECT ST-1-473 WJI ENV-0053

Notebook No. D32 #121 (c)

Continued from page _____

ob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This well ill be purged using a dedicated bladder pump. Samples will be collected sing a Teflon discharge tube. 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 @ 639mm/Hg.
onductivity - calibrated using 1413 us/cm std. Solution.
H - calibrated using Fisher buffers (7-10).
urbidity meter #20 std - 5.71 rdg - 5.80 lot-91017 Exp-4/30/21

rameters (time)	temp (°c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
210412 0920C	20.22	1.138	5.13	7.82	36	0.81	470.63
—— 0923C	20.34	1.150	4.98	7.83	36	0.70	470.63
—— 0926C	20.39	1.156	4.72	7.82	35	0.66	470.63

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210412 0930C	VOA by 8260	ice/HCl	(3) 40ml vials	2573-1	ALS
—— 0931C	" (Dupl.)	"	"	"	"
—— 0932C	" (FB)	"	"	"	"
—— 0933C	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
—— 0934C	" (Dupl.)	"	"	"	"
—— 0935C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 0936C	Anions/Alk.	ice	"	N/A	"
—— 0937C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 0938C	Perchlorate by 6850	"	"	"	"
—— 0939C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

nitial DTW - 470.60ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/12/21 — Date

Signed — 4-13-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/12/21 Page 1 of 1

Sample Location: ST-1-473

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions / Alk				Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210412 0930C	3	A	✓							XGMD
0931C (Dupl.)	3	A	✓							"
0932C (FB)	3	A	✓							"
0933C	1	A		✓						"
0934C (Dupl.)	1	A		✓						"
0935C	2	A			✓					"
0936C	2	A				✓				"

Sample Location: ·

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210412 0937C	1	A	✓							XGMD
0938C	1	A		✓						"
0939C	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/12/21 1120 hrs.		[signature]	4-13-21 / 0915

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

OJECT ST-7.453 ENV.0000 TJ

Notebook No. D32#120(A)

Continued from page _____

AM HALVORSEN & TONY TORAER PRESENT. THE WEATHER IS CLEAR & HOT. THIS ZONE WILL BE SAMPLED & PURGED USING A FLATE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22Bpsi & SAMPLE PRESSURE @ 20psi. BUBBLER SET @ 3psi & STABLE @ 8psi. THE FIRST 350 ml's OF SAMPLE WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION.

	INITIAL	FINAL
	210406 ~~0915A~~ 0915A	210406 0930A
pH	~~8.65~~ 8.67	8.65
Temp	18.8	18.7
Cond	1304 µs/cm	1301 µs/cm
Turb	~~+0.2~~ 0.58 NTU's	0.65
pH pre	7.08 / 9.98 (19.6)	7.10 / 10.03 (19.9°C)
pH post	7.10 / 10.03	7.09 / 10.01

METER ID's
pH / Cond = 73
Turb # 20
" std = 5.71
" adj = 5.65
" Lot # = 91017
" Exp = 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210406 0916A	8260 full	ICE/HCl	2573-2	(3) 40 ml VOA's	ALS
0917A	" (FB)	"	"	"	"
0918A	" MDMA	ICE	108501	(1) LT Amber	SRL
0919A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T-D
Signed

4-6-21
Date

Ron Munch
Signed

4-7-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ~~ST-7-453~~ 4/6/21 Page 1 of 1

Sample Location: ST-7-453

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	LLNDMA						Charge Number
										XGMD
210406 0916A	3	A	X							
0917A (f3)	3	A	X							
0918A	1	A		X						
0919A f3	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-Dg	4/6/21 / 1100		John M Munch	4-7-21 / 0900

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

DAN HALVORSEN & TONY TORCH PRESENT. THE WEATHER IS CLEAR & HOT. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 8psi & SAMPLE PRESSURE SET @ 20 7psi. BUBBLER SET @ 3psi & STABLE @ 8psi. THE ~~FIVE~~ FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION.

	INITIAL	FINAL
	210406 0855A	210406 0840A
pH	8.62	8.63
TEMP	18.0°C	18.4°C
COND	1286 µs/cm	1288 µs/cm
TURB	1.02 NTU's	0.96 NTU's
pH PRE	7.02 / 9.99 (19.2)	7.10 / 10.05 (19.6)
pH POST	7.03 / 10.00	7.08 / 10.05

METER ID's

pH/COND 73

TURB # 20

" STD 5.71

" RDG 5.65

" LOT # 91017

" EXP 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210406 0835A	8260 (11)	HCl	2573-2	(3) 40ml VIALS	ALS
— 0836A	" (FB)	"	"	"	"
— 0837A	6010A	HNO3	108501	(1) 1LT AMBER	SAI
— 0838A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 4.6.21 Date

[signature] Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST. 7-544

Analytical Requirement: 8260 (C), (C) NDMA

Charge Number: XGMD

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 (C)	(C) NDMA						
210406 0935A	3	A	X							
0936A (F.B)	3		X							
0937A	1			X						
0938A (F.B)	1			X						

Sample Location:

Analytical Requirement

Charge Number

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D.	4/6/21 / 1100			4-7-21 / 0900

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

PROJECT ST-7-779

Notebook No. D32#120 (A)

Continued from page _____

DAN HALVERSON & TONY TORR PRESENT, THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE SAMPLED WITH A DEDICATED TEFLON DISCHARGE TUBE. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. PURGE PRESSURE SET @ 22 PSI & SAMPLE PRESSURE SET @ 20 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING.

INITIAL	FINAL
210406 0905A	210406 0955A
pH 8.85	8.86
Temp 18.9°c	18.8°c
Cond 1143 µs/cm	1140 µs/cm
Turb 1.27 NTU's	1.33 NTU's
pHpre 7.02/9.95 (19.6°c)	7.01/10.00 (19.7)
phpost 7.02/10.01	7.00/10.01

METER ID's
pH/Cond = 73
Turb # 20
" STD = 5.71
" Adj = 5.65
" CAL # = 9/0/17
" Exp = 4/30/21

SAMPLES

SAMPLE #	Analysis	PRESERV	LOT #	CONT	Lab
~~2HCl~~ 210406 0945A	8260d(1	ICE/HCl	2573-2	(3) 40ml VOA's	ALS
0946A	" (FB)	"	"	"	"
0947A	(1 NAOH A	ICE	108501	(1) 1LT Amber	SR#
0948A	" (FB)	"	"	"	

Continued from page

Read and Understood By

T. [signature] Signed — 4-6-21 Date

[signature] Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST-7-779

Sample Number	# of Containers	Sample Matrix*	8260C	LCN34						Charge Number
Pertinent Notes (if any)										X6mD
210466 0945A	3	A								
0946A (FB)	3	A								
0947A	1	A								
0948A (FB)	1	A								

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4-6-21 / 1100			4-7-21 / 0900

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

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. THE SAMPLES WILL BE COLLECTED FROM A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 228 psi & SAMPLE PRESSURE SET @ 207 psi. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLING.

	INITIAL	FINAL
	210406 0911A	210406 1008A
pH	8.76	8.77
TEMP	17.4°C	17.8°C
COND	1033 µs/cm	1035 µs/cm
TURB	0.73 NTU's	0.65
pH PRE	7.08/10.04 (19.5°C)	7.03/9.98 (19.6°C)
pH POST	7.10/10.02	7.02/10.01

METER ID's
pH/COND 73
Turb # 80
" STD 5.71
" Adj 5.65
" LOT# 91017
" EXP 4/30/21

SAMPLES

SAMPLE#	ANALYSIS		PRESERV	LOT #	CONT	LAB
210406 1000A	8260011		ICE/HCl	2573-2	(3) 40ml VIAL	ALS
" 1001A	"	(FB)	"	"	"	"
" 1002A	11 NDMA		ICE	108501	(1) LT AMBER	SRL
" 1003A	"	(FB)	"	"	"	"

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Read and Understood By

T. [signature] Signed — 4-6-21 Date

Dan Halvorsen Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST-7-570

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LCXMA						Charge Number
										XGMD
210406 1000A	3	A	X							
1001A (FB)	3	A	X							
1002A	1	A		X						
1003A (FB)	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:
T.	4-6-21 / 1100			4-7-21 / 0900

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

A(MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON TUBE. PURGE PRESSURE SET @ 224PSI & SAMPLE PRESSURE SET @ 203PSI. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION. BUBBLER SET @ 3PSI & STABLE @ 4PSI, CARBOY 6.5 KIM KOODY PRESENT ON 4.13.21.

	INITIAL	FINAL
	210413085SA	210413091SA
pH	8.84	8.84
Temp	18.9°C	18.9°C
Cond	1149 us/cm	1150 us/cm
Turb	0.95 NTU	0.97 NTU
ph pre	6.91 - 9.89 (18.5°)	6.92 - 9.90 (18.9°C)
ph post	6.95 - 9.91	6.93 - 9.99

METER ID's
pH/cond = 12
Turb # 21
" Std = 57 NTU
" Rdg = 58.9 NTU
" LOT # = 91017
" Exp = 4.30.21

SAMPLES

SAMPLE #	Analysis	PRESERV	LOT #	CONT	LAB
210413090DA	8260 (11)	ICE/HCl	2573.1	(3) 40mL VIALS	ALS
0905A	" (FB)	"	"	"	"
0910A	(1) NDMA	ICE	108501	(1) 1LTAMBER	SRI
0911A	" (FB)	"	"	"	"

BLED OFF ALL ZONES @ 210413102O. (224PSI)

Continued from page NA

Read and Understood By

Signed 4.13.21 Date

Signed 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.13.21 Page 1 of 1

Sample Location: WW-5-459

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA LL 8260	LL 2DMA						Charge Number
										XGMD
210413 0900A	3	A	x							
0905A FB	3	A	x							
0910A	1	A		x						
0911A 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:
	4-13-21 1109AM			4-14-21 0900

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

PROJECT WW.5.579

Notebook No. D32#120(A)

Continued from page UA

AL MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 224 PSI & SAMPLE PRESSURE SET @ 203 PSI. BUBBLER SET @ 3 PSI & SABLE @ 4 PSI CARBOY 0.5

	INITIAL	FINAL
	210413 0914	210413 0923 A
pH	8.03	8.04
TEMP	19.0°C	19.1°C
COND	10.34 uS/cm	10.39 uS/cm
TURB	0.95 NTU	0.89 NTU
pH PRE	6.92-9.90 (19.9°C)	6.95-9.92 (20.1°C)
pH POST	6.93-9.91 (19.9°C	6.95-8.93

METER ID's
pH/cond = 12
Turb # = 21
" STD = 57 NTU
" STD = 5% 9 NTU
" LOT # = 91017
" EXP = 4.30.21

SAMPLES

SAMPLE #	Analysis	PRESERV	BOTT	CONT	LAB
210413 0915A	8260LL	HCL/HCl	2573.1	(3) 40 mL VOAs	ALS
0916A	" (FB)	"	"	"	"
0920A	LL NORM A	ICE	10850 1	(1) 1 L AMBER	SRL
0921A	" (FB)	"	"	"	

SLED OFF ZONE @ 210413 1020A. (224 PSI)

Continued from page NA

Signed

4-13-21
Date

Read and Understood By

Signed

4-14-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4·13·21 Page 1 of 1

Sample Location: WW·S·579

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL 8260	Analytical Requirement: LL 2054						Charge Number: XGMD
210413 0915A	3	A	x							
0916A FB	3	A	x							
0920A	1	A		x						
0921A 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:
	4.13.21 11:00			4-14-21 / 0900

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

AL MONITES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. SET PURGE PRESSURE @ 22 PSI & SAMPLE PRESSURE @ 20 PSI. BUBBLER SET @ 3 PSI & STABLE @ 4 PSI CARBOY G-5

INITIAL	FINAL
210413 0925A	210413 0933A
pH 8.27	8.28
Temp 18.9°C	18.7°C
Cond 974 uS/cm	969 uS/cm
Turb 0.50 NTU	0.47 NTU
pH pre 6.93-9.91 (19.8°C)	6.95-9.92 (20.1°C)
pH post 6.91-9.95	6.95-9.96

METER ID's
pH/cond = 12
Turb # 21
" STD = 57 NTU
" Hdg = 53.9 NTU
" Lot # = 51017
" Exp = 4.30.22

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210413 0926A	8260 (1)	ICE/HCl	2573.1	(3) 40 mL vials	ALS
— 0927A	" (FB)	"	"	"	"
— 0930A	ICN8MA	ICE	10850	(1) LT Amber	SNI
— 0931A	" (FB)	"	"	"	"

BLED off ZONE @ 210413 1020A. (22 PSI)

Continued from page NA

Read and Understood By

Signed — 4.13.21 Date

Signed — 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4·13·21 Page 1 of 1

Sample Location: NW-S-809

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	ONSOL	LL 2MA						Charge Number
										XGMD
210413 0926A	3	A	X							
0927A FB	3	A	X							
0930A	1	A		X						
0931A 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:
	4·13·21 11:00			4-14-21 0900

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

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ROJECT WW-5.909

Notebook No. D32#120(A)
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AL MORRIES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED USING A DEDICATED TEFLON DISCHARGE TUBE PURGE PRESSURE SET @ 224 PSI & SAMPLE PRESSURE SET @ 203 PSI. BLADDER SET @ 3 PSI & STABLE @ 4 PSI. DARBY 0.5

INITIAL	FINAL
210413 0935 A	210413 0950A
pH 7.98	7.99
TEMP 19.0°C	19.9°C
COND 1102 uS/cm	1121 uS/cm
TURB 1.62 NTU	1.80 NTU
pH PRE 6.93-9.95 (18.9°C)	6.94-9.96 (20.3C)
pH POST 6.95-9.96	6.96-9.97

METER ID'S
pH/COND = 12
TURB II 21
"STD = 57
"Rdg = 58.9
"LOT# = 91017
"EXP = 4.30.21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210417 0940A	8260 (11)	ICE/HCl	25.73.1	(3) VOAs	ALS
0941 A	" (FB)	"	"	"	"
0945 A	(11 NDMA	ICE	10850	(1) AMBER	SRL
0946A	" (FB)	"	"	"	

SHUT OFF ZONE @ 210413 1020A. (224 PSI)

Continued from page NA

Read and Understood By

Signed — Date 4.13.21

Signed — Date 4-14-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.13.21 Page 1 of 1

Sample Location: WW.S.909

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA						Charge Number: XGMD
210413 0940A	3	A	X							
0941A FB	3	A	X							
0945A	1	A		X						
0946A 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:
	4.13.21 11:00am			4-14-21 / 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 2021

NM 8800019434

Report Submitted: July 15, 2021

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 2021.
- The quantity and type of quality control samples collected or prepared in February 2021.
- 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

A significant increase in the number of SW-846 Method 8260 and Low Level Nitrosamine Method field and equipment blank detections in January and February 2021 prompted an investigation that revealed an inappropriate valve replacement in blank water carboys used in the field. The valve replacement was completed at the end of December 2020 and corrective action to reverse the valve replacement was taken immediately upon investigation and discovery at the end of February 2021. The field and equipment blank detections associated with this contamination source decreased significantly after corrective action was complete. No further corrective action is required.

2.2 Notable Anomalies

There were no notable anomalies, other than the blank contamination mentioned in Section 2.1, in the groundwater data associated with the February 2020 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in February 2021. 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 2021

Well ID	Event Date
400-EV-131	2/1/2021
400-GV-125	2/1/2021
ST-5-485	2/1/2021
ST-5-655	2/1/2021
400-JV-150	2/2/2021
BLM-32-543	2/2/2021
BLM-32-571	2/2/2021
BLM-32-632	2/2/2021
PL-7-560	2/2/2021
PL-7-630	2/2/2021
ST-2-466	2/2/2021
100-A-182	2/3/2021
300-B-166	2/3/2021
PL-7-480	2/3/2021

Well ID	Event Date
600-E-280	2/4/2021
BLM-23-431	2/4/2021
ST-4-589	2/4/2021
BLM-21-400	2/8/2021
PL-12-570	2/8/2021
PL-12-800	2/8/2021
B650-EFF-1	2/9/2021
B650-INF-1	2/9/2021
B655-EFF-2	2/9/2021
B655-INF-2	2/9/2021
MPE-1	2/10/2021
MPE-10	2/10/2021
MPE-11	2/10/2021
MPE-8	2/10/2021

Well ID	Event Date
MPE-9	2/10/2021
200-C-270	2/17/2021
ST-5-481	2/17/2021
200-C-170	2/18/2021
200-C-225	2/18/2021
300-A-170	2/18/2021
100-C-365	2/22/2021
200-F-370	2/22/2021
200-F-420	2/22/2021
200-F-225	2/23/2021
300-E-138	2/23/2021
300-E-183	2/24/2021

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	13	0	0	0	0	0	0
Nitrosamines by EPA Method 607	32	1	2	0	1	2	1
Perchlorate by SW-846 Method 6850	11	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	29	20	9	1	1	3	0
Low Level Volatile Organics by SW-846 Method 8260C	11	6	5	5	0	0	1
Semi-Volatile Organics by SW-846 Method 8270D	5	0	0	0	0	0	0
Anions by Various EPA Methods	11	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	22	2	2	0	1	2	0
Nitrosamines by Low-Level Method	15	10	5	7	1	2	0
Total Dissolved Solids by Standard Method 2540C	11	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Quantity February 2021	QC Quantity February 2021	QC % February 2021
VOA Duplicates	10	539	57	**11**	40	3	8
VOA Matrix Spikes	2	539	13	**2**	40	1	3
607 Duplicates	10	329	37	**11**	32	2	6
607 Matrix Spikes	2	329	8	**2**	32	1	3
607 Equipment Blanks	2	329	12	**4**	32	2	6
607 Field Blanks	2	329	10	**3**	32	1	3
NDMA_LL Duplicates	10	319	37	**12**	15	2	13
NDMA_LL Matrix Spikes	2	319	9	**3**	15	0	0
Metals Duplicates	10	235	26	**11**	22	2	9
Metals Matrix Spikes	2	235	6	**3**	22	0	0
Metals Equipment Blanks	5	235	13	**6**	22	2	9

Quality Control Requirement	Requirement %	Samp. Qty. since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Quantity February 2021	QC Quantity February 2021	QC % February 2021
Metals Field Blanks	5	235	15	**6**	22	2	9

Quality Control Requirement	Requirement %	Sample Events since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Events February 2021	QC Quantity February 2021	QC % February 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	538	538	**100%**	40	40	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	315	315	**100%**	15	15	100%

Quality Control Requirement	Requirement %	Shipments since 3/1/2020	TB Qty. since 3/1/2020	TB % since 3/1/2020	Shipments in February 2021	TB Quantity February 2021	QC % February 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	113	113	**100%**	7	7	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	112	112	**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	**13**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**102**	0	**1**	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**11**	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	**2092**	**2**	**1**	0	**4**	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**715**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**608**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**44**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**648**	**1**	**1**	0	0	0	0	0
Nitrosamines by Low-Level Method	**34**	**6**	**3**	**2**	**1**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**11**	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	**13**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**102**	0	**12**	0	0	0	0	0	0	**3**
Perchlorate by SW-846 Method 6850	**11**	0	0	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**4**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**2092**	0	0	0	0	0	0	0	0	**38**
Low Level Volatile Organics by SW-846 Method 8260C	**715**	0	0	0	0	0	0	0	0	**2**
Semi-Volatile Organics by SW-846 Method 8270D	**608**	0	0	0	0	0	0	0	0	0
Anions by Various EPA Methods	**44**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**648**	0	0	0	0	**3**	0	0	0	**136**
Nitrosamines by Low-Level Method	**34**	0	0	0	0	0	0	0	0	**5**
Total Dissolved Solids by Standard Method 2540C	**11**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-5-481	2/17/2021	For Low Level SW-846 Method 8260C, 2-butanone (MEK) (1.1 ug/L) and carbon disulfide (20 ug/L) were detected below the reporting limit with the exception of carbon disulfide and one unknown compound (7.1 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102171401B). No groundwater data are affected by this field blank contamination.
100-C-365	2/22/2021	For Low Level SW-846 Method 8260C, benzene (0.27 ug/L) was detected in the field blank (2102220946B) below the reporting limit. No groundwater data are affected by this field blank contamination.
B655-EFF-2	2/9/2021	For Low Level SW-846 Method 8260C, carbon disulfide (0.56 ug/L) was detected in the field blank (2102090855). No groundwater data are affected by this field blank contamination.
B650-EFF-1	2/9/2021	For Low Level SW-846 Method 8260C, carbon disulfide (0.69 ug/L) was detected in the field blank (2102091323). No groundwater data are affected by this field blank contamination.
ST-2-466	2/2/2021	For Low Level SW-846 Method 8260C, for sample 2102021501C the matrix spike recoveries of 1,1-dichloroethene (142%) and (142%) and trans-dichloroethene (132%) and (131%) were outside laboratory control limits (70-130%) and (73-118%). No groundwater data are affected by these elevated matrix spike recoveries.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, one unknown compound (5 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2102040700C). No groundwater data are affected by this trip blank contamination.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.1 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2102030730Y). No groundwater data are affected by this trip blank contamination.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 712878. No groundwater data are affected by this method blank contamination.
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
100-C-365	2/22/2021	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) 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	2/9/2021	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) 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	2/9/2021	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) 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-7-480	2/3/2021	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) 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-7-560	2/2/2021	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) 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	2/2/2021	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) 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-2-466	2/2/2021	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) 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	2/4/2021	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) 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	2/17/2021	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) 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-5-485	2/1/2021	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) 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-5-655	2/1/2021	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) 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-7-560	2/2/2021	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-7-630	2/2/2021	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-2-466	2/2/2021	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-5-485	2/1/2021	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-5-655	2/1/2021	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	2/9/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-560	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-630	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-2-466	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-5-481	2/17/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-5-485	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-5-655	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-5-655	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
BLM-21-400	**2/8/2021**	**For SW-846 Method 8260C in blind control sample (2102081115C), the percent recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (36%), trichloroethene (52%), tetrachloroethene (48%), and trichlorofluoromethane (40%) were outside of the standard limits (75-125%). Additionally, vinyl chloride (0.24 ug/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**
200-C-170	**2/18/2021**	**For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.44 ug/L), chloromethane (0.54 ug/L) and trichlorofluoromethane (CFC 11) (0.72 ug/L) were detected in the equipment blank (2102181430Y) below the reporting limit. Affected data are appropriately qualified.**
MPE-8	2/10/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.3 ug/L) was detected in the field blank (2102100932) below the reporting limit. No groundwater data are affected by this field blank contamination.
MPE-9	2/10/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.41 ug/L) was detected in the field blank (2102100917) below the reporting limit. No groundwater data are affected by this field blank contamination.
MPE-11	**2/10/2021**	**For SW-846 Method 8260C, 2-propanol (8.4 ug/L) was detected below the reporting limit and one unknown compound (5.9 ug/L) and silane, methoxytrimethyl- (5.1 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102101102). Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-21-400	2/8/2021	For SW-846 Method 8260C, carbon disulfide (0.75 ug/L) was detected in the field blank (2102080907C) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8260C, carbon disulfide (0.81 ug/L) was detected and hexanoic acid, 2-ethyl- (13 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102020948A). Affected data are appropriately qualified.**
BLM-23-431	2/4/2021	For SW-846 Method 8260C, carbon disulfide (0.84 ug/L) was detected and one unknown compound (5.7 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102041306C). No groundwater data are affected by this field blank contamination.
BLM-32-632	2/2/2021	For SW-846 Method 8260C, carbon disulfide (1.1 ug/L) was detected in the field blank (2102021011A). No groundwater data are affected by this field blank contamination.
B655-INF-2	2/9/2021	For SW-846 Method 8260C, carbon disulfide (1.3 ug/L) was detected and one unknown compound (5.7 ug/L) and 1-Hexanol, 2-ethyl- (34 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102090845). No groundwater data are affected by this field blank contamination.
PL-12-800	2/8/2021	For SW-846 Method 8260C, carbon disulfide (1.6 ug/L) and toluene (0.25 ug/L) were detected below the reporting limit with the exception of carbon disulfide and 1-hexanol, 2-ethyl- (140 ug/L) and acetic acid, 2-ethylhexyl ester (7.6 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102080951B). No groundwater data are affected by this field blank contamination.
MPE-1	2/10/2021	For SW-846 Method 8260C, carbon disulfide (11.0 ug/L) and toluene (0.29 ug/L) were detected below the reporting limit with the exception of carbon disulfide and one unknown compound (84 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102100902). No groundwater data are affected by this field blank contamination.
PL-12-570	2/8/2021	For SW-846 Method 8260C, carbon disulfide (5.0 ug/L) and toluene (0.3 ug/L) were detected below the reporting limit with the exception of carbon disulfide and 1-hexanol, 2-ethyl- (66.0 ug/L) and acetic acid, 2-ethylhexyl ester (8.6 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102081512B). No groundwater data are affected by this field blank contamination.
300-A-170	**2/18/2021**	**For SW-846 Method 8260C, carbon disulfide (9.0 ug/L) and chloromethane (0.61 ug/L) were detected in the field blank (2102181021B) below the reporting limit with the exception of carbon disulfide. Affected data are appropriately qualified.**
200-F-370	2/22/2021	For SW-846 Method 8260C, equipment blank 2102220915Y was inadvertently not shipped for analysis.
600-E-280	2/4/2021	For SW-846 Method 8260C, field duplicate samples 2102041310Y and 2102041311Y the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 6.7%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for trichloroethene (TCE) was 6.1%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for trichlorofluoromethane (CFC 11) was 13.3%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 11.9%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for trichlorofluoromethane (CFC 11) was 6.5%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for trichloroethene (TCE) was 2.6%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for tetrachloroethene (PCE) was 6.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8260C, hexanoic acid, 2-ethyl- (11 ug/L) was tentatively identified by a GC/MS library search in sample 2102020947A.**
BLM-32-571	**2/2/2021**	**For SW-846 Method 8260C, hexanoic acid, 2-ethyl- (6.1 ug/L) was tentatively identified by a GC/MS library search in sample 2102021002A.**
MPE-8	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (13 ug/L) and silane, fluorotrimethyl- (7.9 ug/L) were tentatively identified by a GC/MS library search in duplicate sample 2102100933.**
MPE-8	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (13 ug/L) was tentatively identified by a GC/MS library search in sample 2102100931.**
400-EV-131	**2/1/2021**	**For SW-846 Method 8260C, one unknown compound (25 ug/L) was tentatively identified by a GC/MS library search in sample 2102011500C.**
300-B-166	2/3/2021	For SW-846 Method 8260C, one unknown compound (5 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102031456C). No groundwater data are affected by this field blank contamination.
400-EV-131	**2/1/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 712878. Affected data are appropriately qualified.**
PL-12-800	**2/8/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in sample 2102080950B.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (5.3 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102100947). Affected data are appropriately qualified.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (5.6 ug/L) was tentatively identified by a GC/MS library search in sample 2102100946.**
200-F-420	**2/22/2021**	**For SW-846 Method 8260C, one unknown compound (5.8 ug/L) was tentatively identified by a GC/MS library search in sample 2102221535Y.**
200-C-170	**2/18/2021**	**For SW-846 Method 8260C, one unknown compound (6 ug/L) was tentatively identified by a GC/MS library search in sample 2102181520Y.**
MPE-1	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
MPE-8	2/10/2021	For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. No groundwater data are affected by this method blank contamination.
MPE-9	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
600-E-280	2/4/2021	For SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
BLM-23-431	2/4/2021	For SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
200-F-420	2/22/2021	For SW-846 Method 8260C, tetrahydrofuran (THF) (1.8 ug/L) was detected in the equipment blank (2102221435Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
100-A-182	2/3/2021	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) 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
200-C-170	2/18/2021	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) 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-225	2/18/2021	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) 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-270	2/17/2021	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) 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	2/23/2021	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) 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	2/22/2021	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) 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	2/22/2021	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) 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-A-170	2/18/2021	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) 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	2/3/2021	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) 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	2/23/2021	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) 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	2/24/2021	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) 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	2/1/2021	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) 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	2/1/2021	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) 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	2/2/2021	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) 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	2/4/2021	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) 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
B650-INF-1	2/9/2021	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) 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	2/9/2021	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) 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-21-400	2/8/2021	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) 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	2/4/2021	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) 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	2/2/2021	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) 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	2/2/2021	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) 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	2/2/2021	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) 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	2/10/2021	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) 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	2/10/2021	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) 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-11	2/10/2021	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) 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	2/10/2021	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) 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	2/10/2021	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) 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-12-570	2/8/2021	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) 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	2/8/2021	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) 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
400-EV-131	2/1/2021	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-GV-125	2/1/2021	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-JV-150	2/2/2021	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-32-543	2/2/2021	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-32-571	2/2/2021	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-32-632	2/2/2021	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-225	2/18/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-C-270	2/17/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-F-225	2/23/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
300-E-138	2/23/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
600-E-280	2/4/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
100-A-182	2/3/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-EV-131	2/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-GV-125	2/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-JV-150	2/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	2/9/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-32-571	2/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PL-12-800	2/8/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
300-E-183	2/24/2021	For SW-846 Method 8260C, trichlorofluoromethane (CFC 11) (0.6 ug/L) was detected in the equipment blank (2102240925Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
MPE-1	**2/10/2021**	**For SW-846 Method 8260C, two unknown compounds were tentatively identified by a GC/MS library search in sample 2102100901.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
BLM-21-400	2/8/2021	For Modified EPA Method 607 in blind control sample (2102081116C), all recoveries were within standard limits.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
600-E-280	**2/4/2021**	**For Modified EPA Method 607, bromacil (0.029 ug/L) was detected in the equipment blank (2102040936Y). Affected data are appropriately qualified.**
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for N-nitrodimethylamine was 4.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for bromacil was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for N-nitrosodimethylamine was 6.3%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for N-nitrodimethylamine was 4.1%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for bromacil was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Modified EPA Method 607, matrix spike recoveries for sample 2102021504C were within laboratory control limits.
100-C-365	2/22/2021	For Modified EPA Method 607, surrogate recovery of N-nitroso-di-n-propylamine-d14 (19%) was outside laboratory control limits (40-160%) for sample 2102220948B. Surrogate data are appropriately qualified.
100-C-365	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-225	**2/23/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-370	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-420	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-138	**2/23/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-183	**2/24/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-183	2/24/2021	For Modified EPA Method 607, there were no detections in the equipment blank.
100-A-182	2/3/2021	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	**2/8/2021**	**For Low Level Nitrosamine Method in blind control sample (2102081100B), the percent recovery for N-nitrosodimethylamine (160%) was outside of the standard limits (70-130%). Affected data are appropriately qualified.**
PL-12-570	2/8/2021	For Low Level Nitrosamine Method, field duplicate samples 2102081514B and 2102081516B the relative percent difference for N-nitrosodimethylamine was 3.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-32-571	2/2/2021	For Low Level Nitrosamine Method, N-nitrodimethylamine (0.21 ng/L) was detected in the field blank (2102021006A) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-32-543	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.34 ng/L) was detected in the field blank (2102021028A) below the reporting limit. Affected data are appropriately qualified.**
B650-EFF-1	2/9/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the field blank (2102091326) below the reporting limit. No groundwater data are affected by this field blank contamination.
ST-5-655	**2/1/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.39 ng/L) was detected in the trip blank (2102010746Y) below the reporting limit. Affected data are appropriately qualified.**
ST-5-481	2/17/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.52 ng/L) was detected in the trip blank (2102170901B). No groundwater data are affected by this trip blank contamination.
ST-5-655	**2/1/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.62 ng/L) was detected in the equipment blank (2102010901Y) below the reporting limit. Affected data are appropriately qualified.**
PL-12-570	**2/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.65 ng/L) and N-nitrodimethylamine (0.34 ng/l) were detected in the field blank (2102081517B) below the reporting limit for N-nitrodimethylamine only. Affected data are appropriately qualified.**
PL-7-630	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.3 ng/L) was detected in the trip blank (2102020740Y). Affected data are appropriately qualified.**
PL-7-630	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.9 ng/L) and N-nitrodimethylamine (0.5 ng/L) were detected in the equipment blank (2102020906Y). Affected data are appropriately qualified.**
PL-7-560	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (2.0 ng/L) and N-nitrodimethylamine (0.57 ng/L) were detected in the equipment blank (2102021351Y). Affected data are appropriately qualified.**
ST-4-589	2/4/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (5.8 ng/L) and N-nitrodimethylamine (1.3 ng/L) were detected in the field blank (2102041003C). No groundwater data are affected by this field blank contamination.
ST-2-466	2/2/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (7.3 ng/L) and N-nitrodimethylamine (2.1 ng/L) were detected in the field blank (2102021506C. No groundwater data are affected by this field blank contamination.
PL-12-800	**2/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (2102080954B) at 0.85 ng/L. Affected data are appropriately qualified.**
BLM-32-571	2/2/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2102021004A and 2102021038A were within control limits or below the calculable range.
B650-EFF-1	2/9/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
B655-EFF-2	2/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-32-632	2/2/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-12-800	2/8/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-7-480	2/3/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-7-480	2/3/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-4-589	2/4/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-5-481	2/17/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-485	2/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
PL-12-800	**2/8/2021**	**For SW-846 Method 8270D, 2,4,6-triallyloxy-1,3,5-triazine (3.6 ug/L), drometrizole (1.3 ug/L), benzoic acid, 3,5-bis(1,1-dimethyl (1.3 ug/L), trichloroethene (TCE) (1.7 ug/L), and one unknown compounds (2.5 ug/L) were tentatively identified by a GC/MS library search in sample 2102080955B.**
100-C-365	2/22/2021	For SW-846 Method 8270D, 2,4-dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 30% and 37% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
100-C-365	**2/22/2021**	**For SW-846 Method 8270D, benzenamine, 2,6-bis(1-methylethyl (10 ug/L), 2,5-cyclohexadiene-1,4-dione, 2,6- (5 ug/L), and one unknown compounds (9.5 ug/L) were tentatively identified by a GC/MS library search in sample 2102220949B.**
100-A-182	2/3/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form.
100-C-365	2/22/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl)Phthalate was detected at 60% and 62% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-32-543	2/2/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 62% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
PL-12-570	2/8/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
PL-12-800	2/8/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8270D, butane, 2-methoxy-2-methyl- (85 ug/L), 1,4-dioxane, 2,5-dimethyl- (10 ug/L), benzenesulfonamide, N-butyl- (7.2 ug/L), and one unknown compounds (6.9 ug/L) were tentatively identified by a GC/MS library search in sample 2102021310A.**
100-C-365	2/22/2021	For SW-846 Method 8270D, chrysene (1.6 ug/L) was detected in the method blank for analytical batch 374869. No groundwater data are affected by this method blank contamination.
PL-12-570	**2/8/2021**	**For SW-846 Method 8270D, drometrizole (3.2 ug/L), trichloroethene (TCE) (1.9 ug/L), n-hexadecanoic acid (1.7 ug/L), stearic acid (octadecanoic acid) (1.2 ug/L), and one unknown compounds (3.6 ug/L) were tentatively identified by a GC/MS library search in sample 2102081518B.**
100-A-182	**2/3/2021**	**For SW-846 Method 8270D, one unknown compound (82 ug/L) was tentatively identified by a GC/MS library search in sample 2102031005C.**
100-A-182	**2/3/2021**	**For SW-846 Method 8270D, one unknown compound (93 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 373896. Affected data are appropriately qualified.**
BLM-32-543	**2/2/2021**	**For SW-846 Method 8270D, one unknown compound (93 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 373896. Affected data are appropriately qualified.**
100-A-182	2/3/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/22/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the

Well ID	Event Date	SW-846 Method 8270D QA Narratives
		associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-32-543	2/2/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/22/2021	For SW-846 Method 8270D, the relative percent difference (RPD) for the laboratory control samples was greater than the limit for benzidine. The percent recovery limit was met for both the LCS and the LCSD. No groundwater data are affected by this QC issue.
100-A-182	2/3/2021	For SW-846 Method 8270D, 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) 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	2/2/2021	For SW-846 Method 8270D, 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) 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	2/8/2021	For SW-846 Method 8270D, 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) 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	2/8/2021	For SW-846 Method 8270D, 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) 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-A-182	2/3/2021	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	2/22/2021	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.
BLM-32-543	2/2/2021	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
200-F-420	**2/22/2021**	**For Total Metals, antimony (0.0002 mg/L), calcium (0.5 mg/L), magnesium (0.1 mg/L), and strontium (0.05 mg/L) were detected in the equipment blank (2102221436Y) below the reporting limit. Affected data are appropriately qualified.**
ST-5-481	**2/17/2021**	**For Total Metals, antimony (0.0003 mg/L) was detected in the field blank (2102171406B) below the reporting limit. Affected data are appropriately qualified.**
600-E-280	2/4/2021	For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-21-400	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**
PL-12-570	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Total Metals QA Narratives
PL-12-800	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**
BLM-21-400	2/8/2021	For Total Metals, blind control sample (2102081117C) was prepared at a concentration below the reporting limits for calcium. The result for this metal is not qualified based on this control.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for magnesium was 1.5%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for sodium was 1.5%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for calcium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for strontium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for sodium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for calcium was 1.7%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for strontium was 2.1%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for magnesium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
600-E-280	2/4/2021	For Total Metals, magnesium (0.06 mg/L) and strontium (0.004 mg/L) were detected in the equipment blank (2102041040Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
200-C-225	2/18/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-270	2/17/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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	2/18/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-5-481	2/17/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-A-182	2/3/2021	For Total Metals, there were no detections in the field blank.

Well ID	Event Date	Miscellaneous QA Narratives
100-C-365	2/22/2021	For SW-846 Method 8015D, gasoline range organics (GRO) (7.8 ug/L) was detected in the method blank for analytical batch 692041 below the reporting limit. No groundwater data are affected by this method blank contamination.

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	140	ug/L	TIC FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	84	ug/L	TIC FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	66	ug/L	TIC FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	34	ug/L	TIC FB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	20	ug/L	FB
BLM-32-543	2/2/2021	Carboy G5	8260	VOA-FB	149-57-5	Hexanoic acid, 2-ethyl-	13	ug/L	TIC FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	11	ug/L	FB
300-A-170	2/18/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	9	ug/L	FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	103-09-3	Acetic acid, 2-ethylhexyl ester	8.6	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	67-63-0	2-Propanol	8.4	ug/L	J FB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	103-09-3	Acetic acid, 2-ethylhexyl ester	7.6	ug/L	TIC FB
ST-2-466	2/2/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	7.3	ng/L	FB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	TIC	Unknown	7.1	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	5.9	ug/L	TIC FB
ST-4-589	2/4/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	5.8	ng/L	FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	TIC	Unknown	5.7	ug/L	TIC FB
BLM-23-431	2/4/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5.7	ug/L	TIC FB
MPE-10	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	5.3	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	5.1	ug/L	TIC FB
PL-7-480	2/3/2021	Carboy G2	8260_LL	VOA-TB	TIC	Unknown	5.1	ug/L	TIC RB TB
ST-4-589	2/4/2021	Carboy G3	8260_LL	VOA-TB	TIC	Unknown	5	ug/L	TIC RB TB
300-B-166	2/3/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5	ug/L	TIC FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	5	ug/L	FB
ST-2-466	2/2/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	2.1	ng/L	FB
PL-7-560	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2	ng/L	EB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.9	ng/L	TB EB
200-F-420	2/22/2021	Carboy G2	8260	VOA-EB	109-99-9	Tetrahydrofuran (THF)	1.8	ug/L	J EB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	1.6	ug/L	FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	75-15-0	Carbon Disulfide	1.3	ug/L	FB
ST-4-589	2/4/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	1.3	ng/L	FB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.3	ng/L	TB EB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	78-93-3	2-Butanone (MEK)	1.1	ug/L	J FB
BLM-32-632	2/2/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	1.1	ug/L	FB
PL-12-800	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.85	ng/L	FB Q
BLM-23-431	2/4/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.84	ug/L	J FB
BLM-32-543	2/2/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	0.81	ug/L	J FB
BLM-21-400	2/8/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.75	ug/L	J FB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	75-69-4	Trichlorofluoromethane (CFC 11)	0.72	ug/L	J EB
B650-EFF-1	2/9/2021	Carboy PF1	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.69	ug/L	FB
PL-12-570	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.65	ng/L	FB
ST-5-655	2/1/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.62	ng/L	TB EB
300-A-170	2/18/2021	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.61	ug/L	J FB
300-E-183	2/24/2021	Carboy G2	8260	VOA-EB	75-69-4	Trichlorofluoromethane (CFC 11)	0.6	ug/L	J EB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-7-560	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.57	ng/L	EB
B655-EFF-2	2/9/2021	Carboy PF1	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.56	ug/L	FB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	74-87-3	Chloromethane	0.54	ug/L	J EB
ST-5-481	2/17/2021	Carboy G5	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.52	ng/L	TB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.5	ng/L	EB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-70-2	Calcium, Total	0.5	mg/L	J EB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.44	ug/L	J EB
MPE-9	2/10/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.41	ug/L	J FB
ST-5-655	2/1/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.39	ng/L	J TB EB
B650-EFF-1	2/9/2021	Carboy PF1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.38	ng/L	J FB
BLM-32-543	2/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.34	ng/L	J FB
PL-12-570	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.34	ng/L	J FB
MPE-8	2/10/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.3	ug/L	J FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.3	ug/L	J FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.29	ug/L	J FB
100-C-365	2/22/2021	Carboy G3	8260_LL	VOA-FB	71-43-2	Benzene	0.27	ug/L	J FB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.25	ug/L	J FB
BLM-32-571	2/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.21	ng/L	J FB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.1	mg/L	J EB
600-E-280	2/4/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.06	mg/L	J EB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.05	mg/L	J EB
600-E-280	2/4/2021	Carboy G2	607	NDMA-EB	314-40-9	Bromacil	0.029	µg/L	EB
600-E-280	2/4/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.004	mg/L	J EB
ST-5-481	2/17/2021	Carboy G5	METALS	METALS-FB	7440-36-0	Antimony, Total	0.0003	mg/L	J FB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-36-0	Antimony, Total	0.0002	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

March 2021

NM 8800019434

Report Submitted: July 15, 2021

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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 2021.
- The quantity and type of quality control samples collected or prepared in March 2021.
- 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 2021 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in March 2021. 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 2021

Well ID	Event Date
BLM-7-509	3/1/2021
WW-1-452	3/1/2021
WW-3-569	3/1/2021
WW-3-710	3/1/2021
BLM-9-419	3/2/2021
PL-11-470	3/2/2021
PL-11-530	3/2/2021

Well ID	Event Date
PL-11-710	3/2/2021
ST-4-690	3/2/2021
WW-3-469	3/2/2021
WW-3-978	3/2/2021
PL-8-605	3/3/2021
PL-8-965	3/3/2021
ST-4-481	3/3/2021

Well ID	Event Date
BLM-13-300	3/4/2021
PL-11-820	3/4/2021
PL-11-980	3/4/2021
PL-8-455	3/4/2021
B650-EFF-1	3/5/2021
B650-INF-1	3/5/2021
B655-EFF-2	3/5/2021

Well ID	Event Date
B655-INF-2	3/5/2021
PL-8-780	3/8/2021
WW-2-489	3/8/2021
WW-2-664	3/8/2021
BW-1-268	3/9/2021
ST-6-528	3/9/2021
ST-6-568	3/9/2021
ST-6-678	3/9/2021
200-KV-150	3/10/2021
BLM-42-569	3/10/2021

Well ID	Event Date
BLM-42-709	3/10/2021
100-HG-139	3/11/2021
BW-6-355	3/11/2021
PL-4-464	3/11/2021
ST-6-824	3/11/2021
ST-6-970	3/11/2021
200-B-240	3/15/2021
BLM-14-327	3/15/2021
BLM-5-527	3/15/2021
PL-2-504	3/15/2021

Well ID	Event Date
200-D-240	3/16/2021
NASA 3	3/17/2021
700-A-253	3/22/2021
700-H-535	3/22/2021
700-H-670	3/22/2021
700-J-200	3/22/2021
700-D-186	3/23/2021
700-H-350	3/23/2021

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	**18**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**35**	**1**	**1**	0	**1**	**3**	**1**
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	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	**20**	**17**	**3**	**3**	0	**5**	0
Low Level Volatile Organics by SW-846 Method 8260C	**29**	**21**	**8**	**7**	0	0	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**13**	**1**	0	0	0	**1**	**1**
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 9034	**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	**22**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**25**	**1**	**1**	0	**1**	**2**	**1**
Nitrosamines by Low-Level Method	**31**	**23**	**8**	**9**	**1**	**3**	**1**
Total Dissolved Solids by Standard Method 2540C	**18**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Quantity March 2021	QC Quantity March 2021	QC % March 2021
VOA Duplicates	10	540	56	**10**	49	5	10
VOA Matrix Spikes	2	540	14	**3**	49	1	2
607 Duplicates	10	339	37	**11**	35	3	9
607 Matrix Spikes	2	339	8	**2**	35	1	3
607 Equipment Blanks	2	339	12	**4**	35	1	3
607 Field Blanks	2	339	9	**3**	35	1	3
NDMA_LL Duplicates	10	317	36	**11**	31	3	10
NDMA_LL Matrix Spikes	2	317	9	**3**	31	1	3
Metals Duplicates	10	236	26	**11**	25	2	8
Metals Matrix Spikes	2	236	6	**3**	25	1	4

Quality Control Requirement	Requirement %	Samp. Qty. since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Quantity March 2021	QC Quantity March 2021	QC % March 2021
Metals Equipment Blanks	5	236	13	**6**	25	1	4
Metals Field Blanks	5	236	13	**6**	25	1	4

Quality Control Requirement	Requirement %	Sample Events since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Events March 2021	QC Quantity March 2021	QC % March 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	539	539	**100%**	49	49	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	313	313	**100%**	31	31	100%

Quality Control Requirement	Requirement %	Shipments since 4/1/2020	TB Qty. since 4/1/2020	TB % since 4/1/2020	Shipments in March 2021	TB Quantity March 2021	QC % March 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	112	112	**100%**	11	11	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	109	109	**100%**	9	9	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	**18**	0	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Nitrosamines by EPA Method 607	**114**	0	**1**	0	0	0	**3**	0
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	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	**1635**	**4**	**4**	**2**	0	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**1894**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**593**	0	0	0	0	0	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 9034	**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	**88**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**729**	0	0	0	0	0	0	0
Nitrosamines by Low-Level Method	**68**	**6**	**3**	**1**	**2**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**18**	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	**18**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**114**	0	0	0	0	0	0	0	0	**10**
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0	0	0	**3**
Organics by SW-846 Method 8015M	**2**	0	0	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**21**	0	0	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	**1635**	0	0	0	0	**10**	0	0	0	**35**
Low Level Volatile Organics by SW-846 Method 8260C	**1894**	0	0	0	0	0	**65**	0	0	**13**
Semi-Volatile Organics by SW-846 Method 8270D	**593**	0	0	0	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**25**	0	**14**	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9012B	**1**	0	0	0	0	0	0	0	0	0
Sulfide by SW-846 Method 9034	**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	**88**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**729**	0	0	0	0	**3**	0	0	0	**138**
Nitrosamines by Low-Level Method	**68**	6	0	0	0	**9**	0	0	0	**12**
Total Dissolved Solids by Standard Method 2540C	**18**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-1-452	3/1/2021	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2103011411C were within laboratory control limits.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-3-469	3/2/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.4 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103020810Y). No groundwater data are affected by this trip blank contamination.
PL-11-820	**3/4/2021**	**For Low Level SW-846 Method 8260C, sample 2103040846A was determined to be insufficiently preserved after analysis and was analyzed was outside the 7 day hold time. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (100 ug/L) was tentatively identified by a GC/MS library search in sample 2103101030B.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (120 ug/L) and one unknown compound (5.4 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103100909B). Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (150 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103100700B). Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (18 ug/L) and silane, methoxytrimethyl- (6.9 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103090927A). Affected data are appropriately qualified.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (18 ug/L) was tentatively identified by a GC/MS library search in sample 2103090956A.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (24 ug/L) was tentatively identified by a GC/MS library search in sample 2103090945A.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (25 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103111002A). Affected data are appropriately qualified.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (32 ug/L) was tentatively identified by a GC/MS library search in sample 2103111001A.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (35 ug/L) and one unknown compound (7.1 ug/L) were tentatively identified by a GC/MS library search in sample 2103090926A.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (37 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103090957A). Affected data are appropriately qualified.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (40 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103170906B). Affected data are appropriately qualified.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (48 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103110942A). Affected data are appropriately qualified.**
PL-11-820	3/4/2021	For Low Level SW-846 Method 8260C, sulfur dioxide (5.1 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103040847A). No groundwater data are affected by this field blank contamination.
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (59 ug/L) was tentatively identified by a GC/MS library search in sample 2103110941A.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (77 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717070. Affected data are appropriately qualified.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (77 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717070. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (80 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103090946A). Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (82 ug/L) was tentatively identified by a GC/MS library search in sample 2103100900B.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (83 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103110700A), Affected data are appropriately qualified.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in sample 2103170905B.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (82 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103101031B). Affected data are appropriately qualified.**
B650-EFF-1	3/5/2021	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) 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	3/5/2021	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) 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	3/10/2021	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) 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	3/10/2021	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) 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	3/1/2021	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) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
NASA 3	3/17/2021	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) 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	3/2/2021	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) 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-11-530	3/2/2021	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) 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	3/2/2021	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) 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	3/4/2021	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) 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-11-980	3/4/2021	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) 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	3/4/2021	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) 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	3/3/2021	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) 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-8-780	3/8/2021	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) 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	3/3/2021	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) 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-4-481	3/3/2021	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) 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-4-690	3/2/2021	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) 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-6-528	3/9/2021	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) 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-6-568	3/9/2021	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) 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	3/9/2021	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) 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	3/11/2021	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) 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
ST-6-970	3/11/2021	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) 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	3/1/2021	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) 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	3/8/2021	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) 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	3/8/2021	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) 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	3/2/2021	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) 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	3/1/2021	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) 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	3/1/2021	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) 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	3/2/2021	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) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
NASA 3	3/17/2021	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) 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	3/8/2021	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) 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-42-569	3/10/2021	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	3/10/2021	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-7-509	3/1/2021	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-6-528	3/9/2021	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	3/9/2021	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	3/9/2021	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	3/1/2021	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	3/1/2021	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	3/1/2021	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	3/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
B655-EFF-2	3/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-7-509	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-470	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-530	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-710	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-980	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-8-455	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-455	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-780	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-965	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-4-481	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-690	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-1-452	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-489	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-664	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-3-469	3/2/2021	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
WW-3-569	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
WW-3-569	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-710	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-978	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-2-504	3/15/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.21 ug/L) and trichloroethene (TCE) (0.22 ug/L) were detected in the field blank (2103150956B) below the reporting limit. No groundwater data are affected by this field blank contamination.
700-H-535	**3/22/2021**	**For SW-846 Method 8260C, 2-propanol (4.8 ug/L) and trichloroethene (TCE) (1.2 ug/L) were detected in the equipment blank (2103221325Y) below the reporting limit for 2-propanol only. Affected data are appropriately qualified.**
200-B-240	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
BLM-14-327	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
PL-2-504	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 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%.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 the relative percent difference for trichloroethene (TCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for trichloroethene (TCE) was 7.4%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for trichlorofluoromethane (CFC 11) was 4.0%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 9.5%. Upper acceptance limit for relative percent difference is 25%.
100-HG-139	3/11/2021	For SW-846 Method 8260C, field duplicate samples 2103111425B and 2103111426B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 6.7%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 10.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for trichloroethene (TCE) was 4.1%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
100-HG-139	3/11/2021	For SW-846 Method 8260C, silane, methoxytrimethyl- was tentatively identified by a GC/MS library search in the field blank (2103111427B). No groundwater data are affected by this field blank contamination.
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (110 ug/L)was tentatively identified by a GC/MS library search in the field blank (2103091317B). Affected data are appropriately qualified.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
PL-4-464	3/11/2021	For SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. No groundwater data are affected by this method blank contamination.
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (160 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103110700C). Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (24 ug/L) and silane, methoxytrimethyl- (7.4 ug/L) were tentatively identified by a GC/MS library search in sample 2103110945C.**
100-HG-139	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (27 ug/L) and (22 ug/L) was tentatively identified by a GC/MS library search in sample 2103111425B and duplicate sample 2103111426B.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (32 ug/L) was tentatively identified by a GC/MS library search in duplicate sample 2103101436C.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (35 ug/L) and silane, methoxytrimethyl- (5.3 ug/L) were tentatively identified by a GC/MS library search in sample 2103101435C.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (39 ug/L) was tentatively identified by a GC/MS library search in duplicate sample 2103110946C.**
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (40 ug/L) was tentatively identified by a GC/MS library search in sample 2103091316B.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (41 ug/L) and silane, methoxytrimethyl- (6.9 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103101437C). Affected data are appropriately qualified.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (44 ug/L) was tentatively identified by a GC/MS library search in sample 2103111035B.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (61 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103111036B). Affected data are appropriately qualified.**
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (80 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103110947C). Affected data are appropriately qualified.**
100-HG-139	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
700-J-200	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.26 ug/L) and trichloroethene (TCE) (1.5 ug/L) were detected in the field blank (2103220901B) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.38 ug/L) and trichloroethene (TCE) (2.2 ug/L) were detected in the trip blank (2103220745Y) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.41 ug/L) and trichloroethene (TCE) (1.9 ug/L) were detected in the equipment blank (2103220845Y) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**
100-HG-139	3/11/2021	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) 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-KV-150	3/10/2021	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) 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	3/5/2021	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) 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	3/5/2021	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) 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	3/4/2021	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) 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	3/2/2021	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) 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	3/9/2021	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) 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	3/11/2021	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) 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	3/11/2021	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) 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-HG-139	3/11/2021	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) 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	3/2/2021	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) 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.
BW-6-355	3/11/2021	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) 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-4-464	3/11/2021	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) in the

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		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	3/15/2021	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	3/16/2021	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-KV-150	3/10/2021	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-A-253	3/22/2021	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	3/23/2021	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	3/23/2021	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	3/22/2021	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	3/22/2021	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	3/22/2021	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	3/15/2021	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	3/15/2021	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.
BLM-9-419	3/2/2021	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-1-268	3/9/2021	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	3/15/2021	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	3/11/2021	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-B-240	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
200-D-240	3/16/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	3/5/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-13-300	3/4/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-14-327	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-9-419	3/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PL-2-504	3/15/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
700-A-253	3/22/2021	For SW-846 Method 8260C, trichloroethene (0.44 ug/L) was detected in the method blank for analytical batch 718329 below the reporting limit. No groundwater data are affected by this method blank contamination.
700-A-253	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-D-186	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-350	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-535	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-J-200	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-A-253	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.3 ug/L) was detected in the field blank (2103221321B) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
700-D-186	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.93 ug/L) was detected in the field blank (2103230921B) below the reporting limit. Affected data are appropriately qualified.**
700-H-350	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.94 ug/L) was detected in the equipment blank (2103231400Y) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
WW-1-452	**3/1/2021**	**For Modified EPA Method 607, matrix spike recoveries of NDMA (10%), DMN (27%), and bromacil (33%) as well as the surrogate recovery (22%) for sample 2103011414C were outside laboratory lower control limits (NDMA 13-110%), (DMN 30-150%), (Bromacil 40-190%), and (surrogate 40-160%). Affected data are appropriately qualified.**
200-D-240	3/16/2021	For Modified EPA Method 607 in blind control sample (2103161330C), all recoveries were within standard limits.
700-H-670	**3/22/2021**	**For Modified EPA Method 607, bromacil (0.0095 ug/L) was detected in the equipment blank (2103220846Y). Affected data are appropriately qualified.**
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for N-nitrosodimethylamine was 3.2%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for bromacil was 7.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For Modified EPA Method 607, field duplicate samples 2103151348B and 2103151349B the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For Modified EPA Method 607, field duplicate samples 2103151348B and 2103151349B the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-9-419	3/2/2021	For Modified EPA Method 607, relative percent differences (RPD) for duplicate samples 2103021335C and 2103021336C were within control limits or below the calculable range.
100-HG-139	3/11/2021	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-4-464	**3/11/2021**	**For Low Level Nitrosamine Method in blind control sample (2103111030C), the percent recovery for N-nitrosodimethylamine (150%) was outside of the standard limits (70-130%). Additionally, N-nitrodimethylamine (0.26 ng/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**
WW-1-452	3/1/2021	For Low Level Nitrosamine Method, matrix spike and matrix spike duplicate recoveries and RPD for samples 2103011416C and 2103011417C were within laboratory control limits.
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the field blank (2103170908B) below the reporting limit. Affected data are appropriately qualified.**
PL-8-455	**3/4/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the equipment blank (2103040916Y) below the reporting limit. Affected data are appropriately qualified.**
PL-11-470	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-11-530	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-11-710	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-8-605	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-8-965	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
ST-4-481	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
ST-4-690	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
WW-3-469	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
WW-3-978	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-11-530	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L) was detected in the field blank (2103021034A) below the reporting limit. Affected data are appropriately qualified.**
PL-11-980	3/4/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L was detected in the field blank (2103040904A) below the reporting limit. No groundwater data are affected by this field blank contamination.
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the trip blank (2103170730B) below the reporting limit. Affected data are appropriately qualified.**
PL-8-605	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the equipment blank (2103030931Y) below the reporting limit. Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the field blank (2103090929A) below the reporting limit. Affected data are appropriately qualified.**
PL-11-710	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.47 ng/L) was detected in the field blank (2103021049A) below the reporting limit. Affected data are appropriately qualified.**
PL-8-965	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.53 ng/L) was detected in the equipment blank (2103031331Y) below the reporting limit. Affected data are appropriately qualified.**
ST-4-690	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.56 ng/L) was detected in the field blank (2103021505C). Affected data are appropriately qualified.**
PL-11-820	3/4/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103040848A and 2103040925A were within control limits or below the calculable range.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103110949C and 2103110950C were within control limits or below the calculable range.
ST-6-568	3/9/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103090928A and 2103091005A were within control limits or below the calculable range.
BLM-42-569	**3/10/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (212%) in the laboratory fortified blank (LFB21C24CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
ST-6-528	3/9/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
ST-6-568	**3/9/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B650-EFF-1	3/5/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
B655-EFF-2	3/5/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-13-300	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-569	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-569	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-42-709	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-7-509	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-470	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-820	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-455	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-605	3/3/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-4-481	3/3/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-528	3/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-678	3/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-824	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-824	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-6-970	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-1-452	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-489	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-664	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-3-469	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-469	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-710	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-978	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
200-KV-150	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-13-300	3/4/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 60% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form.
BLM-42-569	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-42-709	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
PL-11-530	3/2/2021	For SW-846 Method 8270D, field duplicate samples 2103021311A and 2103021312A the relative percent difference for 1,4-dioxane was 24.2%. Upper acceptance limit for relative percent difference is 25%.
PL-8-605	3/3/2021	For SW-846 Method 8270D, matrix spike recoveries for sample 2103031111Y were within laboratory control limits.
200-KV-150	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-569	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-709	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-13-300	3/4/2021	For SW-846 Method 8270D, 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) 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	3/15/2021	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.
BLM-13-300	3/4/2021	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.
ST-6-568	3/9/2021	For SW-846 Method 8270D, there were no detections in the field blank.
200-B-240	**3/15/2021**	**For SW-846 Method 8270D, trichloroethene (TCE) was tentatively identified by a GC/MS library search in sample 2103151006C.**

Well ID	Event Date	Total Metals QA Narratives
200-B-240	**3/15/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Total Metals QA Narratives
BLM-14-327	**3/15/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**
100-HG-139	**3/11/2021**	**For Total Metals, antimony (0.0004 mg/L) were detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**
PL-4-464	3/11/2021	For Total Metals, antimony (0.0004 mg/L) were detected in the method blank for analytical batch 375960 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For Total Metals, blind control sample (2103161331C) 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.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for sodium was 0.3%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for magnesium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for calcium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for calcium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for magnesium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for sodium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for strontium was 1.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for potassium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
WW-3-710	3/1/2021	For Total Metals, for matrix spike sample 2103011436Y 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.
WW-3-569	3/1/2021	For Total Metals, magnesium (0.04 mg/L) and strontium (0.002 mg/L) were detected in the equipment blank (2103010922Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
BW-1-268	3/9/2021	For Total Metals, strontium (0.003 mg/L) were detected in the method blank for analytical batch 375706 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For Total Metals, the upper control limit was exceeded for antimony 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.
NASA 3	3/17/2021	For Total Metals, the upper control limit was exceeded for antimony 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-B-240	3/15/2021	For Total Metals, the upper control limit was exceeded for thallium 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

Well ID	Event Date	Total Metals QA Narratives
		to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-14-327	3/15/2021	For Total Metals, the upper control limit was exceeded for thallium 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-HG-139	3/11/2021	For Total Metals, there were no detections in the field blank.

Well ID	Event Date	Miscellaneous QA Narratives
BLM-13-300	3/4/2021	For SW-846 Method 8015C, the control limits were exceeded for one or more surrogates in one or more QC samples associated with samples. The associated recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier is flagged accordingly. No further corrective action was appropriate.
BLM-13-300	3/4/2021	For SW-846 Method 8015C, the upper control limit was exceeded for one or more surrogates in one or more samples. The elevated recovery equates to a high bias. Since no target analytes were detected in the sample(s), the quality of the sample data is not significantly affected. No further corrective action was appropriate.
BLM-13-300	3/4/2021	For SW-846 Method 8015C, 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	3/4/2021	For SW-846 Method 8015D, gasoline range organics (GRO) (25.7 ug/L) was detected in the method blank for analytical batch 696043 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-B-240	3/15/2021	For SW-846 Method 8081B, 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-B-240	3/15/2021	For SW-846 Method 8151A, the control limits were exceeded for one or more surrogates in one or more QC samples associated with samples. The associated recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier is flagged accordingly. No further corrective action was appropriate. There was no more sample for a reextraction.
200-B-240	3/15/2021	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 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	**3/15/2021**	**For SW-846 Method 8290A, laboratory control sample recoveries for the majority of the analytes were outside the lower laboratory limits. Affected data are appropriately qualified.**
200-B-240	3/15/2021	For SW-846 Method 8290A, several compounds were detected below the reporting limit in the method blank. No groundwater data are affected by this method blank contamination.

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-4-464	3/11/2021	Carboy G1	8260	VOA-TB	7446-09-5	Sulfur Dioxide	160	ug/L	TIC RB TB FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-TB	7446-09-5	Sulfur Dioxide	150	ug/L	TIC TB FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	120	ug/L	TIC RB TB FB
BW-1-268	3/9/2021	Carboy G3	8260	VOA-FB	7446-09-5	Sulfur Dioxide	110	ug/L	TIC FB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-824	3/11/2021		8260_LL	VOA-TB	7446-09-5	Sulfur Dioxide	83	ug/L	TIC RB TB FB
BLM-42-709	3/10/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	82	ug/L	TIC RB FB
ST-6-678	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	80	ug/L	TIC RB FB
PL-4-464	3/11/2021	Carboy G1	8260	VOA-FB	7446-09-5	Sulfur Dioxide	80	ug/L	TIC RB TB FB
BW-6-355	3/11/2021	Carboy G5	8260	VOA-FB	7446-09-5	Sulfur Dioxide	61	ug/L	TIC RB FB
ST-6-824	3/11/2021		8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	48	ug/L	TIC RB TB FB
200-KV-150	3/10/2021	Carboy G1	8260	VOA-FB	7446-09-5	Sulfur Dioxide	41	ug/L	TIC RB FB
NASA 3	3/17/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	40	ug/L	TIC RB FB
ST-6-528	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	37	ug/L	TIC RB FB
ST-6-970	3/11/2021		8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	25	ug/L	TIC RB FB
ST-6-568	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	18	ug/L	TIC RB FB
200-KV-150	3/10/2021	Carboy G1	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.9	ug/L	TIC FB
ST-6-568	3/9/2021	Carboy G1	8260_LL	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.9	ug/L	TIC FB
100-HG-139	3/11/2021	Carboy G5	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.7	ug/L	TIC FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-FB	TIC	Unknown	5.4	ug/L	TIC RB FB
WW-3-469	3/2/2021	Carboy G3	8260_LL	VOA-TB	TIC	Unknown	5.4	ug/L	TIC TB
PL-11-820	3/4/2021	Carboy	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	5.1	ug/L	TIC FB
700-H-535	3/22/2021	Carboy G5	8260	VOA-EB	67-63-0	2-Propanol	4.8	ug/L	J EB
700-H-670	3/22/2021	Carboy G5	8260	VOA-TB	79-01-6	Trichloroethene (TCE)	2.2	ug/L	RB TB EB
700-H-670	3/22/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	1.9	ug/L	RB TB EB
700-J-200	3/22/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	1.5	ug/L	RB FB
700-H-535	3/22/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	1.2	ug/L	RB EB
700-H-350	3/23/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	0.94	ug/L	J RB EB
700-D-186	3/23/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.93	ug/L	J RB FB
ST-4-690	3/2/2021	Carboy G1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.56	ng/L	RB FB
PL-8-965	3/3/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.53	ng/L	RB EB
PL-11-710	3/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.47	ng/L	J RB FB
ST-6-568	3/9/2021	Carboy G1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J * FB
PL-8-605	3/3/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J RB EB
NASA 3	3/17/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J TB * FB
700-H-670	3/22/2021	Carboy G5	8260	VOA-EB	127-18-4	Tetrachloroethene (PCE)	0.41	ug/L	J RB TB EB
PL-11-980	3/4/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J FB
PL-11-530	3/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J RB FB
700-H-670	3/22/2021	Carboy G5	8260	VOA-TB	127-18-4	Tetrachloroethene (PCE)	0.38	ug/L	J RB TB EB
PL-8-455	3/4/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J EB
NASA 3	3/17/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J TB FB *
700-A-253	3/22/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.3	ug/L	J RB FB
700-J-200	3/22/2021	Carboy G3	8260	VOA-FB	127-18-4	Tetrachloroethene (PCE)	0.26	ug/L	J RB FB
PL-2-504	3/15/2021	Carboy G5	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.22	ug/L	J FB
PL-2-504	3/15/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.21	ug/L	J FB
WW-3-569	3/1/2021	Carboy G3	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.04	mg/L	J EB
700-H-670	3/22/2021	Carboy G5	607	NDMA-EB	314-40-9	Bromacil	0.0095	µg/L	EB
WW-3-569	3/1/2021	Carboy G3	METALS	METALS-EB	7440-24-6	Strontium, Total	0.002	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

April 2021

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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 2021.
- The quantity and type of quality control samples collected or prepared in April 2021.
- 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 2021 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in April 2021. 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 2021

Well ID	Event Date
BLM-10-517	4/1/2021
BLM-40-517	4/1/2021
PL-10-813	4/1/2021
PL-10-592	4/5/2021
PL-10-962	4/5/2021
PL-10-484	4/6/2021
ST-7-453	4/6/2021
ST-7-544	4/6/2021
ST-7-779	4/6/2021
ST-7-970	4/6/2021
BLM-39-385	4/7/2021
BLM-39-560	4/7/2021
JER-1-483	4/8/2021
JER-1-563	4/8/2021
JER-1-683	4/8/2021
PL-6-545	4/8/2021
PL-6-725	4/8/2021
BLM-40-595	4/12/2021
ST-1-473	4/12/2021
JP-1-424	4/13/2021
JP-2-447	4/13/2021

Well ID	Event Date
WW-5-459	4/13/2021
WW-5-579	4/13/2021
WW-5-809	4/13/2021
WW-5-909	4/13/2021
B650-EFF-1	4/14/2021
B650-INF-1	4/14/2021
B655-EFF-2	4/14/2021
B655-INF-2	4/14/2021
BLM-40-688	4/14/2021

Well ID	Event Date
BLM-6-488	4/14/2021
JP-3-509	4/15/2021
JP-3-689	4/15/2021
PFE-2	4/15/2021
PFE-3	4/15/2021
PFE-4A	4/15/2021
PFE-5	4/15/2021
PFE-7	4/15/2021
BW-3-180	4/19/2021

Well ID	Event Date
PL-1-486	4/19/2021
BLM-41-420	4/20/2021
BLM-41-670	4/20/2021
JER-2-504	4/20/2021
JER-2-584	4/20/2021
JER-2-684	4/20/2021
400-FV-131	4/21/2021
400-HV-147	4/21/2021
600-G-138	4/27/2021

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	**16**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**21**	**1**	**1**	0	**1**	**2**	**1**
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**16**	**14**	**2**	**2**	**1**	**4**	0
Low Level Volatile Organics by SW-846 Method 8260C	**32**	**26**	**6**	**6**	0	**1**	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**8**	**1**	0	0	0	**1**	0
Anions by Various EPA Methods	**15**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**15**	0	**1**	0	0	2	0
Nitrosamines by Low-Level Method	**35**	**29**	**6**	**7**	**1**	**4**	**1**
Total Dissolved Solids by Standard Method 2540C	**15**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 5/1/2020	QC Qty. since 5/1/2020	QC % since 5/1/2020	Sample Quantity April 2021	QC Quantity April 2021	QC % April 2021
VOA Duplicates	10	538	56	**10**	48	5	10
VOA Matrix Spikes	2	538	14	**3**	48	1	2
607 Duplicates	10	340	38	**11**	21	2	10
607 Matrix Spikes	2	340	9	**3**	21	1	5
607 Equipment Blanks	2	340	12	**4**	21	1	5
607 Field Blanks	2	340	11	**3**	21	2	10
NDMA_LL Duplicates	10	313	36	**11**	35	4	11
NDMA_LL Matrix Spikes	2	313	9	**3**	35	1	3
Metals Duplicates	10	232	27	**12**	15	2	13
Metals Matrix Spikes	2	232	6	**3**	15	0	0
Metals Equipment Blanks	5	232	13	**6**	15	1	7
Metals Field Blanks	5	232	12	**5**	15	0	0

Quality Control Requirement	Requirement %	Sample Events since 5/1/2020	QC Qty. since 5/1/2020	QC % since 5/1/2020	Sample Events April 2021	QC Quantity April 2021	QC % April 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	538	538	**100%**	48	48	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	313	313	**100%**	35	35	100%

Quality Control Requirement	Requirement %	Shipments since 5/1/2020	TB Qty. since 5/1/2020	TB % since 5/1/2020	Shipments in April 2021	TB Quantity April 2021	QC % April 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	108	108	**100%**	8	8	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	105	105	**100%**	7	7	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	**16**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**69**	0	0	0	0	**4**	0	0
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1304**	0	0	0	**4**	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Low Level Volatile Organics by SW-846 Method 8260C	**2146**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**8**	0	0	0	0	**2**	0	0
Anions by Various EPA Methods	**60**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**459**	0	0	0	0	0	0	0
Nitrosamines by Low-Level Method	**78**	**17**	**2**	**1**	**2**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**15**	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	**16**	0	0	0	0	0	0	0	0	**1**
Nitrosamines by EPA Method 607	**69**	0	0	0	0	**7**	0	**1**	0	**4**
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0	0	0	**2**
Volatile Organics by SW-846 Method 8260C	**1304**	0	0	0	0	0	0	0	0	**31**
Low Level Volatile Organics by SW-846 Method 8260C	**2146**	0	0	0	0	0	0	0	0	**15**
Semi-Volatile Organics by SW-846 Method 8270D	**8**	0	0	0	0	0	**1**	0	0	0
Anions by Various EPA Methods	**60**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**459**	0	0	0	0	**1**	0	0	0	**88**
Nitrosamines by Low-Level Method	**78**	**13**	0	0	0	**18**	0	0	0	**4**
Total Dissolved Solids by Standard Method 2540C	**15**	**1**	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, 2-propanol (13 ug/L) was detected in the field blank (2104191457C) below the reporting limit. No groundwater data are affected by this field blank contamination.
B655-EFF-2	4/14/2021	For Low Level SW-846 Method 8260C, 2-propanol (4 ug/L) was detected in the field blank (2104141327) below the reporting limit. No groundwater data are affected by this field blank contamination.
JP-2-447	4/13/2021	For Low Level SW-846 Method 8260C, 2-propanol (4.4 ug/L) was detected in the field blank (2104131001C) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-40-595	4/12/2021	For Low Level SW-846 Method 8260C, 2-propanol (5.2 ug/L) was detected in the trip blank (2104121245C) below the reporting limit. No groundwater data are affected by this trip blank contamination.
WW-5-809	4/13/2021	For Low Level SW-846 Method 8260C, 2-propanol (5.7 ug/L) was detected in the field blank (2104130927A) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-40-688	4/14/2021	For Low Level SW-846 Method 8260C, 2-propanol (9.3 ug/L) was detected in the trip blank (2104141000C) below the reporting limit. No groundwater data are affected by this trip blank contamination.
JER-1-683	4/8/2021	For Low Level SW-846 Method 8260C, 2-propanol (9.6 ug/L) was detected in the field blank (2104080912A) below the reporting limit. No groundwater data are affected by this field blank contamination.
PL-10-592	4/5/2021	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2104051456Y were within laboratory control limits.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-5-809	**4/13/2021**	**For Low Level SW-846 Method 8260C, one unknown compound (55 ug/L) was tentatively identified by a GC/MS library search in sample 2104130926A.**
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2104191455C and 2104191456C were within control limits or below the calculable range.
B650-EFF-1	4/14/2021	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) 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	4/14/2021	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) 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-40-595	4/12/2021	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) 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	4/14/2021	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) 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-1-424	4/13/2021	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) 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-2-447	4/13/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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-5-459	4/13/2021	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) 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-5-579	4/13/2021	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) 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-5-809	4/13/2021	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) 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-5-909	4/13/2021	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) 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-40-517	4/1/2021	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) in the associated field samples. The error associated with elevated recovery equates to

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-40-595	4/12/2021	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) 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-1-424	4/13/2021	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) 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	4/13/2021	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) 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	4/1/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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-40-517	4/1/2021	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-40-595	4/12/2021	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	4/13/2021	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.
JP-2-447	4/13/2021	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-10-484	4/6/2021	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-10-592	4/5/2021	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-10-813	4/1/2021	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-10-962	4/5/2021	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	4/6/2021	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	4/6/2021	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	4/6/2021	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	4/6/2021	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	4/13/2021	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	4/13/2021	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.
WW-5-809	4/13/2021	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	4/13/2021	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	4/14/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-517	4/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-595	4/12/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-420	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-670	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-483	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-483	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JER-1-563	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-504	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-584	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-684	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-1-424	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-509	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JP-3-509	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-689	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-10-484	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-592	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-813	4/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-6-545	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-6-725	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-7-453	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-544	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-779	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-970	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-459	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-579	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-909	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
600-G-138	**4/27/2021**	**For SW-846 Method 8260C in blind control sample (2104270730B), the percent recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (8.8%), trichloroethene (17.2%), tetrachloroethene (17.6%), and trichlorofluoromethane (10.4%) were outside of the standard limits (75-125%). Additionally, vinyl chloride (0.25 ug/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-1-473	**4/12/2021**	**For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.75 ug/L), trichloroethene (TCE) (0.75 ug/L), trichlorofluoromethane (CFC 11) (0.51 ug/L) were detected below the reporting limit and one unknown compound (5.9 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104120932C). Affected data are appropriately qualified.**
PFE-4A	4/15/2021	For SW-846 Method 8260C, 2-propanol (11 ug/L) was detected in the field blank (2104150951) below the reporting limit. No groundwater data are affected by this field blank contamination.
600-G-138	4/27/2021	For SW-846 Method 8260C, 2-propanol (4.4 ug/L) was detected in the field blank (2104270816B) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for dichlorofluoromethane (CFC 21) was 1.4%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 1.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for trichloroethene (TCE) was 8.7%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for trichlorofluoromethane (CFC 11) was 3.3%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for tetrachloroethene (PCE) was 3.8%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 22.2%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for trichlorofluoromethane (CFC 11) was 5.7%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for trichloroethene (TCE) was 9.5%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for trichloroethene (TCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for trichlorofluoromethane (CFC 11) was 8.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 4.3%. Upper acceptance limit for relative percent difference is 25%.
PFE-7	4/15/2021	For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104151321). No groundwater data are affected by this field blank contamination.
ST-1-473	**4/12/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in sample 2104120930C and duplicate sample 2104120931C.**
PFE-4A	4/15/2021	For SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2104150950 and 2104150952 were within control limits or below the calculable range.
BW-3-180	**4/19/2021**	**For SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) and one unknown compound (5.4 ug/L) were tentatively identified by a GC/MS library search in sample 2104190950C.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
400-FV-131	4/21/2021	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) 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	4/21/2021	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) 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	4/27/2021	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) 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	4/14/2021	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) 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	4/14/2021	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) 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	4/14/2021	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) 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	4/19/2021	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) 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	4/15/2021	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) 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-3	4/15/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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-1-473	4/12/2021	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) 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	4/21/2021	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) 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	4/21/2021	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) 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-G-138	4/27/2021	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) 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	4/1/2021	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) 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	4/1/2021	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	4/7/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
400-FV-131	4/21/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-HV-147	4/21/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-10-517	4/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-6-488	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BW-3-180	4/19/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-2	4/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-3	4/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-FV-131	4/21/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
BLM-10-517	4/1/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
PFE-5	4/15/2021	For SW-846 Method 8260C, trichloroethene (TCE) (0.27 ug/L) was detected below the reporting limit and one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104151031). No groundwater data are affected by this field blank contamination.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
600-G-138	4/27/2021	For Modified EPA Method 607 in blind control sample (2104270731B), all recoveries were within standard limits.
600-G-138	4/27/2021	For Modified EPA Method 607, bromacil (0.01 ug/L) was detected in the method blank WBLANK_28APR21. No groundwater data are affected by this method blank contamination.
BLM-39-385	4/7/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. No groundwater data are affected by this method blank contamination.
BLM-39-560	4/7/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_08APR21. No groundwater data are affected by this method blank contamination.
BW-3-180	4/19/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. No groundwater data are affected by this method blank contamination.
PFE-2	4/15/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. No groundwater data are affected by this method blank contamination.
PFE-3	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PFE-4A	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
PFE-5	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PL-1-486	**4/19/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PL-6-545	4/8/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. No groundwater data are affected by this method blank contamination.
PL-6-725	**4/8/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. Affected data are appropriately qualified.**
600-G-138	4/27/2021	For Modified EPA Method 607, bromacil (0.12 ug/L) was detected in the field blank (2104270818B). No groundwater data are affected by this field blank contamination.
ST-1-473	4/12/2021	For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for N-nitrodimethylamine was 4.9%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	**4/12/2021**	**For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for bromacil was 81.7%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
ST-1-473	4/12/2021	For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for N-nitrosodimethylamine was 2.4%. Upper acceptance limit for relative percent difference is 25%.
PFE-4A	**4/15/2021**	**For Modified EPA Method 607, field duplicate samples 2104150953 and 2104150954 the relative percent difference for bromacil was 50%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
JP-2-447	4/13/2021	For Modified EPA Method 607, matrix spike recoveries for sample 2104131003C were within laboratory control limits.
BLM-39-385	4/7/2021	For Modified EPA Method 607, there were no detections in the equipment blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method in blind control sample (2104201120C), the percent recovery for N-nitrosodimethylamine (170%) was outside of the standard limits (70-130%). Affected data are appropriately qualified.**
PFE-7	4/15/2021	For Low Level Nitrosamine Method, field duplicate samples 2104151323 and 2104151325 the relative percent difference for N-nitrosodimethylamine was 3.5%. Upper acceptance limit for relative percent difference is 25%.
BLM-41-670	4/20/2021	For Low Level Nitrosamine Method, field duplicate samples 2104200927C and 2104200928C the relative percent difference for N-nitrosodimethylamine was 6.9%. Upper acceptance limit for relative percent difference is 25%.
JER-2-584	4/20/2021	For Low Level Nitrosamine Method, field duplicate samples 2104201018A and 2104201020A the relative percent difference for N-nitrosodimethylamine was 25%. Upper acceptance limit for relative percent difference is 25%.
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method, for duplicate sample 2104200928C the internal standard recovery of NDMA-d6 (8.5%) was outside laboratory control limits (10-100%). Affected data are appropriately qualified.**
B650-EFF-1	4/14/2021	For Low Level Nitrosamine Method, for field blank 2104141410 internal standard recoveries of NDMA-d6 (3.7%) and DMN-d6 (7.1%) were outside laboratory control limits (10-100%). No corrective action was deemed necessary by the analytical laboratory based on sufficient signal to noise ratios.
JP-1-424	4/13/2021	For Low Level Nitrosamine Method, matrix spike recoveries for samples 2104131403C and 2104131404C were within laboratory control limits.
WW-5-459	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the field blank (2104130911A) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-41-420	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-504	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-584	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-684	4/20/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-1-486	**4/19/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L) was detected in the field blank (2104150908C) below the reporting limit. No groundwater data are affected by this field blank contamination.
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.41 ng/L) and N-nitrodimethylamine (0.2 ng/L) were detected in the trip blank (2104080701A) below the reporting limit. No groundwater data are affected by this trip blank contamination.
JER-1-563	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.42 ng/L) and N-nitrodimethylamine (0.87 ng/L) were detected in the field blank (2104080854A) below the reporting limit for N-nitrosodimethylamine only. Affected data are appropriately qualified.**
JP-1-424	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the field blank (2104131405C) below the reporting limit. Affected data are appropriately qualified.**
PL-10-484	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
PL-10-592	**4/5/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-10-962	**4/5/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-453	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-544	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-779	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-970	4/6/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. No groundwater data are affected by this method blank contamination.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. No groundwater data are affected by this method blank contamination.
JER-1-563	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-1-683	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
PL-6-545	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
PL-6-725	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.48 ng/L) was detected in the trip blank (2104150751C). No groundwater data are affected by this trip blank contamination.
JP-3-689	**4/15/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.49 ng/L) was detected in the field blank (2104151038C) below the reporting limit. Affected data are appropriately qualified.**
WW-5-909	4/13/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.52 ng/L) was detected in the field blank (2104130946A). No groundwater data are affected by this field blank contamination.
JER-1-683	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.57 ng/L) was detected in the field blank (2104080914A) below the reporting limit. Affected data are appropriately qualified.**
ST-7-970	4/6/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.61 ng/L) was detected in the field blank (2104061003A). No groundwater data are affected by this field blank contamination.
WW-5-809	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.66 ng/L) was detected in the field blank (2104130931A). Affected data are appropriately qualified.**
ST-7-779	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.67 ng/L) was detected in the field blank (2104060948A) below the reporting limit. Affected data are appropriately qualified.**
BLM-41-420	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.69 ng/L) was detected in the field blank (2104201424C). Affected data are appropriately qualified.**
JER-2-684	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.75 ng/L) was detected in the field blank (2104201034A). Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.79 ng/L) was detected in the field blank (2104151324). Affected data are appropriately qualified.**
JER-2-584	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.94 ng/L) was detected in the field blank (2104201019A). Affected data are appropriately qualified.**
PL-6-545	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.0 ng/L) was detected in the equipment blank (2104081336Y) below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**4/14/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.1 ng/L) and N-nitrodimethylamine (0.26 ng/L) were detected in the field blank (2104141330) below the reporting limit for N-nitrodimethylamine only. Affected data are appropriately qualified.**
PL-1-486	**4/19/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.1 ng/L) was detected in the trip blank (2104191301C). Affected data are appropriately qualified.**
PL-6-725	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.2 ng/L) was detected in the equipment blank (2104080926Y) below the reporting limit. Affected data are appropriately qualified.**
JER-2-504	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.3 ng/L) was detected in the field blank (2104200954A). Affected data are appropriately qualified.**
BLM-41-420	4/20/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2104201422C and 2104201423C were within control limits or below the calculable range.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, field blank 2104080834A was broken during shipment and was not analyzed.
B650-EFF-1	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B655-EFF-2	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-10-517	**4/1/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-40-517	4/1/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-6-488	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
JP-1-424	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
JP-2-447	4/13/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
JP-3-689	**4/15/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
WW-5-459	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-579	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-809	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-909	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B650-EFF-1	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-10-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-10-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-41-670	4/20/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-6-488	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-2-447	4/13/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-10-484	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-592	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-1-486	4/19/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-453	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-544	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-579	4/13/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
JER-1-563	**4/8/2021**	**For SW-846 Method 8270D, field duplicate samples 2104080855A and 2104080856A the relative percent difference for 1,4-dioxane was 34.0%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
JER-1-483	**4/8/2021**	**For SW-846 Method 8270D, the upper control limit was exceeded for the surrogate in sample 2104080835A. The elevated recovery equates to a high bias. The sample extraction was initially performed within the holding time, but was re-extracted due to the QC failure. The re-extraction was performed past the recommended holding time. The data are flagged to indicate the holding time exceedance.**
JER-2-684	4/20/2021	For SW-846 Method 8270D, there were no detections in the field blank.

Well ID	Event Date	Total Metals QA Narratives
PFE-2	**4/15/2021**	**For Total Metals, chromium (0.0006 mg/L) were detected in the method blank for analytical batch 377893 below the reporting limit. Affected data are appropriately qualified.**
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for sodium was 4.2%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for calcium was 3.9%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for strontium was 4.7%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for magnesium was 4.3%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for chromium was 0.4%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for nickel was 1.9%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Total Metals QA Narratives
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for iron was 0.9%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for strontium was 2.2%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for magnesium was 2.1%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for sodium was 2.4%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for calcium was 8.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For Total Metals, magnesium (0.07 mg/L), sodium (0.7 mg/L), and strontium (0.006 mg/L) were detected in the equipment blank (2104070901Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
JP-1-424	4/13/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-2-447	4/13/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
ST-1-473	4/12/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-1-424	4/13/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-2-447	4/13/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
ST-1-473	4/12/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
BLM-40-517	4/1/2021	For Total Metals, the upper control limit was exceeded for selenium in the Contract Required Detection Limit Standard (CRDL). The field samples analyzed in this sequence did not contain the analyte 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-10-484	4/6/2021	For Total Metals, the upper control limit was exceeded for thallium 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-10-592	4/5/2021	For Total Metals, the upper control limit was exceeded for thallium 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-10-813	4/1/2021	For Total Metals, the upper control limit was exceeded for thallium in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the

Well ID	Event Date	Total Metals QA Narratives
		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-10-962	4/5/2021	For Total Metals, the upper control limit was exceeded for thallium 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	Miscellaneous QA Narratives
PL-10-962	**4/5/2021**	**For Standard Method 2540C, the minimum target residue of 2.5 mg, as described by the reference method, was not achieved. The laboratory Method Reporting Limit (MRL) of 10 mg/L is based on 100 mL of sample and 1 mg of residue. The analytical balances used by the laboratory are capable of accurate quantitation of 1 mg of residue. Affected data are qualified with an asterisk *.**

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-1-486	4/19/2021	Carboy G3	8260_LL	VOA-FB	67-63-0	2-Propanol	13	ug/L	J FB
PFE-4A	4/15/2021		8260	VOA-FB	67-63-0	2-Propanol	11	ug/L	J FB
JER-1-683	4/8/2021		8260_LL	VOA-FB	67-63-0	2-Propanol	9.6	ug/L	J FB
BLM-40-688	4/14/2021	Carboy G3	8260_LL	VOA-TB	67-63-0	2-Propanol	9.3	ug/L	J TB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5.9	ug/L	TIC FB
WW-5-809	4/13/2021	Carboy G5	8260_LL	VOA-FB	67-63-0	2-Propanol	5.7	ug/L	J FB
PFE-7	4/15/2021		8260	VOA-FB	TIC	Unknown	5.2	ug/L	TIC FB
BLM-40-595	4/12/2021	Carboy G3	8260_LL	VOA-TB	67-63-0	2-Propanol	5.2	ug/L	J TB
PFE-5	4/15/2021		8260	VOA-FB	TIC	Unknown	5.2	ug/L	TIC FB
JP-2-447	4/13/2021	Carboy G3	8260_LL	VOA-FB	67-63-0	2-Propanol	4.4	ug/L	J FB
600-G-138	4/27/2021	Carboy G3	8260	VOA-FB	67-63-0	2-Propanol	4.4	ug/L	J FB
B655-EFF-2	4/14/2021		8260_LL	VOA-FB	67-63-0	2-Propanol	4	ug/L	J FB
JER-2-504	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.3	ng/L	RB FB
PL-6-725	4/8/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.2	ng/L	RB EB
PL-1-486	4/19/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.1	ng/L	RB TB
B655-EFF-2	4/14/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.1	ng/L	* FB
PL-6-545	4/8/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1	ng/L	RB EB
JER-2-584	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.94	ng/L	RB FB
JER-1-563	4/8/2021		NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.87	ng/L	RB FB
PFE-7	4/15/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.79	ng/L	* FB
JER-2-684	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.75	ng/L	RB FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.75	ug/L	J FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.75	ug/L	J FB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7440-23-5	Sodium, Total	0.7	mg/L	J EB
BLM-41-420	4/20/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.69	ng/L	RB FB
ST-7-779	4/6/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.67	ng/L	RB FB
WW-5-809	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.66	ng/L	* FB
ST-7-970	4/6/2021		NDMA_LL	NDMA-FB	62-75-9	N-Nitrosodimethylamine	0.61	ng/L	RB FB
JER-1-683	4/8/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.57	ng/L	RB FB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
WW-5-909	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.52	ng/L	* FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	75-69-4	Trichlorofluoromethane (CFC 11)	0.51	ug/L	J FB
JP-3-689	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.49	ng/L	* FB
JP-3-509	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.48	ng/L	* TB FB
JP-1-424	4/13/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.43	ng/L	J FB
JER-1-563	4/8/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.42	ng/L	J FB
JER-1-483	4/8/2021		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.41	ng/L	J RB TB
JP-3-509	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J * TB FB
WW-5-459	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J * FB
PFE-5	4/15/2021		8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.27	ug/L	J FB
B655-EFF-2	4/14/2021		NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.26	ng/L	J FB
JER-1-483	4/8/2021		NDMA_LL	NDMA_LL-TB	4164-28-7	N-Nitrodimethylamine	0.2	ng/L	J TB
600-G-138	4/27/2021	Carboy G3	607	NDMA-FB	314-40-9	Bromacil	0.12	µg/L	FB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.07	mg/L	J EB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.006	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	3/15/2021	607	2103151005C	N-Nitrosodimethylamine	0.14	µg/L	0.0097	0.0049	38	
200-F-225	2/23/2021	607	2102231041Y	N-Nitrosodimethylamine	0.0057	µg/L	0.0094	0.0047	1.4	J A
300-A-170	2/18/2021	607	2102181022B	N-Nitrosodimethylamine	1.5	µg/L	0.0094	0.0047	39	
300-B-166	2/3/2021	607	2102031457C	N-Nitrosodimethylamine	2.8	µg/L	0.0094	0.0047	36	
300-E-138	2/23/2021	607	2102231501Y	N-Nitrosodimethylamine	0.69	µg/L	0.0094	0.0047	1.4	A
BLM-14-327	3/15/2021	607	2103151505C	N-Nitrosodimethylamine	0.23	µg/L	0.0094	0.0047	38	
BLM-21-400	2/8/2021	607	2102080908C	N-Nitrosodimethylamine	0.37	µg/L	0.0095	0.0048	34	
BLM-23-431	2/4/2021	607	2102041307C	N-Nitrosodimethylamine	0.2	µg/L	0.0096	0.0048	34	
BLM-23-431	2/4/2021	607	2102041308C	N-Nitrosodimethylamine	0.2	µg/L	0.0094	0.0047	34	
BLM-32-543	2/2/2021	NDMA_LL	2102021027A	N-Nitrosodimethylamine	2.7	ng/L	0.48	0.33		FB
BLM-32-571	2/2/2021	NDMA_LL	2102021004A	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		
BLM-39-385	4/7/2021	607	2104071431Y	N-Nitrosodimethylamine	2.3	µg/L	0.0095	0.0048	46	
BLM-39-560	4/7/2021	607	2104071017Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	46	
BLM-41-670	4/20/2021	NDMA_LL	2104200927C	N-Nitrosodimethylamine	1.4	ng/L	0.48	0.33		RB Q
BLM-41-670	4/20/2021	NDMA_LL	2104200928C	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		RB * Q
BLM-5-527	3/15/2021	607	2103151348B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
BLM-5-527	3/15/2021	607	2103151349B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
BLM-9-419	3/2/2021	607	2103021335C	N-Nitrosodimethylamine	0.0076	µg/L	0.0095	0.0048	36	J
BLM-9-419	3/2/2021	607	2103021336C	N-Nitrosodimethylamine	0.0075	µg/L	0.0094	0.0047	36	J
BW-1-268	3/9/2021	607	2103091318B	N-Nitrosodimethylamine	4.5	µg/L	0.0094	0.0047	40	
JER-1-563	4/8/2021	NDMA_LL	2104080853A	N-Nitrosodimethylamine	1.8	ng/L	0.48	0.34		RB FB
JER-1-683	4/8/2021	NDMA_LL	2104080913A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		RB FB
JER-2-504	4/20/2021	NDMA_LL	2104200953A	N-Nitrosodimethylamine	2.5	ng/L	0.48	0.33		RB FB
JER-2-584	4/20/2021	NDMA_LL	2104201018A	N-Nitrosodimethylamine	2.1	ng/L	0.48	0.33		RB FB
JER-2-584	4/20/2021	NDMA_LL	2104201020A	N-Nitrosodimethylamine	2.7	ng/L	0.47	0.33		RB FB
JER-2-684	4/20/2021	NDMA_LL	2104201033A	N-Nitrosodimethylamine	4	ng/L	0.47	0.33		FB
PL-10-484	4/6/2021	NDMA_LL	2104060946Y	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		RB
PL-10-813	4/1/2021	NDMA_LL	2104050830Y	N-Nitrosodimethylamine	5.7	ng/L	0.48	0.33		
PL-10-962	4/5/2021	NDMA_LL	2104051052Y	N-Nitrosodimethylamine	1.2	ng/L	0.48	0.33		RB
PL-11-470	3/2/2021	NDMA_LL	2103021018A	N-Nitrosodimethylamine	2.4	ng/L	0.48	0.33		RB
PL-11-530	3/2/2021	NDMA_LL	2103021033A	N-Nitrosodimethylamine	1.9	ng/L	0.48	0.34		RB FB
PL-11-710	3/2/2021	NDMA_LL	2103021048A	N-Nitrosodimethylamine	1.6	ng/L	0.47	0.33		RB FB
PL-12-570	2/8/2021	NDMA_LL	2102081514B	N-Nitrosodimethylamine	5	ng/L	0.48	0.33		FB
PL-12-570	2/8/2021	NDMA_LL	2102081516B	N-Nitrosodimethylamine	5.2	ng/L	0.48	0.33		FB

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
PL-12-800	2/8/2021	NDMA_LL	2102080953B	N-Nitrosodimethylamine	6.8	ng/L	0.47	0.33		FB Q
PL-2-504	3/15/2021	607	2103150957B	N-Nitrosodimethylamine	0.078	µg/L	0.0095	0.0048	38	
PL-7-480	2/3/2021	NDMA_LL	2102031021Y	N-Nitrosodimethylamine	4.9	ng/L	0.5	0.35		
ST-1-473	4/12/2021	607	2104120934C	N-Nitrosodimethylamine	0.41	µg/L	0.0096	0.0048	50	
ST-1-473	4/12/2021	607	2104120933C	N-Nitrosodimethylamine	0.42	µg/L	0.0094	0.0047	50	
WW-5-459	4/13/2021	NDMA_LL	2104130910A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		* FB
WW-5-579	4/13/2021	NDMA_LL	2104130920A	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		*
WW-5-809	4/13/2021	NDMA_LL	2104130930A	N-Nitrosodimethylamine	1.4	ng/L	0.47	0.33		* FB
WW-5-909	4/13/2021	NDMA_LL	2104130945A	N-Nitrosodimethylamine	6.5	ng/L	0.47	0.33		*

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	4/7/2021	8260	2104071430Y	Tetrachloroethene (PCE)	6.1	ug/L	1	0.21		
ST-1-473	4/12/2021	8260	2104120930C	Tetrachloroethene (PCE)	8.1	ug/L	1	0.21		
ST-1-473	4/12/2021	8260	2104120931C	Tetrachloroethene (PCE)	7.8	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	3/15/2021	8260	2103151003C	Trichloroethene (TCE)	61	ug/L	1	0.2		
200-D-240	3/16/2021	8260	2103161015C	Trichloroethene (TCE)	14	ug/L	1	0.2		
200-F-225	2/23/2021	8260	2102231040Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
200-KV-150	3/10/2021	8260	2103101436C	Trichloroethene (TCE)	13	ug/L	1	0.2		
200-KV-150	3/10/2021	8260	2103101435C	Trichloroethene (TCE)	14	ug/L	1	0.2		
600-G-138	4/27/2021	8260	2104270815B	Trichloroethene (TCE)	40	ug/L	1	0.2		Q
BLM-14-327	3/15/2021	8260	2103151503C	Trichloroethene (TCE)	63	ug/L	1	0.2		
BLM-21-400	2/8/2021	8260	2102080906C	Trichloroethene (TCE)	9.2	ug/L	1	0.2		Q
BLM-23-431	2/4/2021	8260	2102041305C	Trichloroethene (TCE)	48	ug/L	1	0.2		
BLM-39-385	4/7/2021	8260	2104071430Y	Trichloroethene (TCE)	150	ug/L	1	0.2		
BLM-39-560	4/7/2021	8260	2104071016Y	Trichloroethene (TCE)	11	ug/L	1	0.2		
BLM-39-560	4/7/2021	8260	2104071015Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
BLM-5-527	3/15/2021	8260	2103151345B	Trichloroethene (TCE)	24	ug/L	1	0.2		
BLM-5-527	3/15/2021	8260	2103151346B	Trichloroethene (TCE)	25	ug/L	1	0.2		
PL-12-570	2/8/2021	8260	2102081510B	Trichloroethene (TCE)	16	ug/L	1	0.2		
PL-12-570	2/8/2021	8260	2102081511B	Trichloroethene (TCE)	17	ug/L	1	0.2		
PL-12-800	2/8/2021	8260	2102080950B	Trichloroethene (TCE)	14	ug/L	1	0.2		
PL-2-504	3/15/2021	8260	2103150955B	Trichloroethene (TCE)	65	ug/L	1	0.2		
ST-1-473	4/12/2021	8260	2104120931C	Trichloroethene (TCE)	220	ug/L	2	0.4		
ST-1-473	4/12/2021	8260	2104120930C	Trichloroethene (TCE)	200	ug/L	2	0.4		

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 **Source GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-EFF-1	4/14/2021	NDMA_LL	2104141409	N-Nitrosodimethylamine	3.5	ng/L	0.48	0.33		*
B650-INF-1	3/5/2021	607	2103050558	N-Nitrosodimethylamine	0.064	µg/L	0.01	0.005	40	
B650-INF-1	4/14/2021	607	2104141419	N-Nitrosodimethylamine	0.045	µg/L	0.0098	0.0049	50	
B650-INF-1	2/9/2021	607	2102091407	N-Nitrosodimethylamine	0.078	µg/L	0.0097	0.0049	40	
B650-INF-1	3/5/2021	607	2103050557	N-Nitrosodimethylamine	0.062	µg/L	0.0096	0.0048	40	
PFE-3	4/15/2021	607	2104150932	N-Nitrosodimethylamine	0.16	µg/L	0.0098	0.0049	40	
PFE-4A	4/15/2021	607	2104150953	N-Nitrosodimethylamine	0.0078	µg/L	0.0097	0.0049	40	J
PFE-4A	4/15/2021	607	2104150954	N-Nitrosodimethylamine	0.0068	µg/L	0.0097	0.0049	40	J
PFE-5	4/15/2021	607	2104151032	N-Nitrosodimethylamine	0.38	µg/L	0.0099	0.005	40	
PFE-7	4/15/2021	NDMA_LL	2104151323	N-Nitrosodimethylamine	2.9	ng/L	0.5	0.35		* FB
PFE-7	4/15/2021	NDMA_LL	2104151325	N-Nitrosodimethylamine	2.8	ng/L	0.48	0.33		* FB

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	3/5/2021	8260	2103050555	Trichloroethene (TCE)	17	ug/L	1	0.2		
B650-INF-1	4/14/2021	8260	2104141416	Trichloroethene (TCE)	14	ug/L	1	0.2		
B650-INF-1	4/14/2021	8260	2104141418	Trichloroethene (TCE)	14	ug/L	1	0.2		
B650-INF-1	2/9/2021	8260	2102091405	Trichloroethene (TCE)	17	ug/L	1	0.2		
B650-INF-1	3/5/2021	8260	2103050554	Trichloroethene (TCE)	17	ug/L	1	0.2		
PFE-3	4/15/2021	8260	2104150930	Trichloroethene (TCE)	45	ug/L	1	0.2		
PFE-5	4/15/2021	8260	2104151030	Trichloroethene (TCE)	59	ug/L	1	0.2		
PFE-7	4/15/2021	8260	2104151320	Trichloroethene (TCE)	5.3	ug/L	1	0.2		

Appendix D.3
MPITS

Analytical Results for MPITS and MPE Wells that Exceed Clean Up Levels

CAS Number 62-75-9 **Analyte N-Nitrosodimethylamine**

Clean Up Level 0.0011 ug/L **Source GMP**

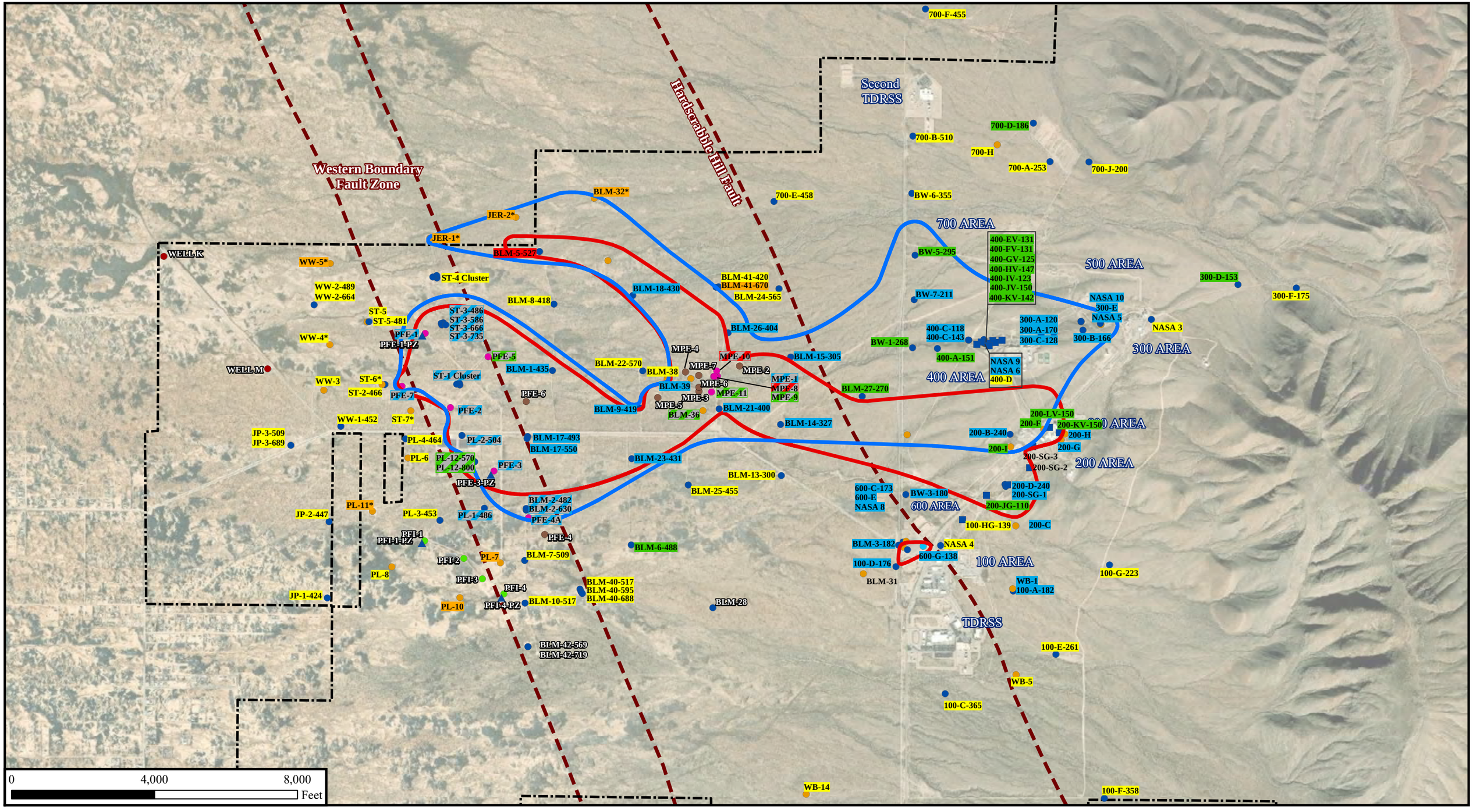
Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-2	3/5/2021	607	2103050808	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	40	
B655-INF-2	4/14/2021	607	2104141348	N-Nitrosodimethylamine	1.8	µg/L	0.0098	0.0049	50	
B655-INF-2	2/9/2021	607	2102090846	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	40	
MPE-1	2/10/2021	607	2102100903	N-Nitrosodimethylamine	3.9	µg/L	0.0096	0.0048	40	
MPE-10	2/10/2021	607	2102100948	N-Nitrosodimethylamine	3.4	µg/L	0.0095	0.0048	40	
MPE-11	2/10/2021	607	2102101103	N-Nitrosodimethylamine	0.26	µg/L	0.0096	0.0048	40	
MPE-8	2/10/2021	607	2102100934	N-Nitrosodimethylamine	2.6	µg/L	0.0096	0.0048	40	
MPE-9	2/10/2021	607	2102100918	N-Nitrosodimethylamine	4.6	µg/L	0.0097	0.0049	40	
MPE-9	2/10/2021	607	2102100919	N-Nitrosodimethylamine	4.9	µg/L	0.0097	0.0049	40	

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	3/5/2021	8260	2103050806	Trichloroethene (TCE)	44	ug/L	1	0.2		
B655-INF-2	4/14/2021	8260	2104141346	Trichloroethene (TCE)	44	ug/L	1	0.2		
B655-INF-2	2/9/2021	8260	2102090844	Trichloroethene (TCE)	53	ug/L	1	0.2		
MPE-1	2/10/2021	8260	2102100901	Trichloroethene (TCE)	82	ug/L	1	0.2		
MPE-10	2/10/2021	8260	2102100946	Trichloroethene (TCE)	61	ug/L	1	0.2		
MPE-11	2/10/2021	8260	2102101101	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
MPE-8	2/10/2021	8260	2102100931	Trichloroethene (TCE)	77	ug/L	1	0.2		
MPE-8	2/10/2021	8260	2102100933	Trichloroethene (TCE)	75	ug/L	1	0.2		
MPE-9	2/10/2021	8260	2102100916	Trichloroethene (TCE)	96	ug/L	1	0.2		

Appendix E
Time Concentration Plots



Time Concentration Plot Interpretations for Second Quarter 2021

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

N W E S

July 2021

Appendix E:

Reporting Period: 2Q/2021

Summary of Maximum Concentrations, Current Concentrations and T-C Plot Interpretations for WSTF Monitoring Well Network

Upgradient 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	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2012	0.004 DL	NP	2021	N/A		N/A	
100-G-223 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2012	0.004 DL	NP	2021	N/A		N/A	
300-F-175 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2016	0.004 DL	NP	2021	N/A		N/A	
NASA 3 Conv	1988	Non Detect	5.00 RL	1988	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	2020	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	2021	1.00 DL	2010	0.21 DL	2021	1.00 DL	2010	0.2 DL	2021	0.05 RL	NP	1992	0.004 DL	NP	2021	N/A		N/A	
100-D-176 Conv	1997	Natural Migration (Decreasing)	1.60 DL	2003	0.24 DL	2020	2.00 DL	1999	0.21 DL	2020	9.60	1999	2.50	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
100-HG-139 MSVGM	2011	Non Detect	0.79 J	2011	0.24 DL	2021	0.33 J	2015	0.21 DL	2021	10	2014	0.2 DL	2021	0.005 DL	NP	2020	0.004 DL	NP	2021	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	2020	2.50 RL	1996	0.21 DL	2020	9.00	1998	1.90	2020	0.1	NP	1988	0.004 DL	NP	2020	N/A		N/A	
600-E WestBay	1998	Natural Migration (Decreasing)	1.60 DL	2002	0.24 DL	2021	2.00 DL	1999	0.21 DL	2021	2.00 DL	1999	0.61 J	2021	0.005 DL	NP	2016	0.004 DL	NP	2021	N/A		N/A	
600-G-138 Conv	2011	Natural Migration (Decreasing)	5.10	2017	0.48 J Q	2021	0.3 DL	2018	0.21 DL	2021	130	2012	40 Q	2021	0.1 DL	NP	2021	0.1 DL	NP	2021	0.96 RB FB	2012	0.96 RB FB	2012
BW-3-180 Conv	1988	Natural Migration (Decreasing)	10	1988	0.42 J	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	
NASA 4 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	3.50	2009	0.2 DL	2020	0.05 RL	NP	1997	0.024 DL	NP	2020	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	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.27 J	2020	0.05 RL	NP	1993	0.004 DL	NP	2020	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	92	2021	15 QD	1989	2.90	2021	290 QD	1989	61	2021	1.60	25	1993	0.37	38	2021	N/A		N/A	
200-C WestBay	1993	Natural Migration (Decreasing)	51	1996	17	2021	2.50 RL	1996	0.21 DL	2021	4.30	2003	2.60	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-D-240 Conv	1988	Natural Migration (Decreasing)	240 QD	1995	54	2021	2.50 RL	1995	0.31 J	2021	110	1990	14	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-F WestBay	1995	Natural Migration (No Overall Trend)	41	2005	5.50	2021	2.50 RL	1996	0.45 J	2021	34	2009	21	2021	0.41 J A	1	2021	0.41 J A	1	2021	N/A		N/A	
200-G WestBay	1995	Natural Migration (Decreasing)	55	1995	5.10	2020	2.50 RL	1996	0.21 DL	2020	4.80	2004	2.20	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
200-H WestBay	1994	Natural Migration (Decreasing)	6.00	2003	1.10	2020	2.50 RL	1996	0.21 DL	2020	3.00 J	1997	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
200-I WestBay	1997	Natural Migration (No Overall Trend)	2.40 J	1999	0.29 J	2020	2.00 DL	1999	0.62 J RB	2020	35	2019	26	2020	0.021 J	42	2006	0.004 DL	NP	2020	N/A		N/A	
200-JG-110 MSVGM	2012	Natural Migration (No Overall Trend)	17	2013	4.70	2020	2.20	2020	2.20	2020	25	2013	24	2020	0.005 DL	NP	2012	0.004 DL	NP	2020	0.93 J	2012	0.93 J	2012
200-KV-150 MSVGM	2015	Natural Migration (No Overall Trend)	90	2020	90	2020	0.3 DL	2015	0.21 DL	2020	22	2020	22	2020	0.005 DL	NP	2020	0.005 DL	NP	2020	N/A		N/A	
200-LV-150 Conv	2018	Natural Migration (No Overall Trend)	0.27 DL	2018	0.24 DL	2020	0.3 DL	2018	0.21 DL	2020	0.89 J Q	2018	0.54 J	2020	0.004 DL	NP	2018	0.004 DL	NP	2020	N/A		N/A	
200-SG-1 MSVGM	2004	Natural Migration (Decreasing)	81	2008	14	2020	17	2007	5.70	2020	380	2007	140	2020	0.016 J	44	2008	0.004 DL	NP	2020	N/A		N/A	
BLM-3-182 Conv	1988	Natural Migration (Decreasing)	10	1988	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	41	1991	2.80	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	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	18	2020	2.50 RL	1996	0.21 DL	2020	2.50	2004	0.2 DL	2020	46	24	1990	2.30	56	2020	N/A		N/A	
300-A-170 Conv	1988	Natural Migration (Decreasing)	6000	1988	320	2021	2.50 RL	1996	0.21 DL	2021	7.00	1988	1.10	2021	48 QD	21	1995	3.80	39	2021	N/A		N/A	
300-B-166 Conv	1988	Natural Migration (Decreasing)	1600	1988	190	2021	2.50 RL	1996	0.21 DL	2021	8.00	1988	0.2 DL	2021	14	39	1991	7.80	36	2021	N/A		N/A	
300-C-128 Conv	1988	Natural Migration (Decreasing)	3000	1988	450 Q	2019	2.50 RL	1996	0.21 DL	2019	3.70 J	1996	1.30 Q	2019	47	32	2000	9.40	34	2019	N/A		N/A	
300-D-153 Conv	1988	Natural Migration (No Overall Trend)	6.30	2013	3.80	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	N/A		N/A	
300-E WestBay	1995	Natural Migration (Decreasing)	180	1996	16	2021	2.50 RL	1996	0.21 DL	2021	9.30	1997	1.40	2021	49 A	1	2021	49 A	1	2021	N/A		N/A	
400-A-151 Conv	1989	Natural Migration (No Overall Trend)	450	1990	200	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	1.20	2021	280	18	1991	16	34	2021	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	190	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.97 J	2020	93	15	1989	6.50	34	2020	N/A		N/A	
400-EV-131 MSVGM	2017	Natural Migration (No Overall Trend)	520	2017	420	2021	0.3 DL	2018	0.21 DL	2021	13	2017	1.80	2021	3.30	46	2020	3.30	46	2020	N/A		N/A	
400-FV-131 MSVGM	2017	Natural Migration (No Overall Trend)	240	2021	190	2021	0.3 DL	2018	0.21 DL	2021	1.60	2021	1.20	2021	3.30	60	2020	3.30	60	2020	N/A		N/A	
400-GV-125 MSVGM	2017	Natural Migration (No Overall Trend)	250	2021	250	2021	0.3 DL	2018	0.21 DL	2021	1.80	2021	1.80	2021	3.90	41	2019	3.20	68	2020	N/A		N/A	
400-HV-147 MSVGM	2017	Natural Migration (No Overall Trend)	240	2021	160	2021	0.3 DL	2018	0.21 DL	2021	2.00	2017	0.59 J	2021	140 D	60	2020	140 D	60	2020	N/A		N/A	
400-IV-123 MSVGM	2017	Natural Migration (No Overall Trend)	430	2017	99	2020	0.93 J	2018	0.21 DL	2020	0.28 J	2020	0.2 DL	2020	0.041	87	2017	0.012 J	54	2019	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
400-JV-150 MSVGM	2017	Natural Migration (No Overall Trend)	790 T *	2020	650	2021	0.3 DL	2018	0.21 DL	2021	1.50	2017	0.96 J	2021	5.30	82	2018	3.50	68	2020	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	150	2021	2.50 RL	1996	0.21 DL	2021	5.00	1989	0.85 J	2021	130	18	1991	11	40	2021	N/A		N/A	
BW-5-295 Conv	1989	Natural Migration (No Overall Trend)	360	1989	60	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.37 J	2020	1.90	49	1997	1.20	38	2020	N/A		N/A	
BW-7-211 Conv	1989	Natural Migration (Decreasing)	2400	1991	97 Q	2020	2.50 RL	1995	0.21 DL	2020	13	1989	0.87 J Q	2020	17	34	1994	1.80	44	2020	N/A		N/A	
NASA 10 Conv	1988	Natural Migration (Decreasing)	250	1996	20	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	4.70	19	1996	0.38	34	2020	N/A		N/A	
NASA 5 Conv	1988	Natural Migration (Decreasing)	350	1991	25	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	13	19	1996	2.70	34	2020	N/A		N/A	
NASA 6 Conv	1988	Natural Migration (Decreasing)	1300	1996	200	2020	2.50 RL	1996	0.21 DL	2020	5.00	1990	0.23 J	2020	95	21	1996	35 D	60	2020	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	0.091 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.99 J RB FB	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-B-510 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
700-D-186 Conv	1990	Natural Migration (No Overall Trend)	2.50 RL	1995	0.52 J	2021	2.50 RL	1995	0.21 DL	2021	2.50 RL	1995	1.30 RB FB	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-E-458 Conv	1990	Non Detect	2.50 RL	1996	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	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	

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
700-H WestBay	1999	Non Detect	1.60 DL	2003	0.091 DL	2021	0.62 DL	2004	0.31 J RB TB EB	2021	1.90 RB TB EB	2021	1.90 RB TB EB	2021	0.005 DL	NP	2013	0.004 DL	NP	2021	N/A		N/A	
700-J-200 Conv	1999	Non Detect	1.60 DL	2003	0.091 DL	2021	0.62 DL	2004	0.36 J RB FB	2021	3.70	2005	1.80 RB FB	2021	0.005 DL	NP	2017	0.004 DL	NP	2021	N/A		N/A	
BLM-24-565 Conv	1991	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-32 Westbay	1997	Fluctuating LL NDMA	1.60 DL	2002	0.24 DL	2021	2.00 DL	1999	0.21 DL	2021	2.00 DL	1999	0.2 DL	2021	0.016 J	36	2004	0.004 DL	NP	2021	21	2015	2.70 FB	2021
BLM-41-420 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2013	0.21 DL	2021	1.00	2013	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2020	5.40	2017	0.53 RB FB	2021
BLM-41-670 Conv	2013	Fluctuating LL NDMA	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2013	0.004 DL	NP	2020	5.50 FB	2017	1.50 RB * Q	2021
BW-6-355 Conv	1992	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	0.32	37	2004	0.004 DL	NP	2021	N/A		N/A	
JER-1 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.72	2011	0.2 DL	2021	0.014 J	41	2005	0.005 DL	NP	2020	360	2009	1.80 RB FB	2021
JER-2 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.016 J	43	2005	0.005 DL	NP	2020	290 QD	2006	4.00 FB	2021

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	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.05 RL	NP	1996	0.004 DL	NP	2020	N/A		N/A	
BLM-13-300 Conv	1988	Non Detect	5.00 RL	1988	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-25-455 Conv	1991	Non Detect	2.50 RL	1996	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	N/A		N/A	
BLM-40-517 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2017	0.21 DL	2021	0.22 DL	2017	0.2 DL	2021	0.005 DL	NP	2018	0.004 DL	NP	2021	1.10	2017	0.33 DL	2021
BLM-40-595 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2019	0.004 DL	NP	2020	0.67 FB	2014	0.33 DL	2021
BLM-40-688 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2016	0.21 DL	2021	0.22 DL	2016	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2020	0.74	2016	0.34 DL	2021

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
BLM-6-488 Conv	1990	Natural Migration (No Overall Trend)	3.10 J	1999	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	14	1999	2.00	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	45 FB	2001	0.76 *	2021
WB-14 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.27 J	2020	0.05 RL	NP	1993	0.004 DL	NP	2020	N/A		N/A	
WB-5 Westbay	1990	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.05 RL	NP	1991	0.004 DL	NP	2020	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	79	2021	9.20	2002	2.90	2021	180	1995	63	2021	1.20	18	2002	0.6	38	2021	N/A		N/A	
BLM-15-305 Conv	1989	Natural Migration (Decreasing)	770	1991	120 Q	2021	2.50 RL	1996	0.21 DL	2021	22	1989	1.80	2021	150 A	8	1989	26	36	2021	N/A		N/A	
BLM-18-430 Conv	1989	Natural Migration (Decreasing)	120 QD	2005	28	2021	2.50 RL	1996	0.63 J	2021	58	2009	19	2021	0.15 QD	31	2009	0.055	36	2021	N/A		N/A	
BLM-21-400 Conv	1991	Natural Migration (Decreasing)	320	1996	25 Q	2021	12	1995	0.41 J Q	2021	220	1991	9.20 Q	2021	5.60	16	1995	1.10	34	2021	N/A		N/A	
BLM-22-570 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-23-431 Conv	1990	Natural Migration (Decreasing)	240	1995	43	2021	8.00	1991	1.30	2021	240	1995	48	2021	1.10	33	2006	0.59	34	2021	N/A		N/A	
BLM-26-404 Conv	1991	Natural Migration (Decreasing)	110	2008	53	2020	2.50 RL	1996	0.54 J	2020	28	2008	17	2020	1.20	50	1991	0.45	38	2020	N/A		N/A	
BLM-27-270 Conv	1991	Natural Migration (No Overall Trend)	500	2010	400	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	1.00	2020	13	41	2006	3.00	90	2020	N/A		N/A	
BLM-36 FLUTe	2000	Pumping Related Migration (No Overall Trend)	98	2011	37	2020	4.40	2011	3.10	2020	97	2008	56	2020	2.00	43	2007	0.74	78	2020	N/A		N/A	
BLM-38 FLUTe	2000	Non Detect	1.60 DL	2003	0.24 DL	2020	0.62 DL	2004	0.21 DL	2020	0.7 DL	2003	0.2 DL	2020	0.024 J	33	2002	0.004 DL	NP	2020	N/A		N/A	
BLM-39 FLUTe	2000	Natural Migration (Decreasing)	340	2005	92	2021	10	2007	6.10	2021	330 QD	2002	150	2021	9.70	19	2002	5.00	46	2021	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
BLM-5-527 Conv	1988	Natural Migration (Increasing)	23	2020	17	2021	2.50 RL	1996	0.57 J	2021	29	2020	25	2021	0.21	38	2021	0.21	38	2021	220 G	2017	220 G	2017
BLM-8-418 Conv	1988	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	3.80 QD	2001	0.2 J	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-9-419 Conv	1989	Natural Migration (Decreasing)	320	1991	5.60	2021	12	1989	0.21 DL	2021	240	1989	3.00	2021	8.80	16	1995	0.021 J	36	2021	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	18	2020	31	1989	1.20	2020	430	1989	25	2020	11 A Q	7	1989	2.20	38	2020	N/A		N/A	
BLM-17-550 Conv	1990	Natural Migration (Decreasing)	440	1991	93	2021	20	1990	3.30	2021	390	1991	80	2021	8.10	16	1995	1.70	34	2021	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	Pumping Related Migration (Decreasing)	470 QD	1988	0.24 DL	2020	8.00	1991	0.21 DL	2020	310 QD	1988	0.85 J	2020	1.30	31	2002	0.004 DL	NP	2020	N/A		N/A	
PL-1-486 Conv	1988	Pumping Related Migration (Decreasing)	190	1996	0.27 J	2021	4.60	2004	0.21 DL	2021	180	2004	0.23 J	2021	0.093	43	2005	0.004 DL	NP	2021	260 QD	2002	0.49 RB TB	2021
PL-2-504 Conv	1989	Pumping Related Migration (Decreasing)	230	1996	41	2021	2.50 RL	1996	0.91 J	2021	180	2004	65	2021	0.2	38	2021	0.2	38	2021	300 G RB Q	2020	300 G RB Q	2020
ST-1-473 Conv	1989	Pumping Related Migration (Decreasing)	610	1996	180	2021	13	2010	8.10	2021	370	2005	220	2021	1.70	27	2009	0.84	50	2021	N/A		N/A	
ST-1-541 Conv	1992	Pumping Related Migration (Decreasing)	790	1995	97	2020	37	1995	3.90	2020	650	1995	91	2020	4.80 QD	37	2003	3.80	42	2020	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
ST-1-630 Conv	1992	Pumping Related Migration (Decreasing)	410	2006	140	2020	19 QD	2007	5.70	2020	440	2000	150	2020	1.90	40	2019	0.5	72	2020	N/A		N/A	
[1]ST-3-486	1991	Pumping Related Migration (Decreasing)	800	1996	3.90	2020	19	2003	0.24 J	2020	690	1991	4.20	2020	4.40	45	2011	0.2	34	2020	N/A		N/A	
ST-3-586 Conv	1992	Pumping Related Migration (Decreasing)	640 T TB Q	1996	8.20	2020	15	2007	0.52 J	2020	320	2005	14	2020	3.80 QD	37	2003	0.043	44	2020	N/A		N/A	
ST-3-666 Conv	1992	Pumping Related Migration (Decreasing)	280	2009	2.20	2020	15	2009	0.21 DL	2020	320	2009	0.99 J	2020	3.70	30	2006	0.48	44	2020	N/A		N/A	
ST-3-735 Conv	1992	Pumping Related Migration (Decreasing)	240	2005	3.80	2020	14	2007	0.31 J	2020	320	2005	9.50	2020	7.80 QD	32	2009	0.63	38	2020	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	2021	2.50 RL	1996	0.21 DL	2021	4.40	2012	0.2 DL	2021	0.095 RL	NP	1988	0.004 DL	NP	2021	5.90	2020	0.38 J *	2021
BLM-7-509 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.09 J	32	1996	0.004 DL	NP	2021	0.76 FB	2018	0.33 DL	2021
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	0.31 J	2020
PL-4-464 Conv	1990	Non Detect	28	2005	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	21	2005	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	2.70 RB FB	2005	0.33 DL	2021
PL-6 Westbay	1992	Non Detect	4.10 J	1996	0.24 DL	2021	5.60	1996	0.21 DL	2021	4.90 J	1996	0.2 DL	2021	0.64	28	1999	0.004 DL	NP	2021	23	2001	0.87 RB EB	2021
PL-7 Westbay	1993	Fluctuating LL NDMA	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	0.005 DL	NP	2021	4.90	2021	4.90	2021
ST-2-466 Conv	1989	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	2.60 RB	2004	0.33 DL	2021
ST-4-481 Conv	1992	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	2020	1.80 FB	2012	0.44 J RB	2021
ST-4-589 Conv	1992	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	2020	1.10 RB Q	2008	0.33 DL	2021

Reporting Period: 2Q/2021

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-4-690 Conv	1992	Non Detect	3.00 J	1998	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	10	1998	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	2.70	2008	0.78 RB FB	2021
ST-5 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1997	0.005 DL	NP	2021	7.20	2017	0.46 J	2021
ST-5-481 Conv	1992	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	0.005 DL	NP	2021	0.7 FB	2002	0.34 DL	2021
ST-6 Westbay	1998	Non Detect	21 EB	2005	0.32 J	2021	2.00 DL	1999	0.21 DL	2021	67	2004	0.45 J	2021	0.012	90	2017	0.004 DL	NP	2020	28 RB FB Q	2005	0.90 *	2021
ST-7 Westbay	1999	Non Detect	1.60 DL	2003	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.82	2021	0.2 DL	2021	0.005 DL	NP	2013	0.004 DL	NP	2020	3.80 FB	2002	0.57	2021
WW-1-452 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.3 T	30	2006	0.004 DL	NP	2021	3.20 RB FB	2012	0.33 DL	2021

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	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	
400-D WestBay	1995	Non Detect	3.30 J EB	1996	0.24 DL	2020	3.50 J	1998	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.29	34	1996	0.004 DL	NP	2020	N/A		N/A	
JP-1-424 Conv	1988	Non Detect	5.50	2001	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.061 J	36	1998	0.005 DL	NP	2021	15 RB QD	2004	0.37 J * FB	2021
JP-2-447 Conv	1988	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	4.50	2001	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	14	2000	0.33 DL	2021
JP-3-509 Conv	2013	Non Detect	0.27 DL	2019	0.24 DL	2021	0.28 DL	2019	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.004 DL	NP	2017	0.004 DL	NP	2021	0.66	2017	0.33 DL	2021
JP-3-689 Conv	2014	Non Detect	0.27 DL	2019	0.24 DL	2021	0.28 DL	2019	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.74	2016	0.56 * FB	2021
PL-10 Westbay	2002	Fluctuating LL NDMA	1.60 DL	2003	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.62 DL	2004	0.2 DL	2021	0.005 DL	NP	2017	0.004 DL	NP	2021	6.10	2019	5.70	2021
PL-11 FLUTe	2017	Fluctuating LL NDMA	0.45 J	2019	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.22 J	2019	0.2 DL	2021	0.005 DL	NP	2017	0.004 DL	NP	2020	5.90 SP	2019	2.4 RB	2021
PL-8 Westbay	2000	Non Detect	1.60 DL	2002	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.7 DL	2003	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2021	12 FB	2002	0.65	2021
WW-2-489 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.41 J FB	2016	0.33 DL	2021

Reporting Period: 2Q/2021

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
WW-2-664 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.4 J	2018	0.33 DL	2021
WW-3 Westbay	2001	Non Detect	1.60 DL	2002	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.7 DL	2003	0.2 DL	2021	0.012 J	40	2004	0.004 DL	NP	2021	95 RB *	2007	0.86 RB	2021
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	2021	0.62 DL	2004	0.21 DL	2021	0.62 DL	2004	0.2 DL	2021	0.005 DL	NP	2016	0.004 DL	NP	2020	6.50	2021	6.50 *	2021

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	180	2021	8.70	2010	4.00	2021	180	2010	82	2021	25	30	2009	9.80	40	2021	N/A		N/A	
MPE-10 Conv*	2004	Pumping Related Migration (Increasing)	150	2017	97	2021	3.50	2020	3.10	2021	65	2017	61	2021	8.50	40	2021	8.50	40	2021	N/A		N/A	
MPE-11 Conv*	2004	Pumping Related Migration (No Overall Trend)	65	2008	6.70	2021	1.60	2008	0.25 J	2021	41	2008	5.30	2021	1.60	40	2007	0.65	40	2021	N/A		N/A	
MPE-8 Conv*	2003	Pumping Related Migration (Increasing)	200	2020	160	2021	4.20	2020	3.40	2021	83	2020	77	2021	6.50	40	2021	6.50	40	2021	N/A		N/A	
MPE-9 Conv*	2004	Pumping Related Migration (No Overall Trend)	250	2015	110	2021	5.60	2018	4.20	2021	130	2018	96	2021	13	35	2019	12	40	2021	N/A		N/A	
PFE-1 Conv*	2000	Pumping Related Migration (Decreasing)	110	2010	7.40	2020	4.80	2010	0.45 J	2020	140	2005	11	2020	0.39	36	2017	0.24	36	2020	N/A		N/A	
PFE-2 Conv*	2000	Pumping Related Migration (Decreasing)	170	2007	0.31 J	2021	7.60	2007	0.21 DL	2021	220	2007	0.3 J	2021	0.3	36	2017	0.004 DL	NP	2021	N/A		N/A	
PFE-3 Conv*	1991	Pumping Related Migration (Decreasing)	290	2006	45	2021	18	2004	2.10	2021	340	2004	45	2021	3.90	18	1991	0.4	40	2021	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-4A Conv*	2001	Pumping Related Migration (Decreasing)	190	2004	0.83 J	2021	8.40	2007	0.21 DL	2021	240	2004	1.20	2021	0.26	36	2010	0.019 J	40	2021	N/A		N/A	
[2]PFE-5	2000	Pumping Related Migration (No Overall Trend)	120	2009	32	2021	7.70	2006	2.80	2021	180	2009	59	2021	2.40	33	2006	0.95	40	2021	N/A		N/A	
PFE-7 Conv*	2001	Pumping Related Migration (Decreasing)	32	2004	4.80	2021	0.81 J	2004	0.21 DL	2021	41	2004	5.30	2021	0.022	44	2004	0.004 DL	NP	2021	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.

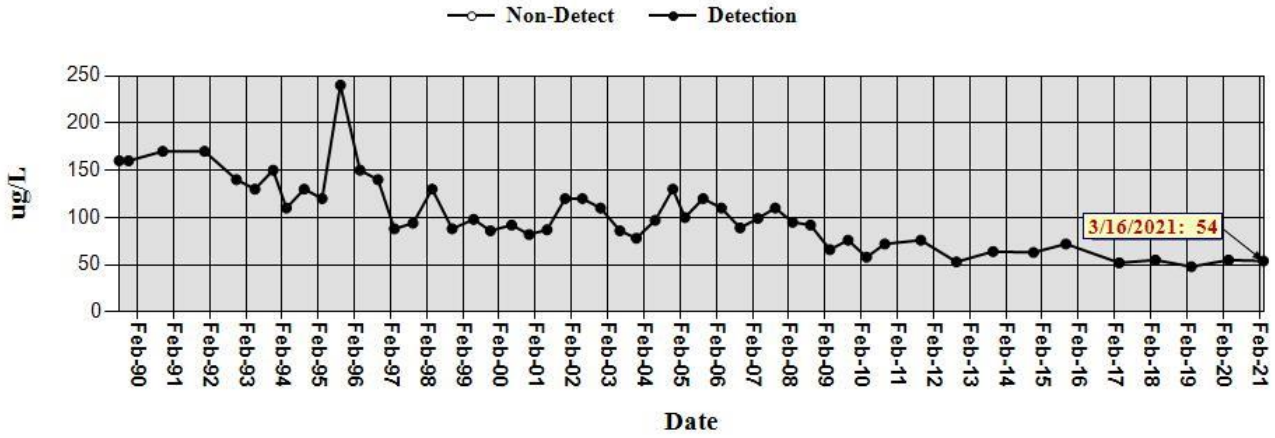
DL = Maximum detection limit and most recent year they were used are reported in the table. Detection limits can change over time, typically decreasing as analytical techniques improve.

[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.

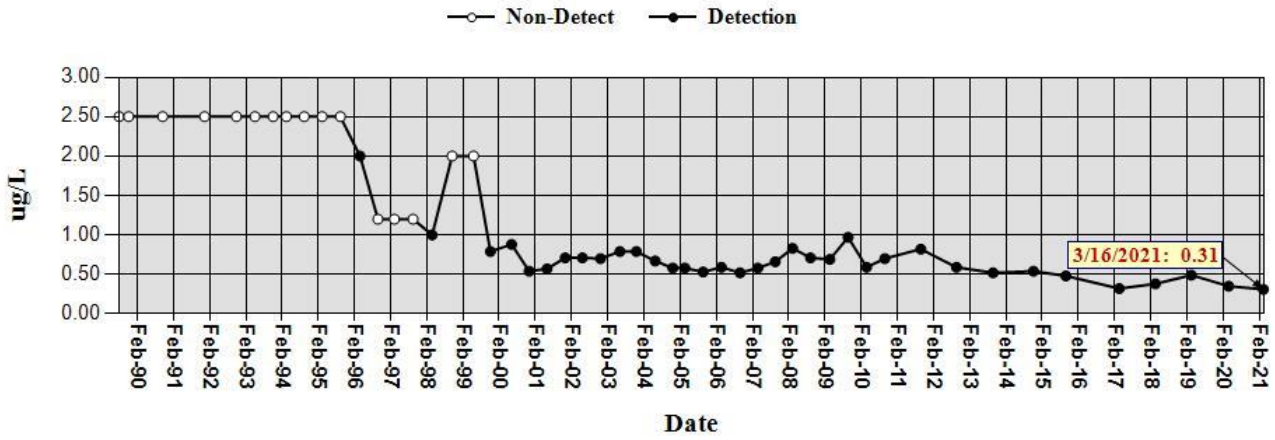
Well ID: 200-D-240
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



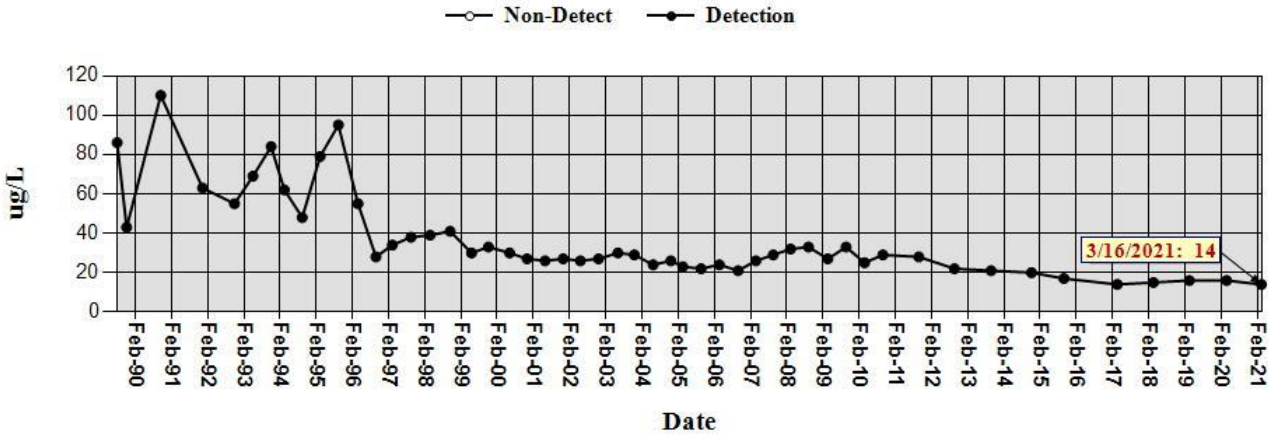
Well ID: 200-D-240
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: 200-D-240
CAS RN: 79-01-6 Trichloroethene

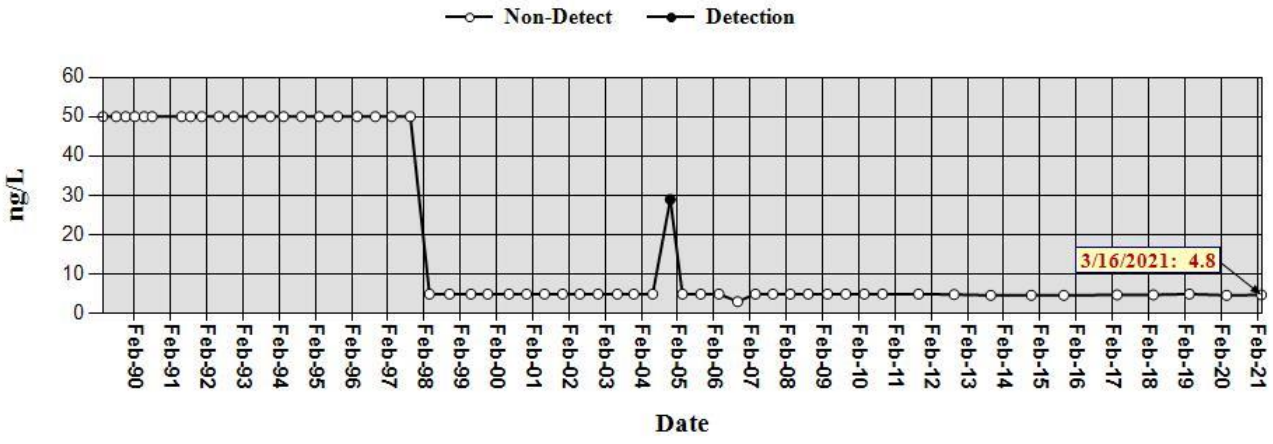
Analysis: 8260



Well ID: 200-D-240
CAS RN: 62-75-9 N-Nitrosodimethylamine

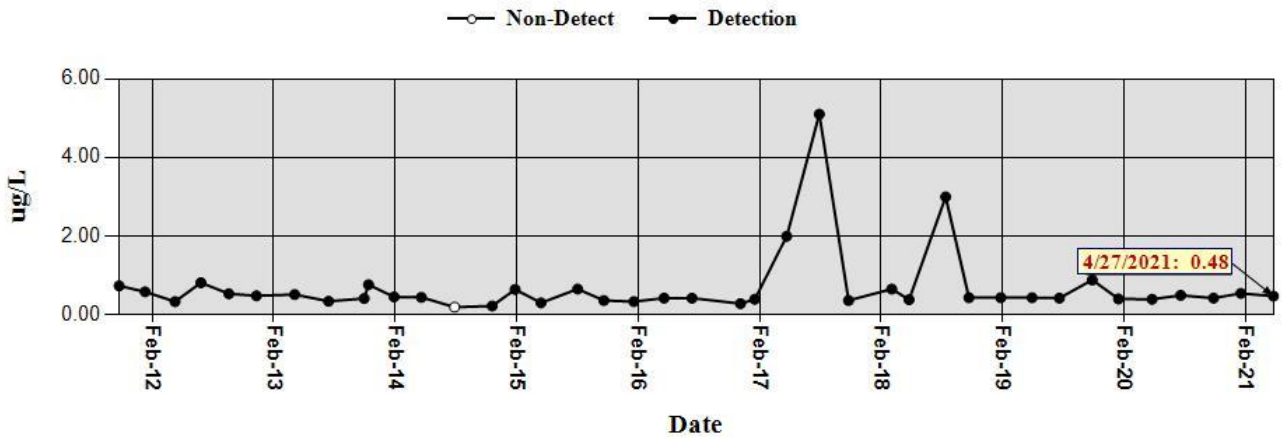
Analysis: 607

Results are Corrected for Extraction Efficiency



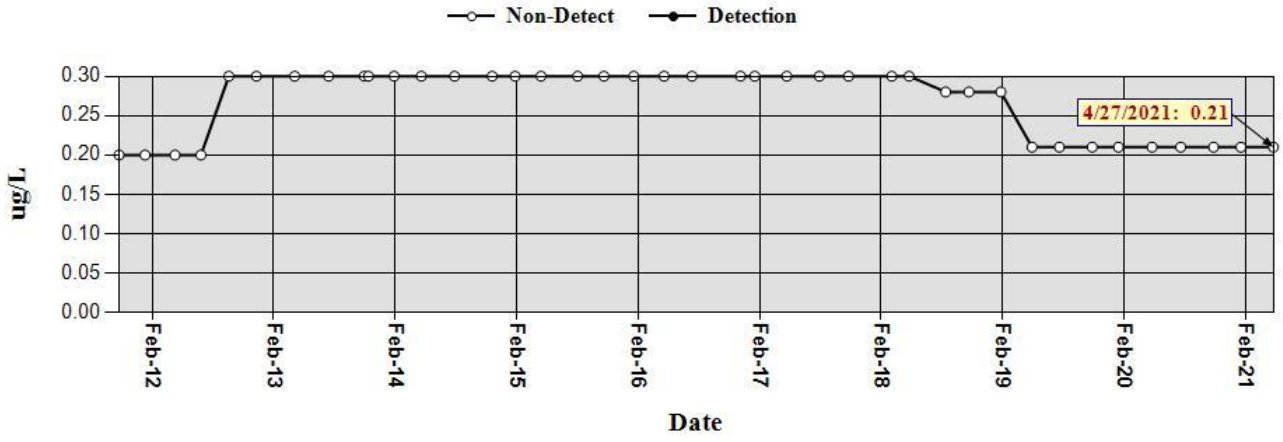
Well ID: 600-G-138
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



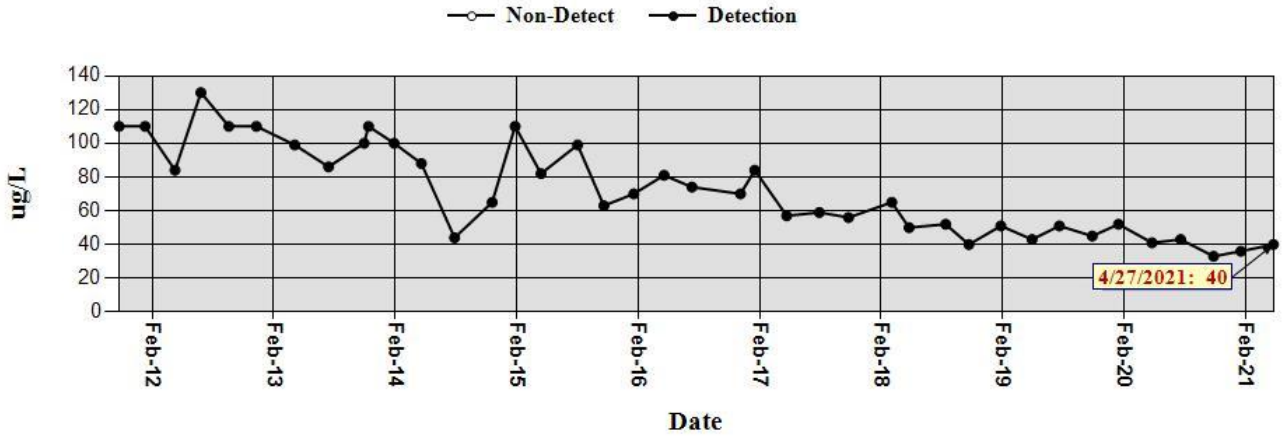
Well ID: 600-G-138
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: 600-G-138
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



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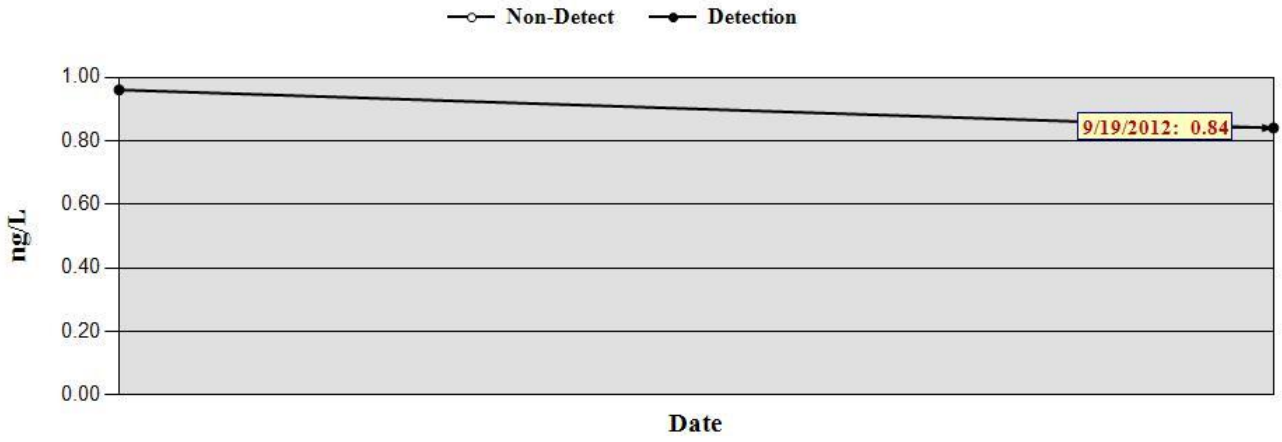
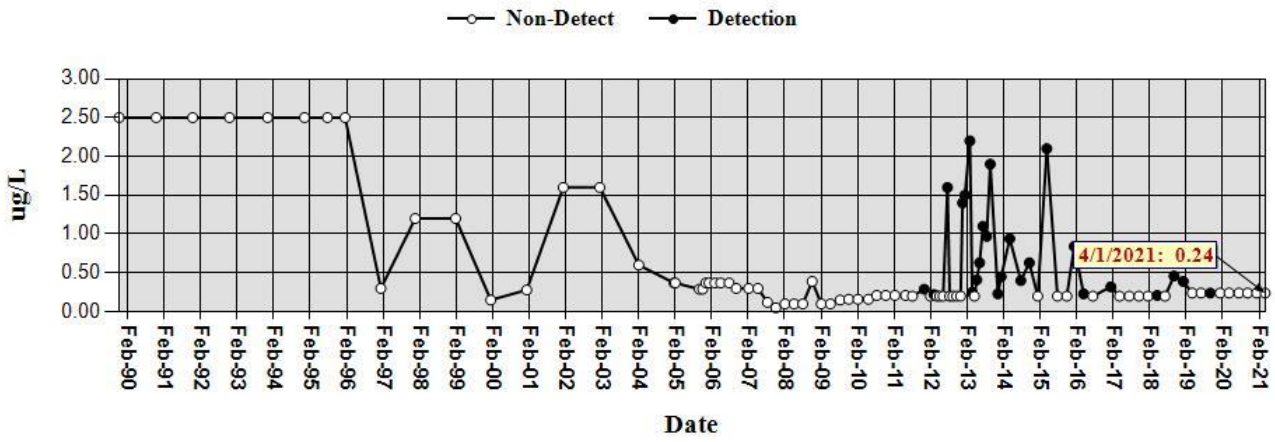
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



Well ID: BLM-10-517
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



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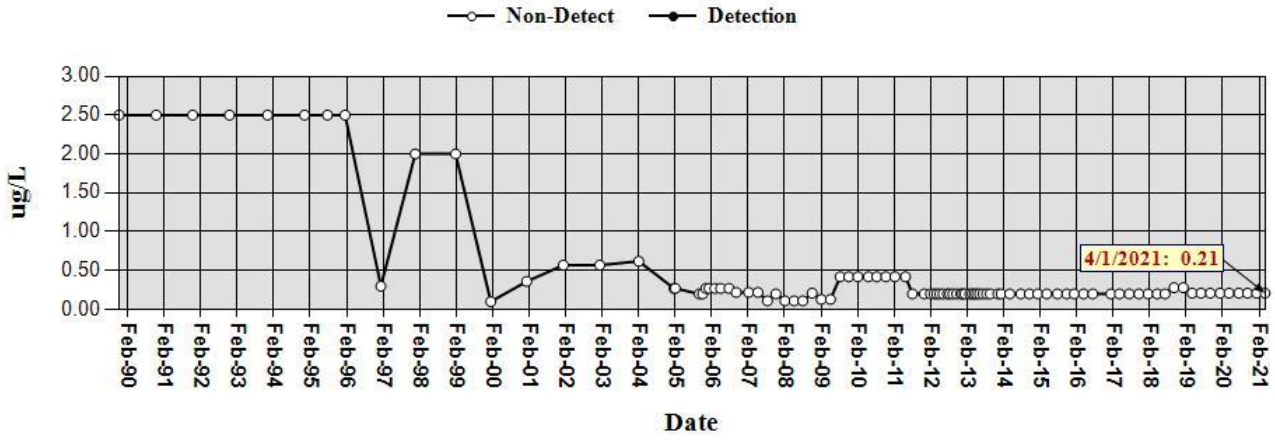
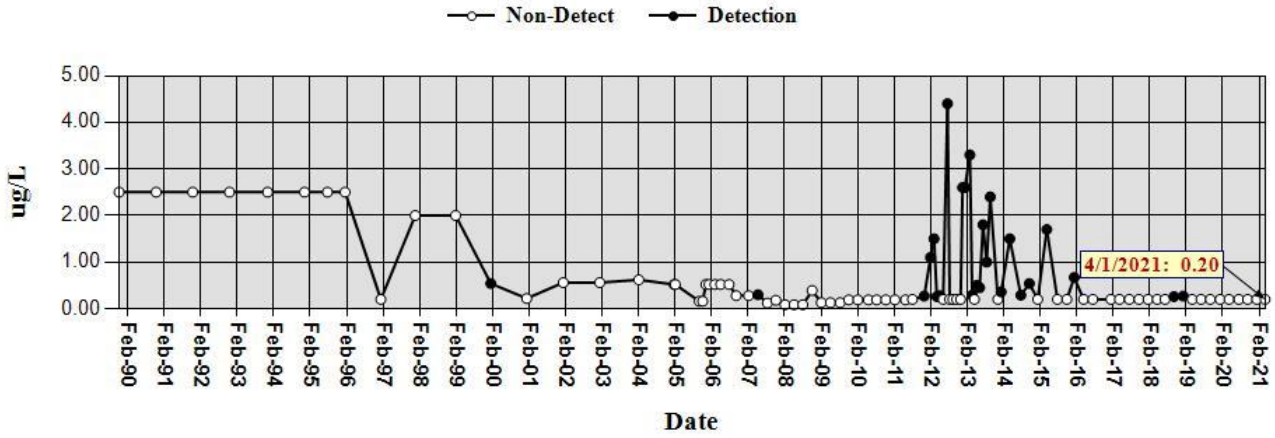
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



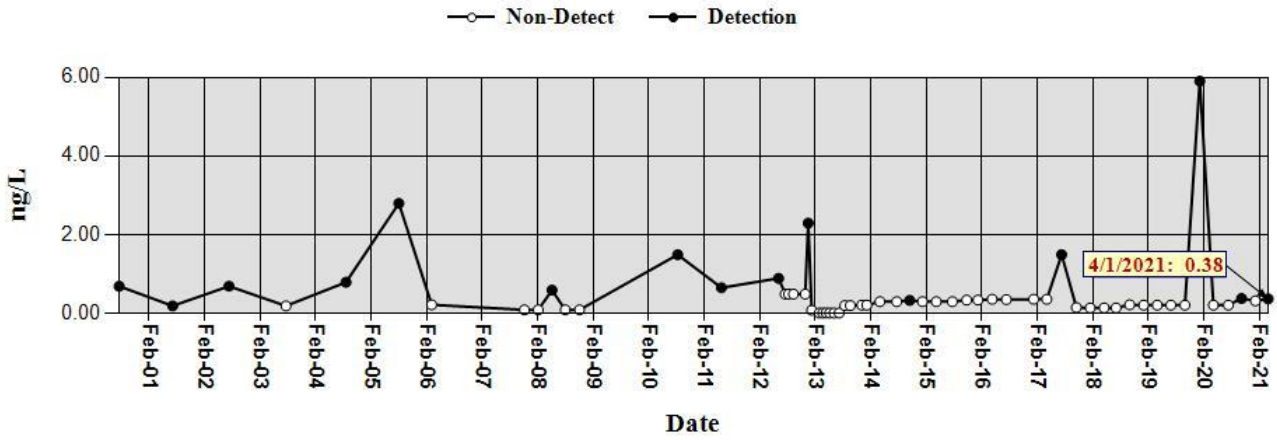
Well ID: BLM-10-517
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



Well ID: BLM-10-517
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



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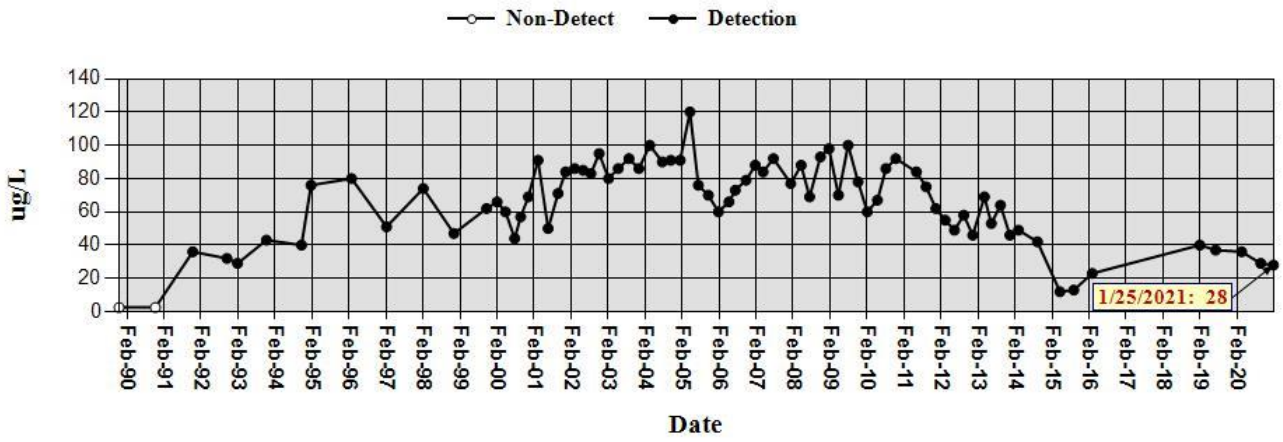
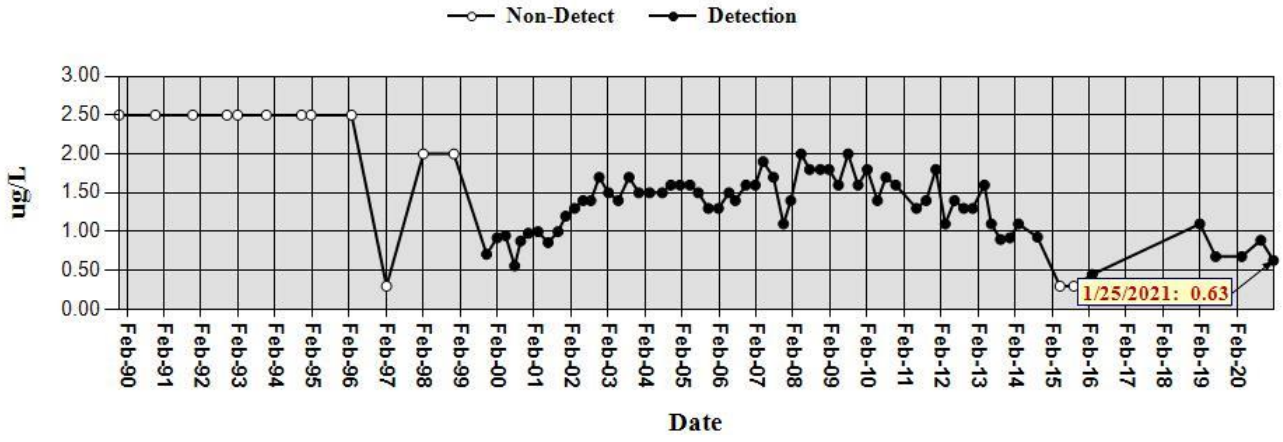
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



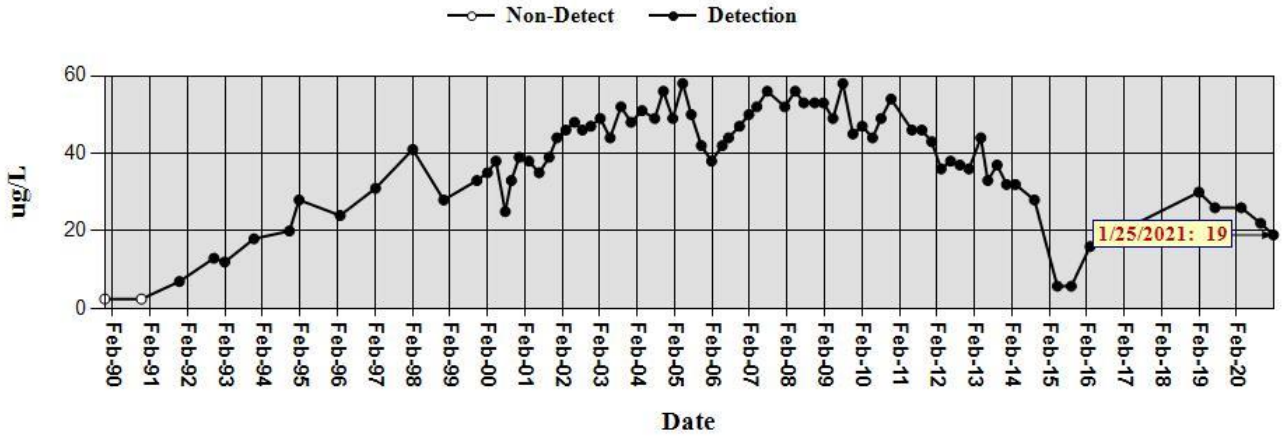
Well ID: BLM-18-430
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-18-430
CAS RN: 79-01-6 Trichloroethene

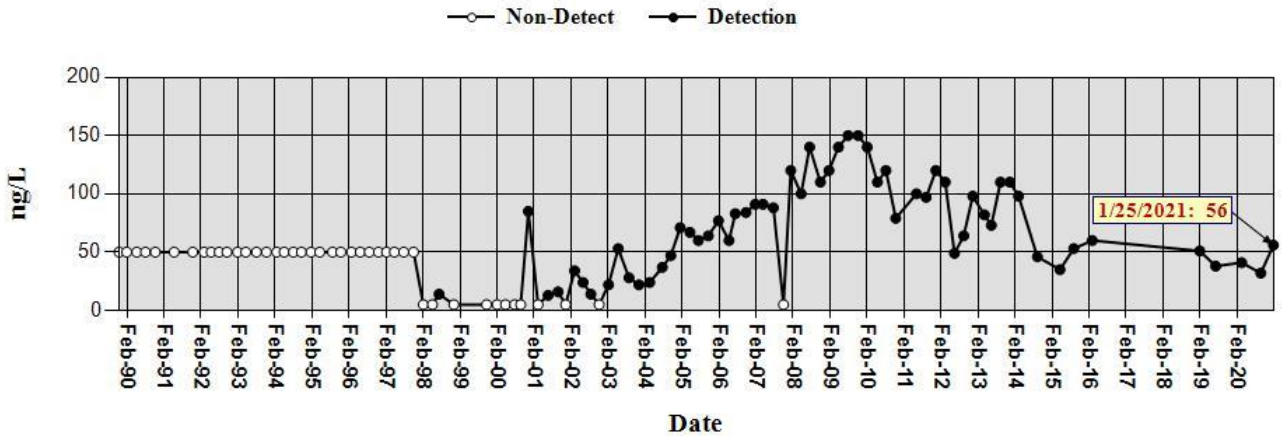
Analysis: 8260



Well ID: BLM-18-430
CAS RN: 62-75-9 N-Nitrosodimethylamine

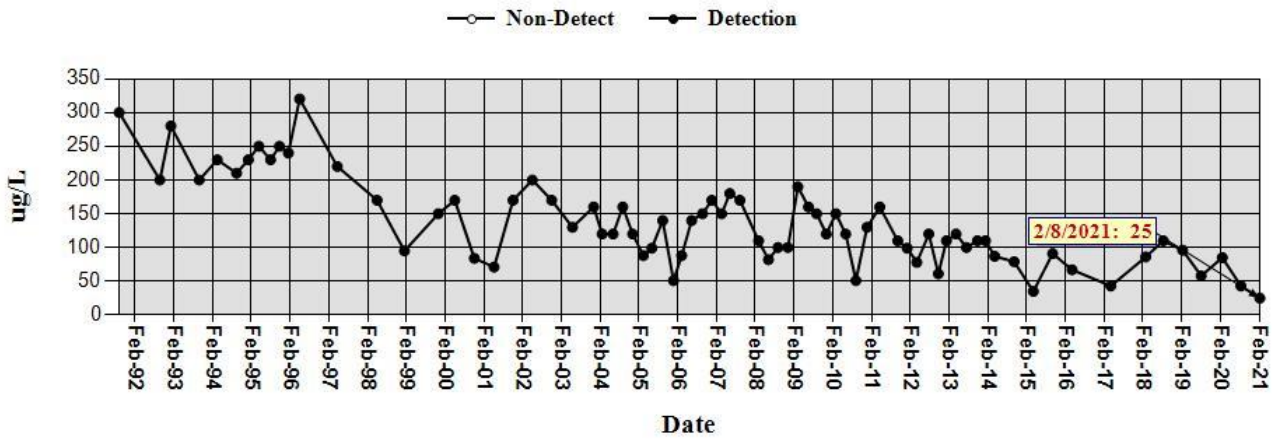
Analysis: 607

Results are Corrected for Extraction Efficiency



Well ID: BLM-21-400
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



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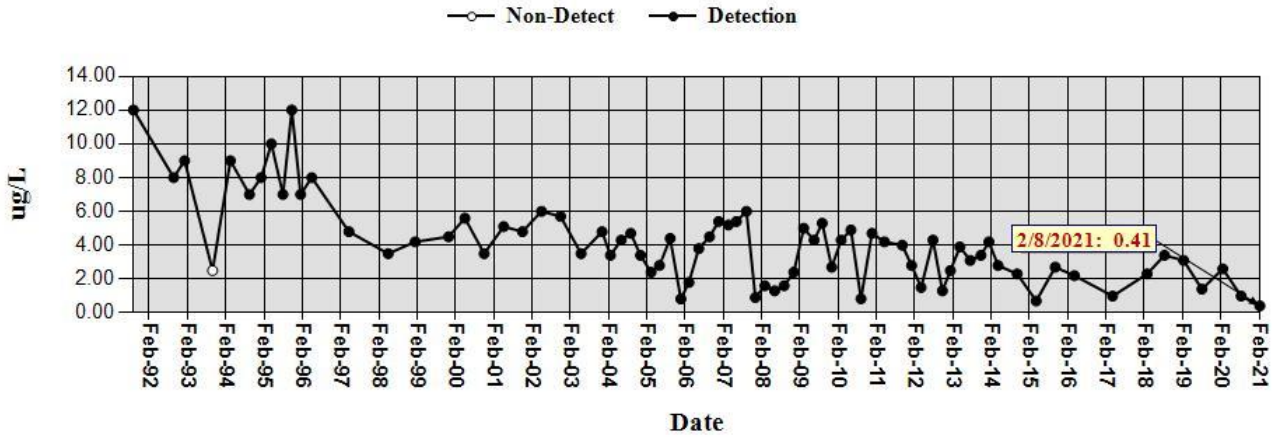
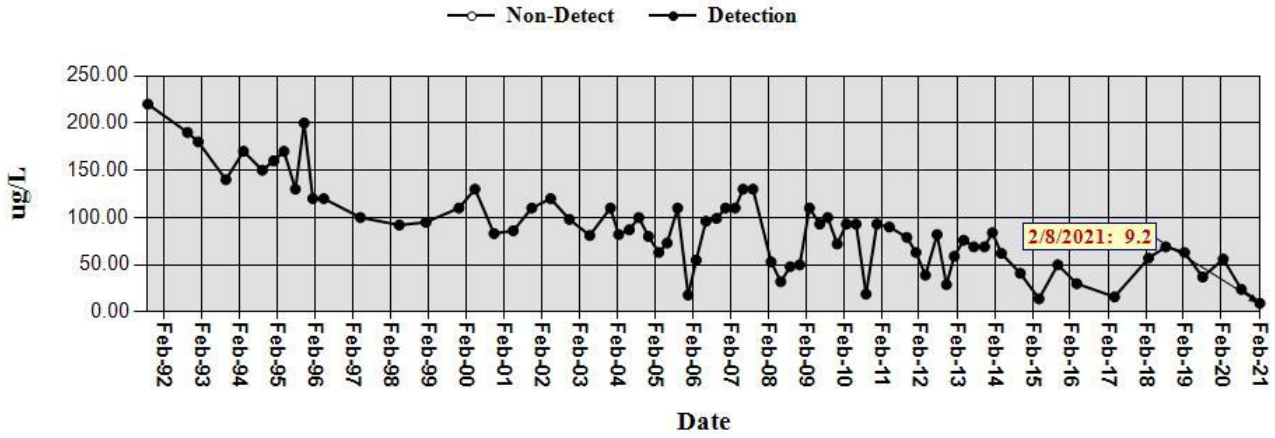
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-21-400
CAS RN: 79-01-6 Trichloroethene

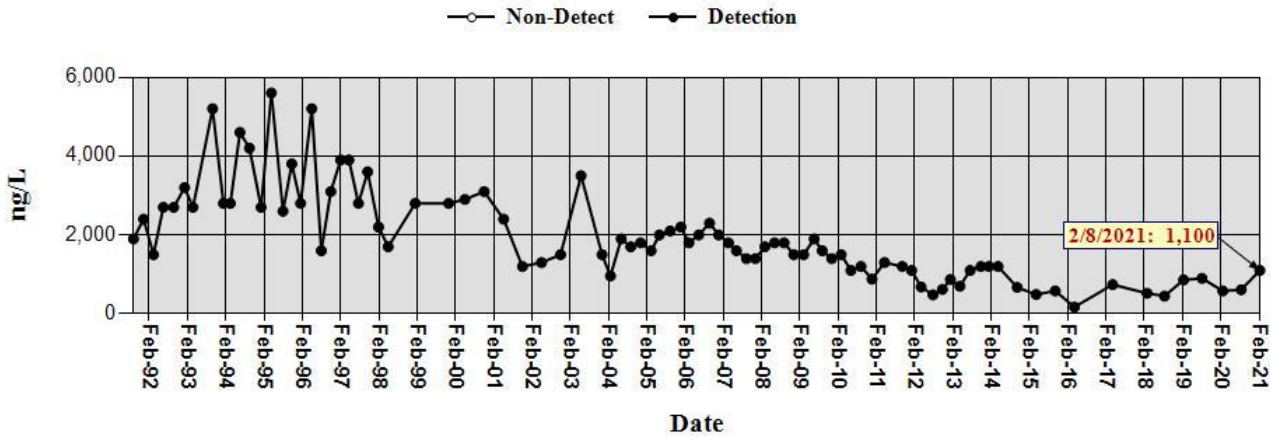
Analysis: 8260



Well ID: BLM-21-400
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: 607

Results are Corrected for Extraction Efficiency



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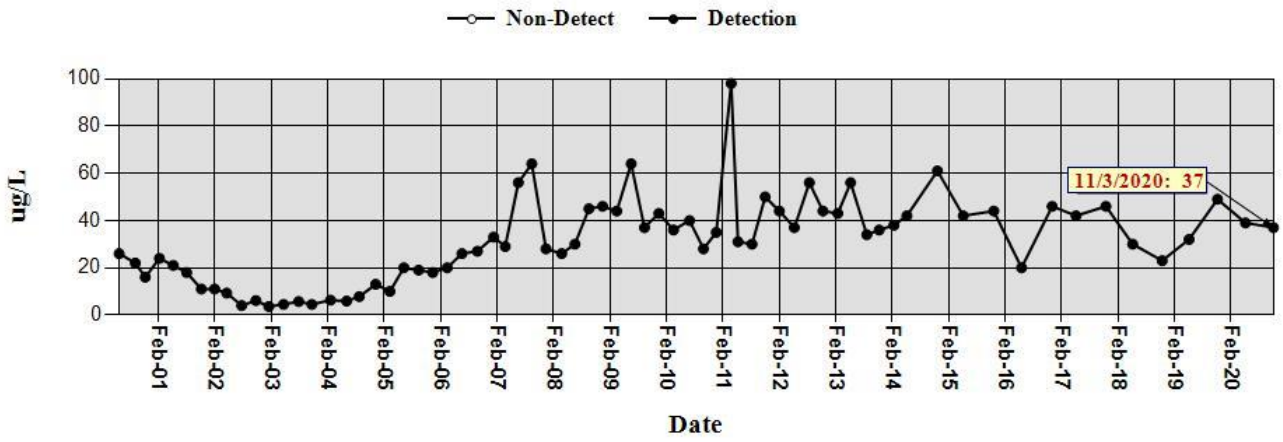
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



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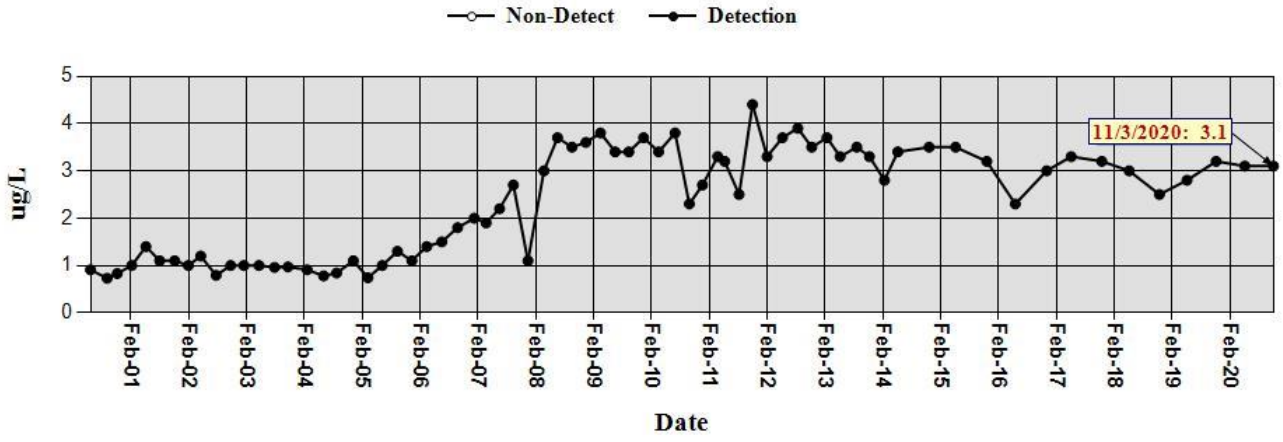
Analysis: 8260



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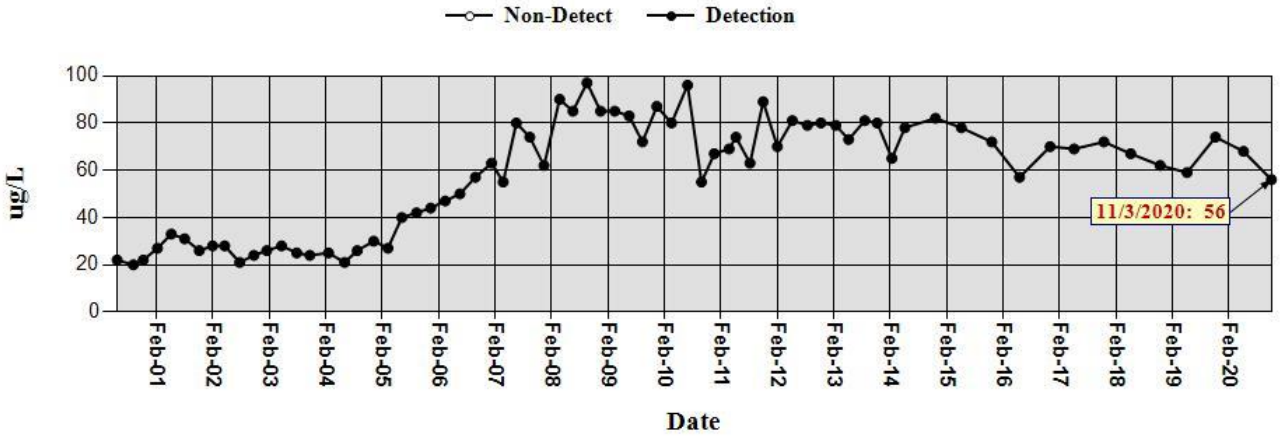
CAS RN: 79-01-6 Trichloroethene

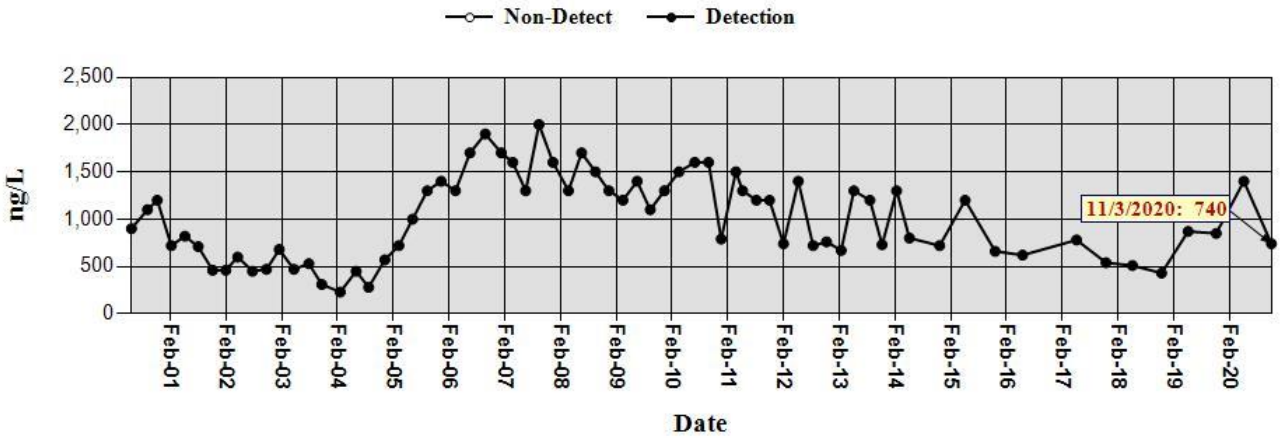
Analysis: 8260



Well ID: BLM-36-350
CAS RN: 62-75-9 N-Nitrosodimethylamine

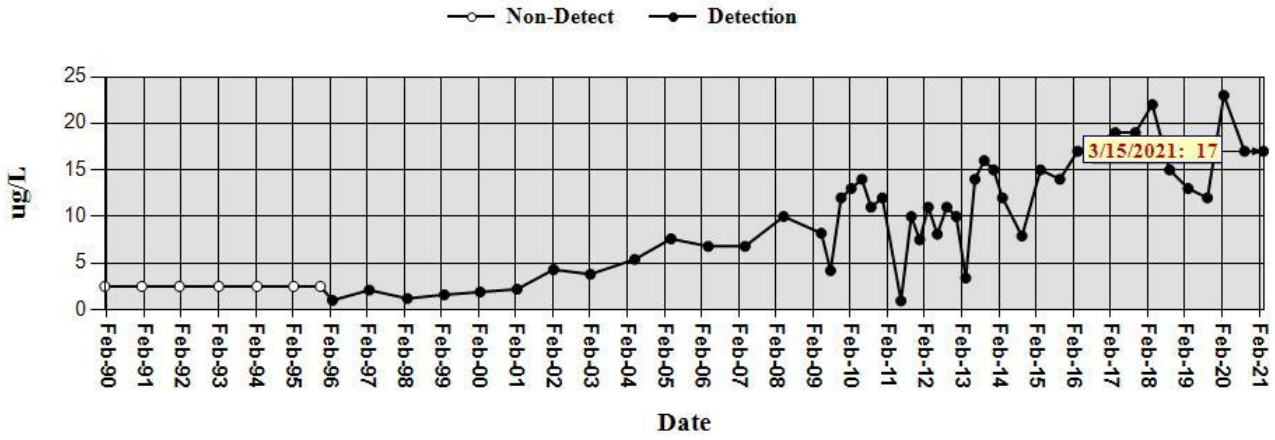
Analysis: 607

Results are Corrected for Extraction Efficiency



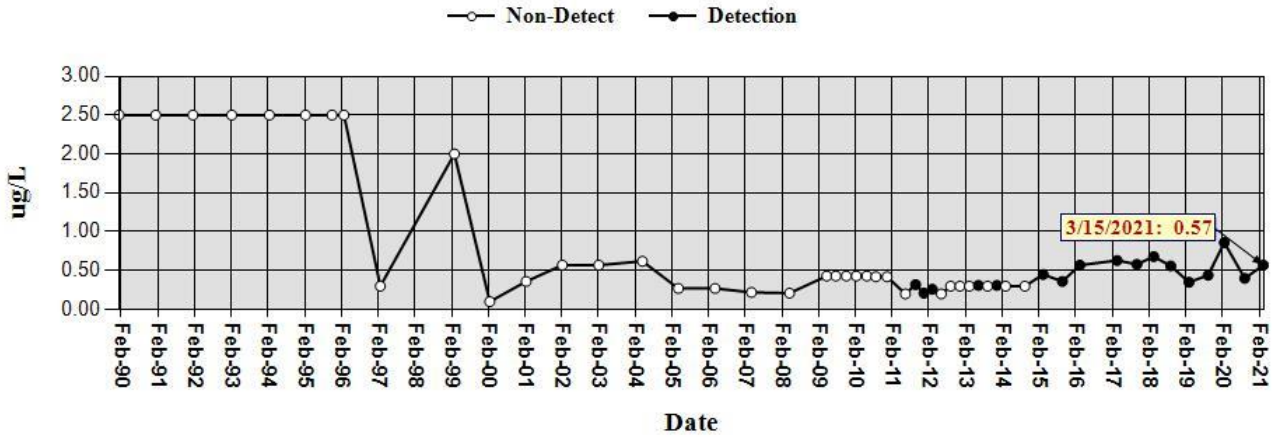
Well ID: BLM-5-527
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



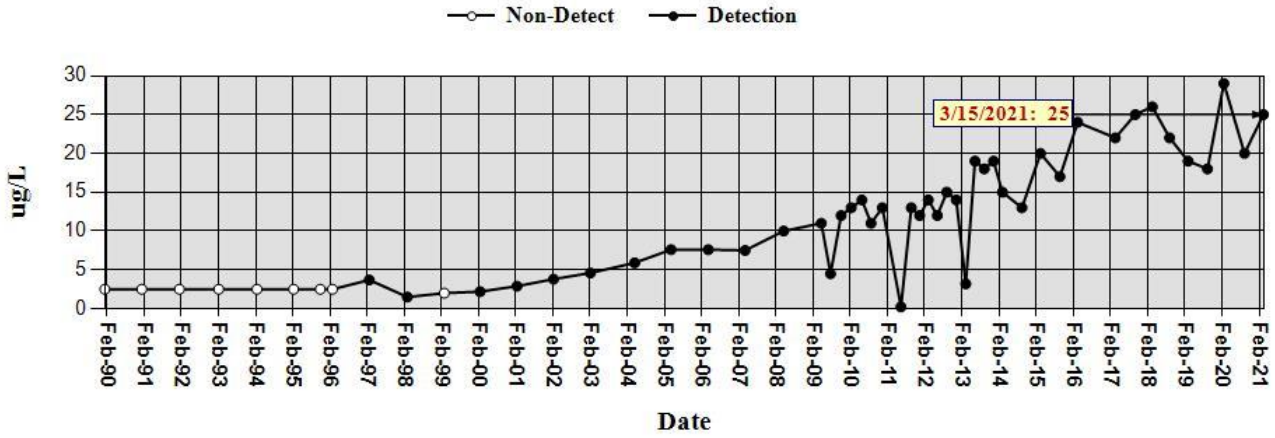
Well ID: BLM-5-527
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



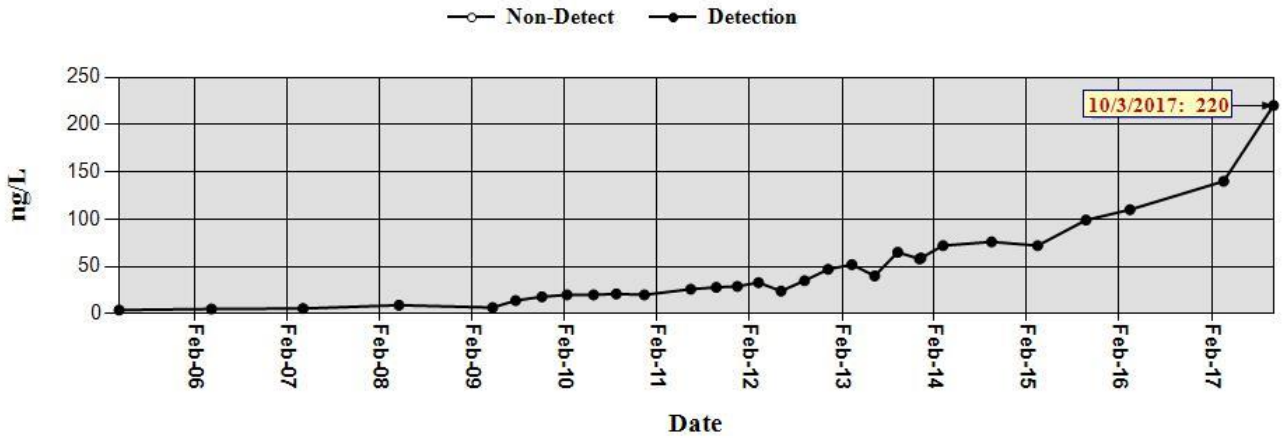
Well ID: BLM-5-527
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



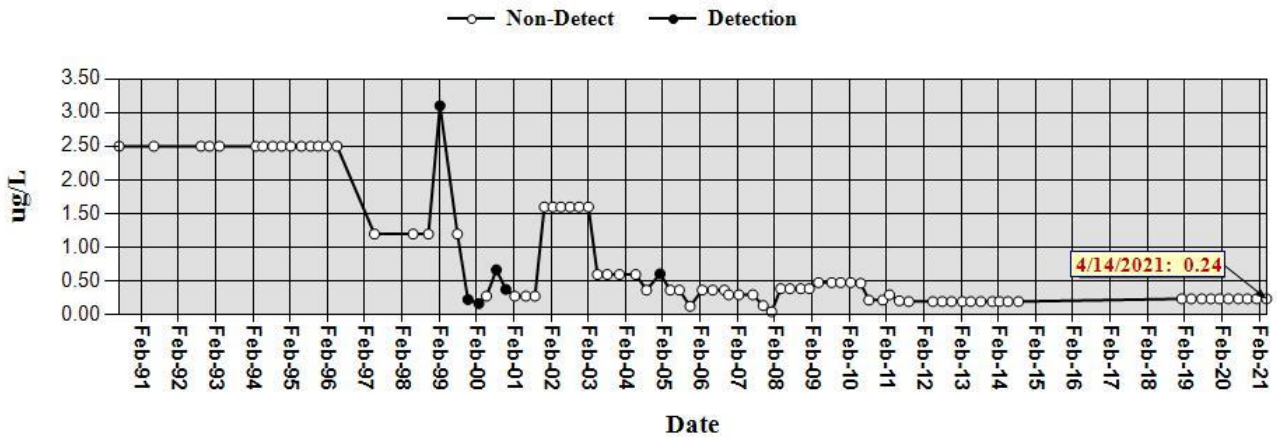
Well ID: BLM-5-527
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



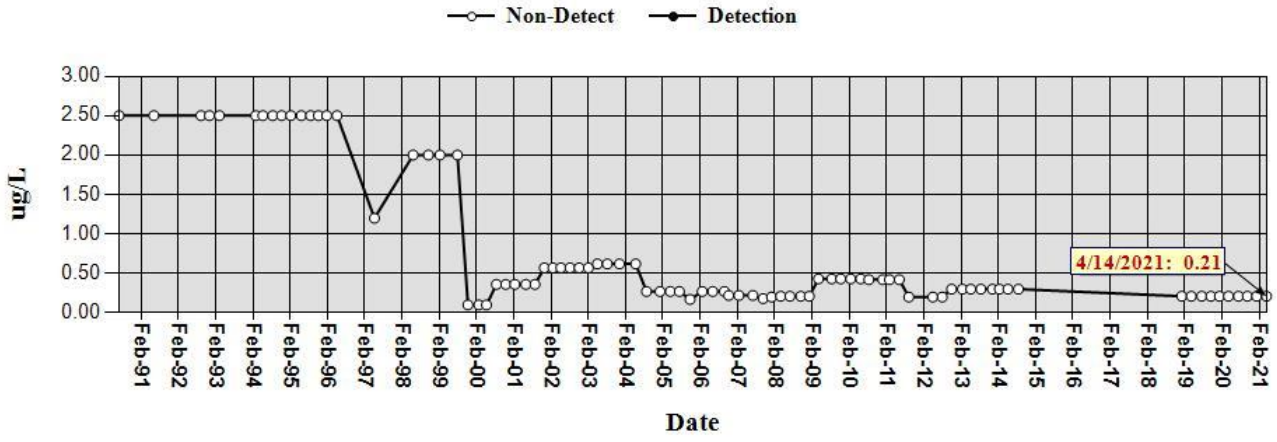
Well ID: BLM-6-488
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



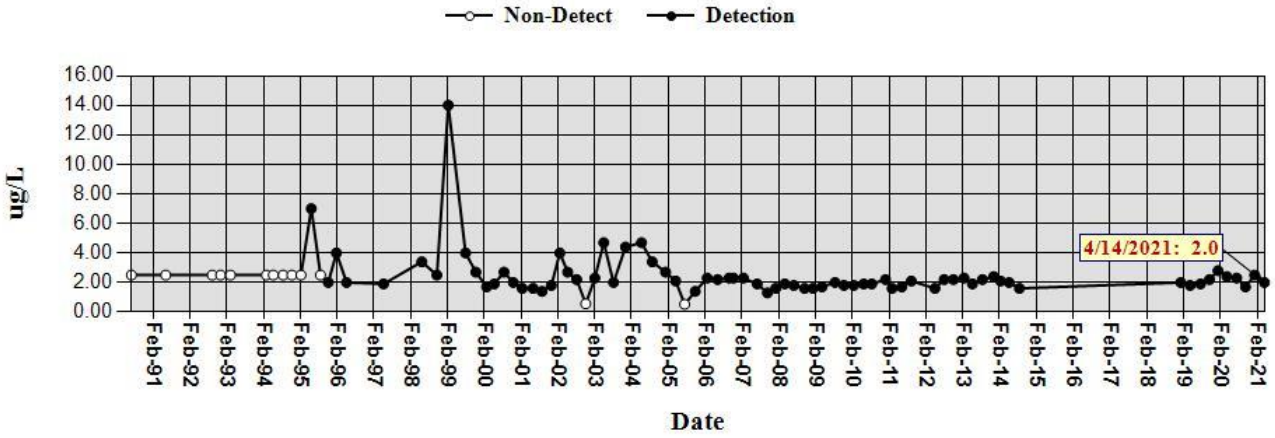
Well ID: BLM-6-488
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



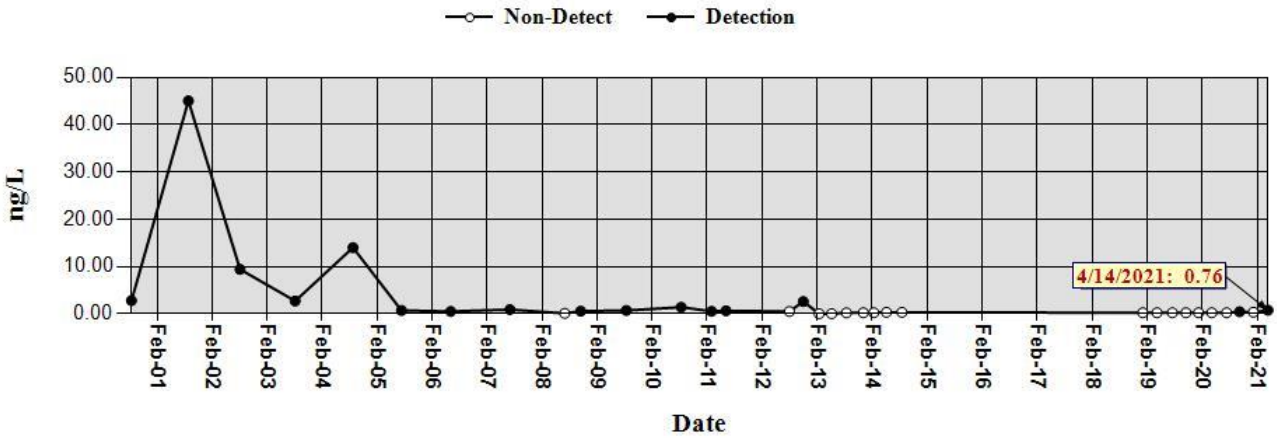
Well ID: BLM-6-488
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



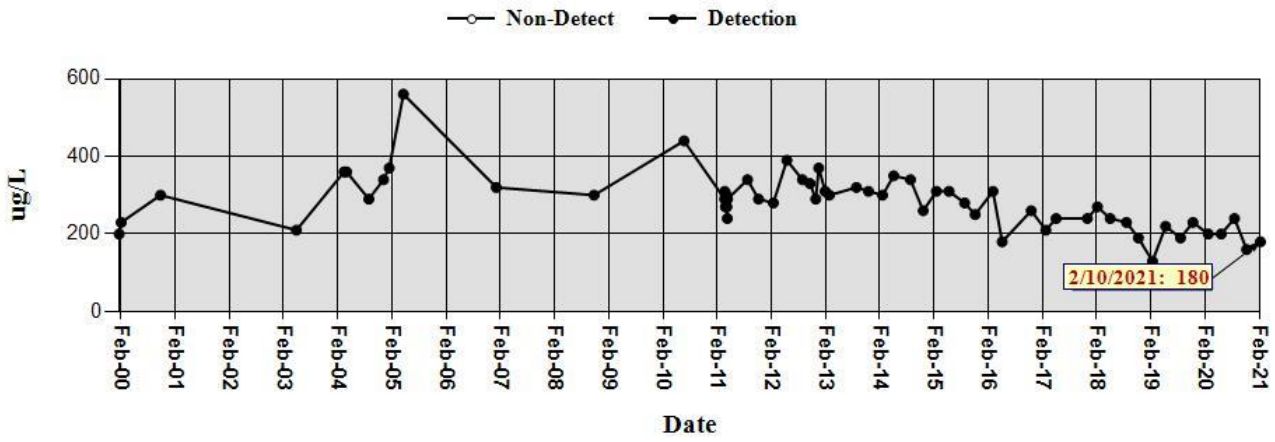
Well ID: BLM-6-488
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



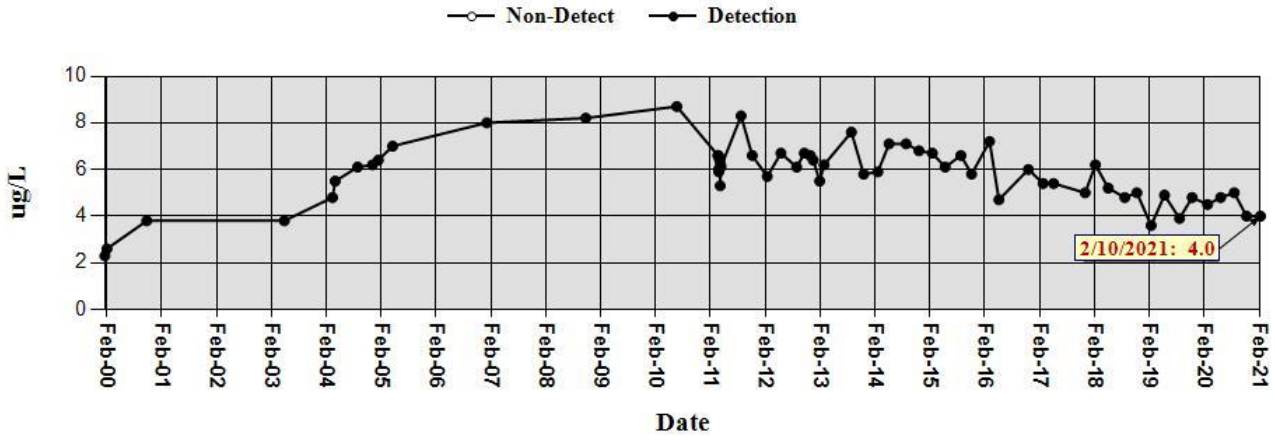
Well ID: MPE-1
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



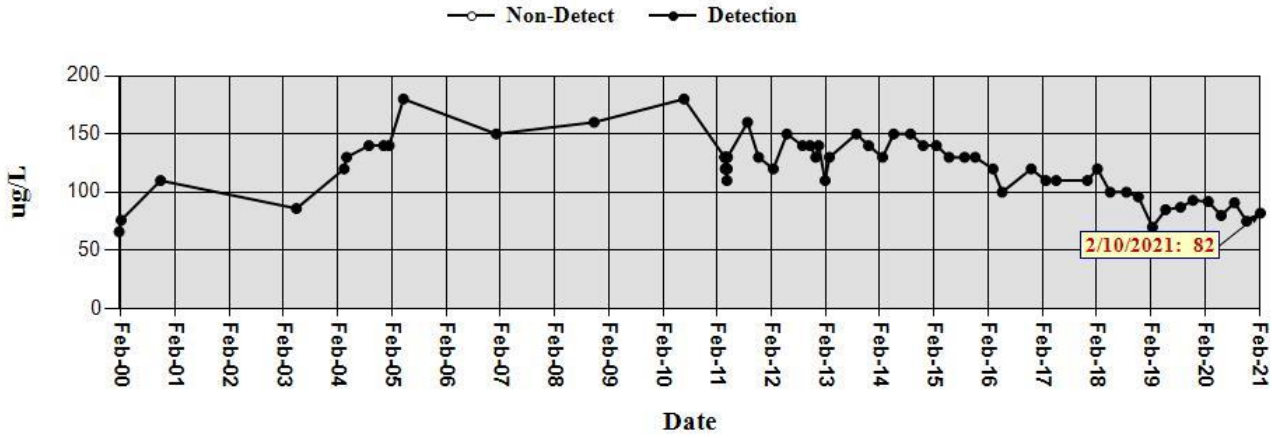
Well ID: MPE-1
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-1
CAS RN: 79-01-6 Trichloroethene

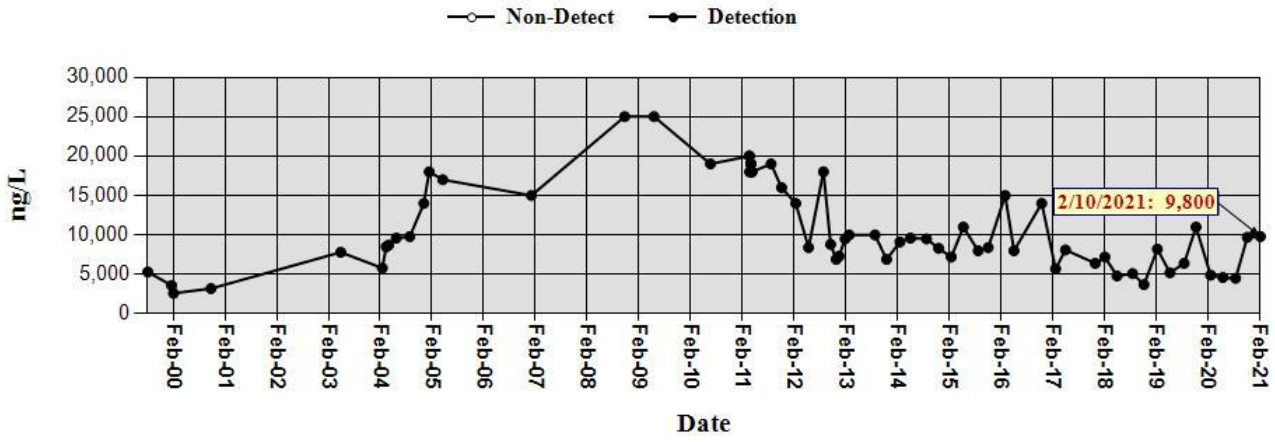
Analysis: 8260



Well ID: MPE-1
CAS RN: 62-75-9 N-Nitrosodimethylamine

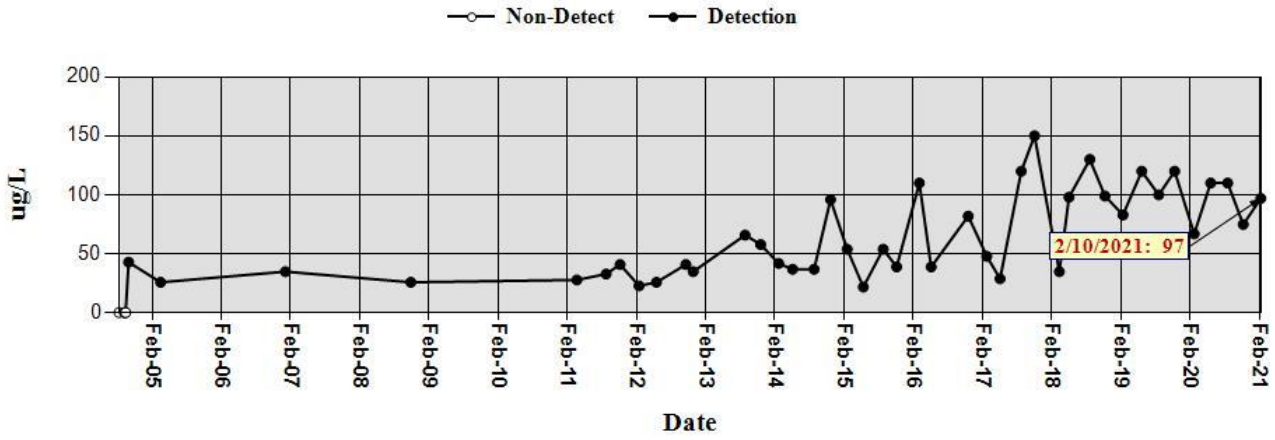
Analysis: 607

Results are Corrected for Extraction Efficiency



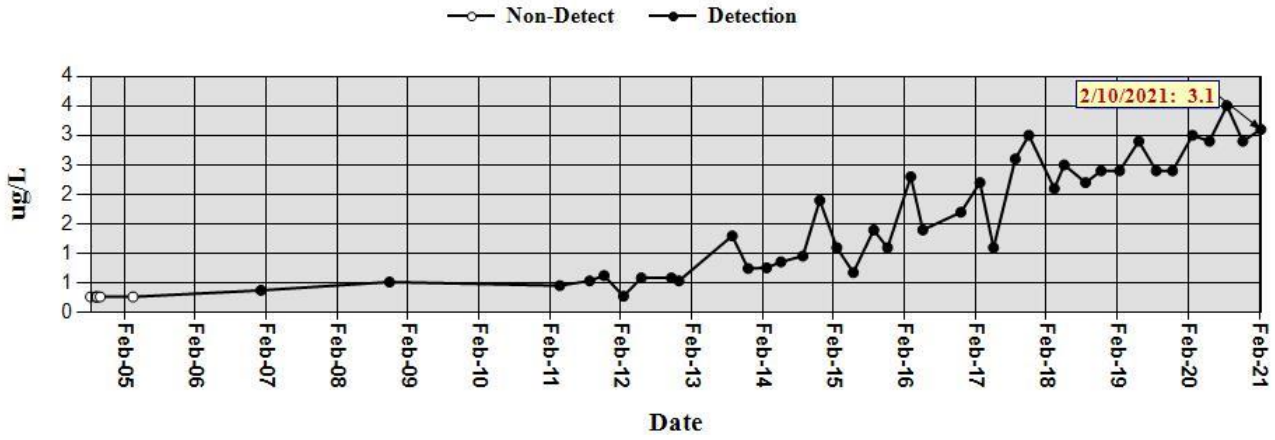
Well ID: MPE-10
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



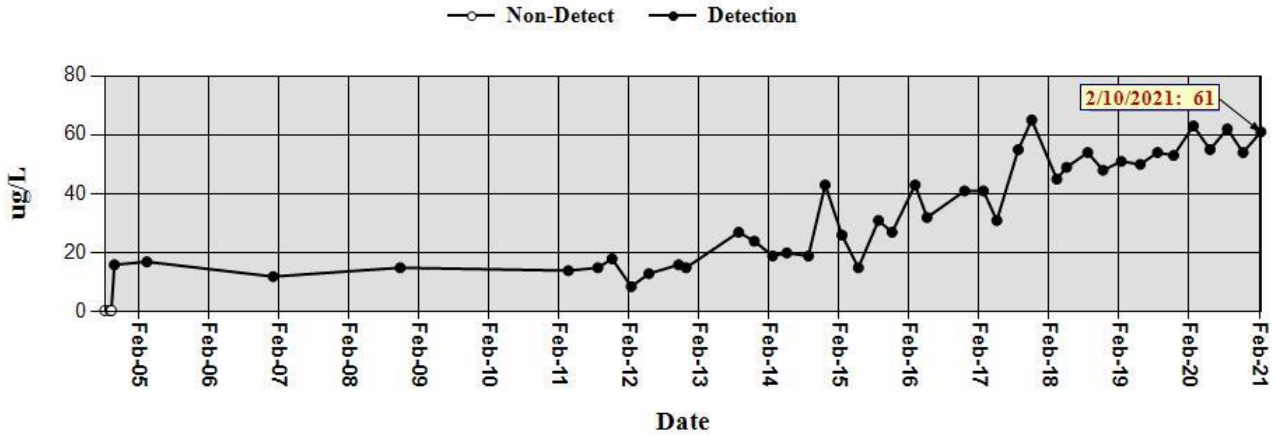
Well ID: MPE-10
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-10
CAS RN: 79-01-6 Trichloroethene

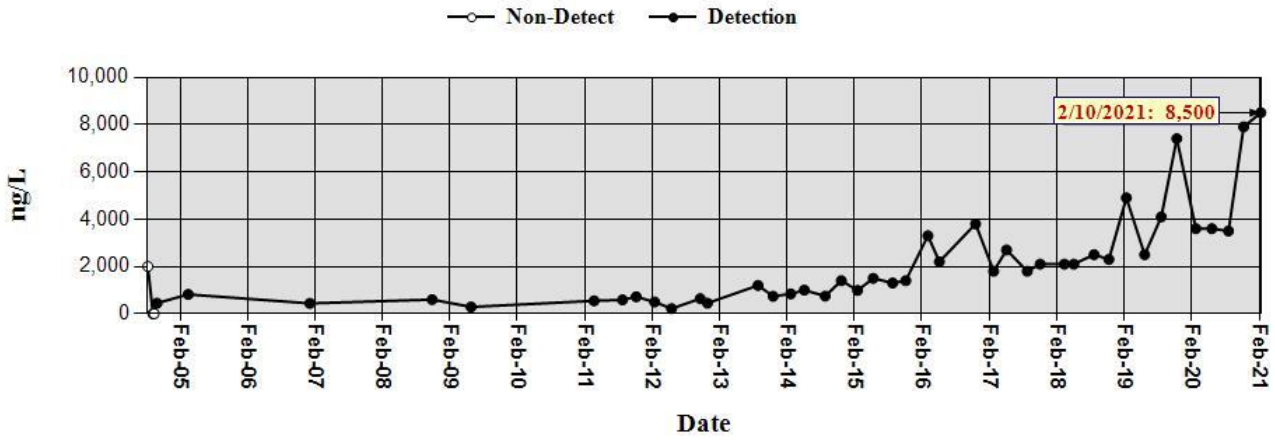
Analysis: 8260



Well ID: MPE-10
CAS RN: 62-75-9 N-Nitrosodimethylamine

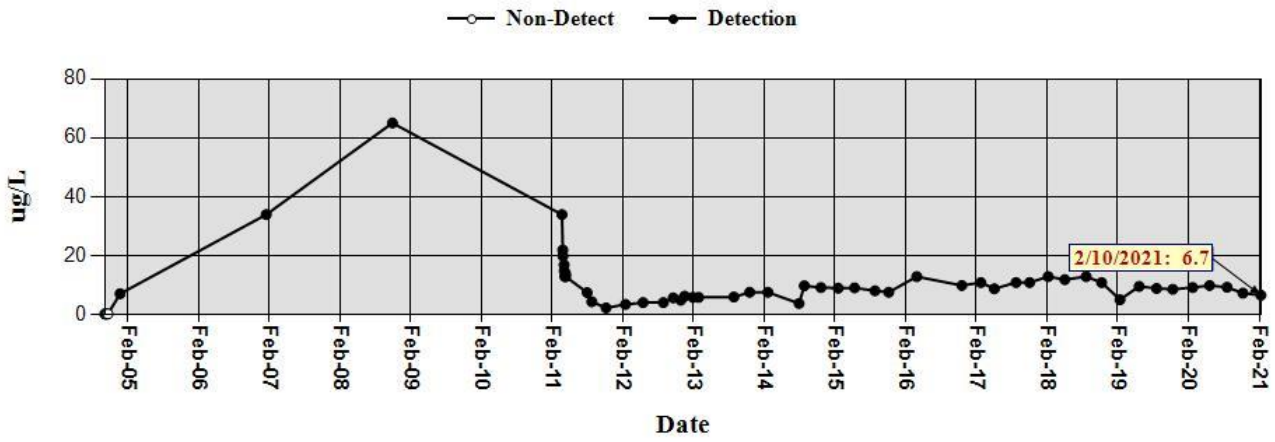
Analysis: 607

Results are Corrected for Extraction Efficiency



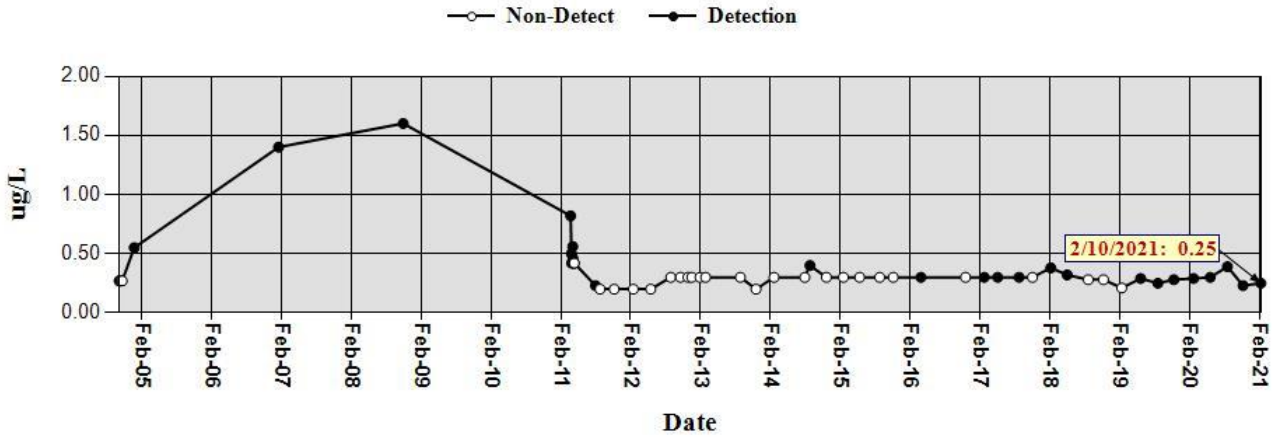
Well ID: MPE-11
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



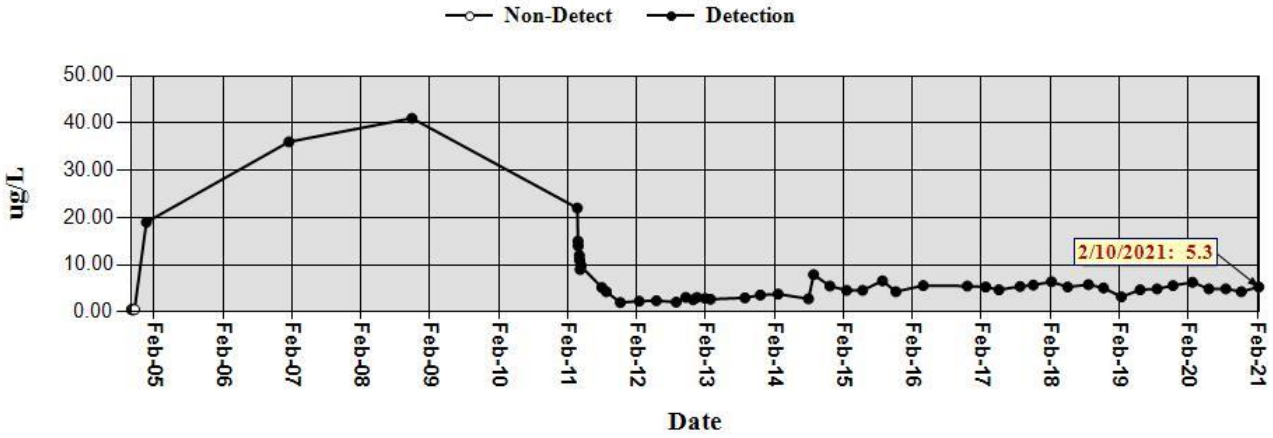
Well ID: MPE-11
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-11
CAS RN: 79-01-6 Trichloroethene

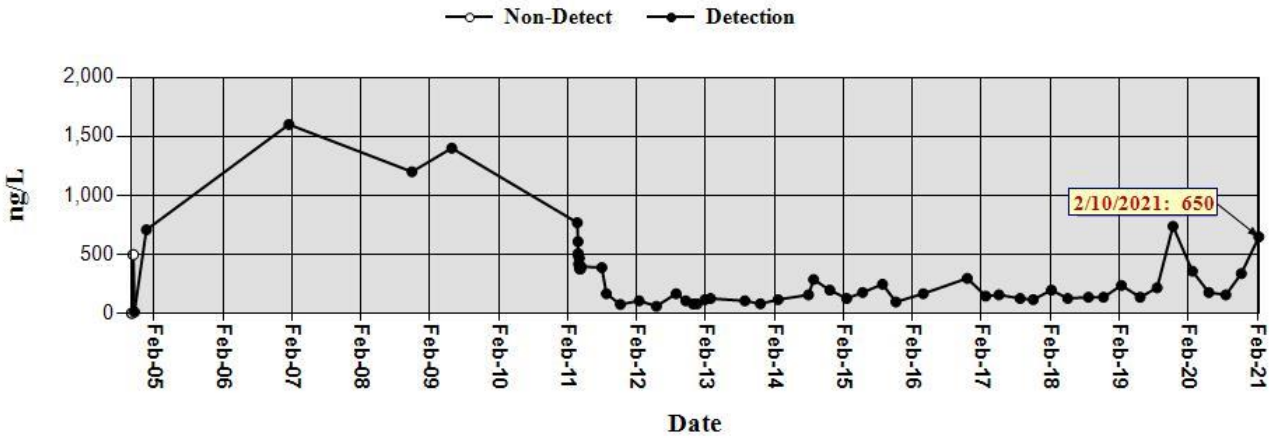
Analysis: 8260



Well ID: MPE-11
CAS RN: 62-75-9 N-Nitrosodimethylamine

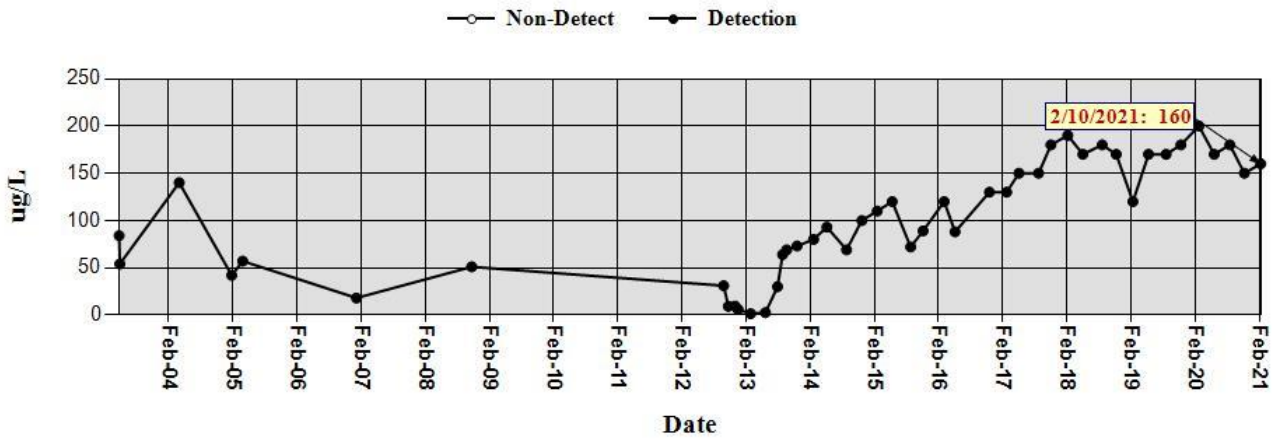
Analysis: 607

Results are Corrected for Extraction Efficiency



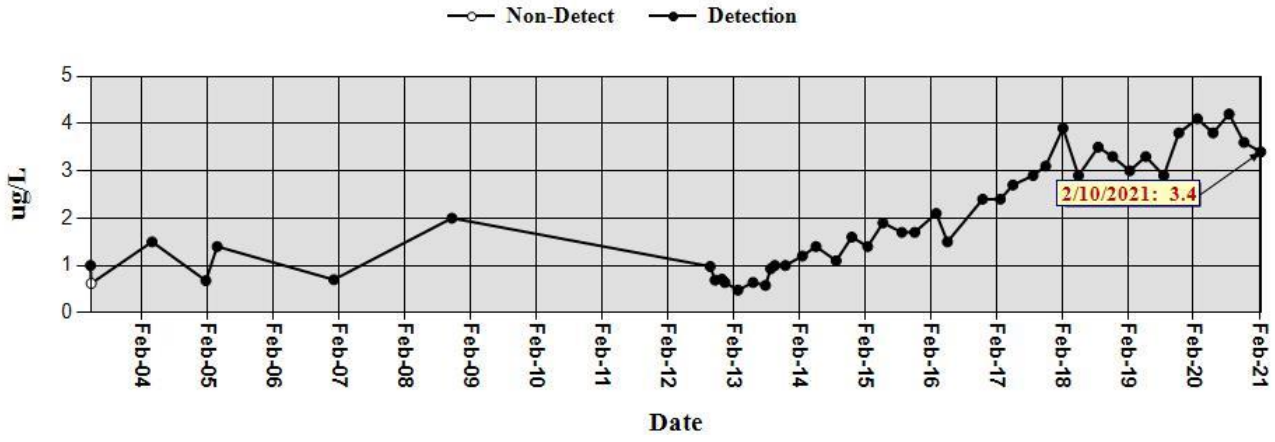
Well ID: MPE-8
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



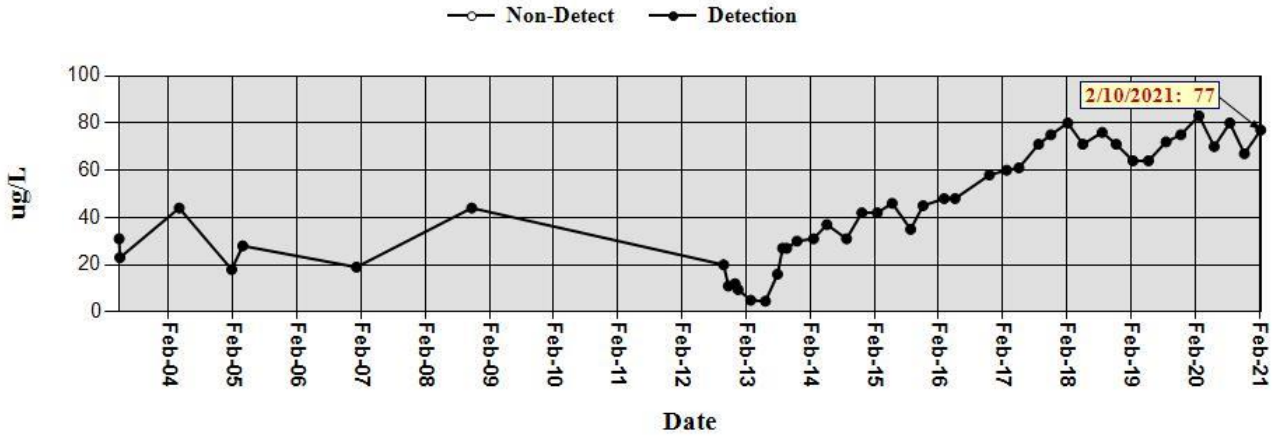
Well ID: MPE-8
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-8
CAS RN: 79-01-6 Trichloroethene

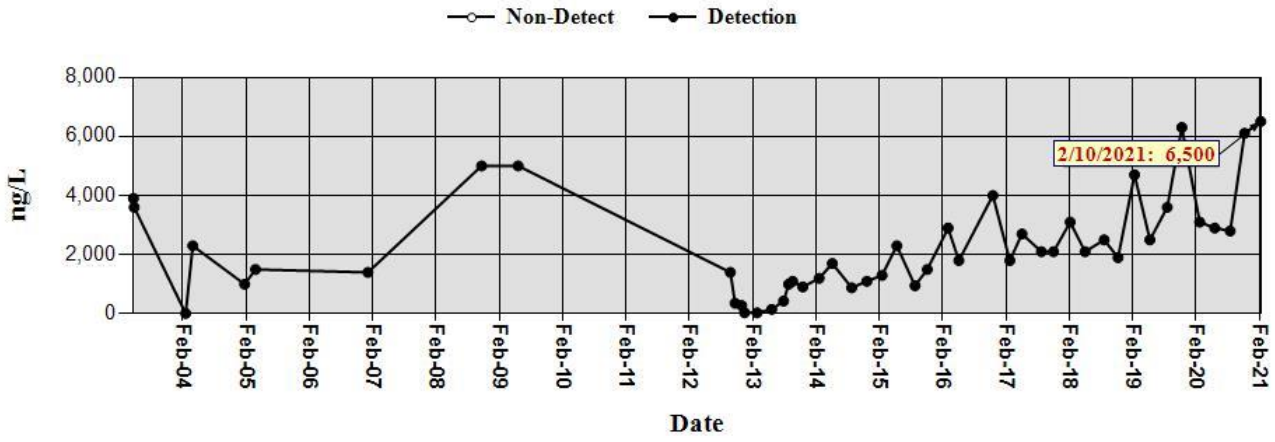
Analysis: 8260



Well ID: MPE-8
CAS RN: 62-75-9 N-Nitrosodimethylamine

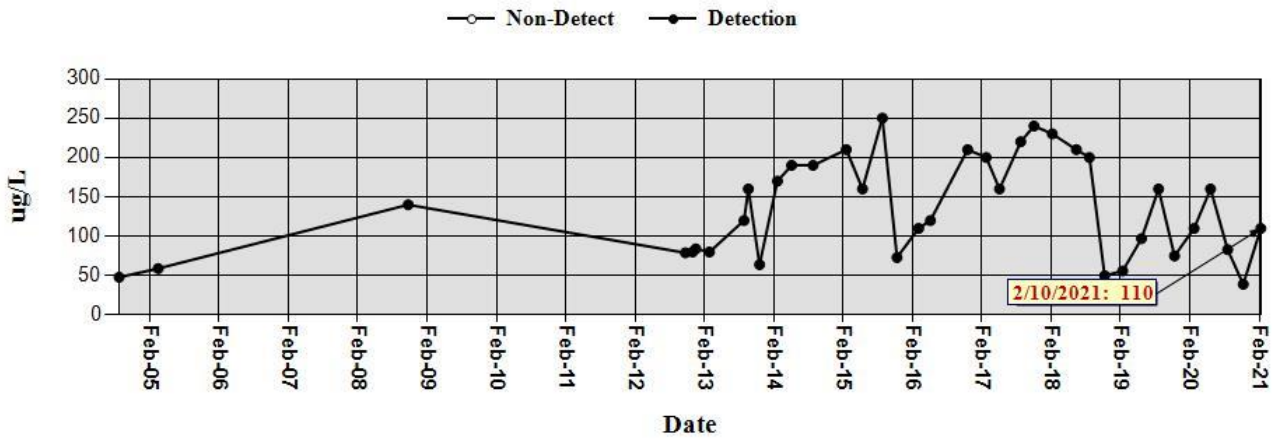
Analysis: 607

Results are Corrected for Extraction Efficiency



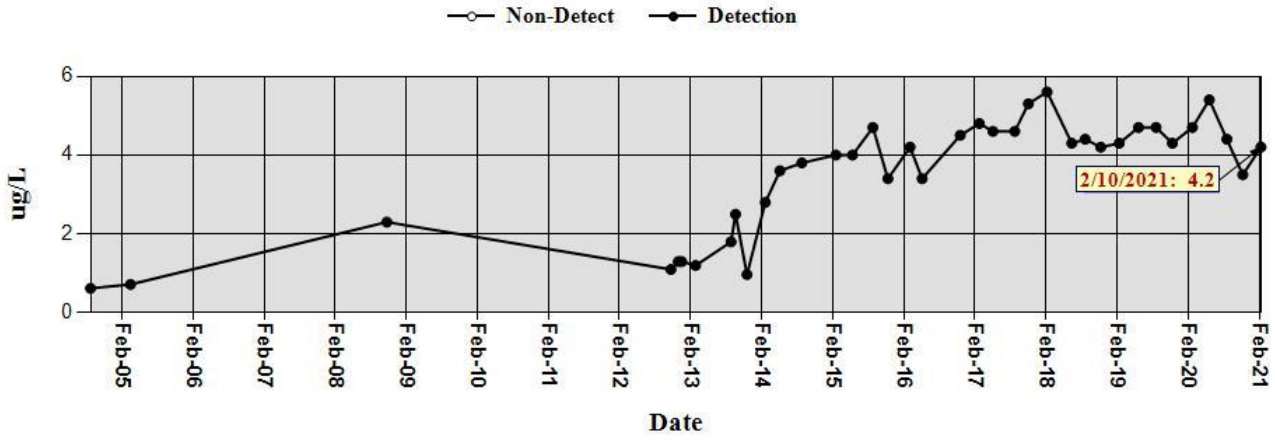
Well ID: MPE-9
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



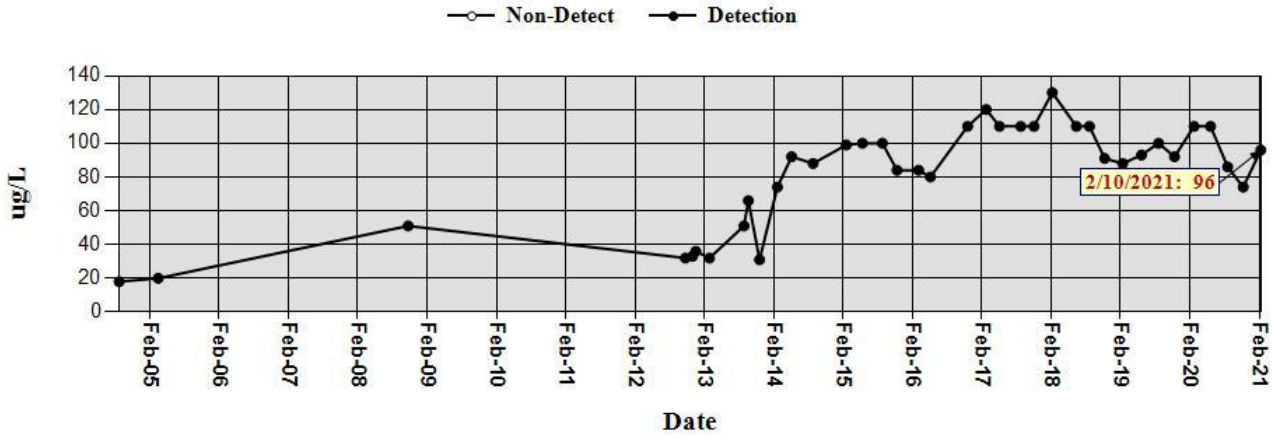
Well ID: MPE-9
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-9
CAS RN: 79-01-6 Trichloroethene

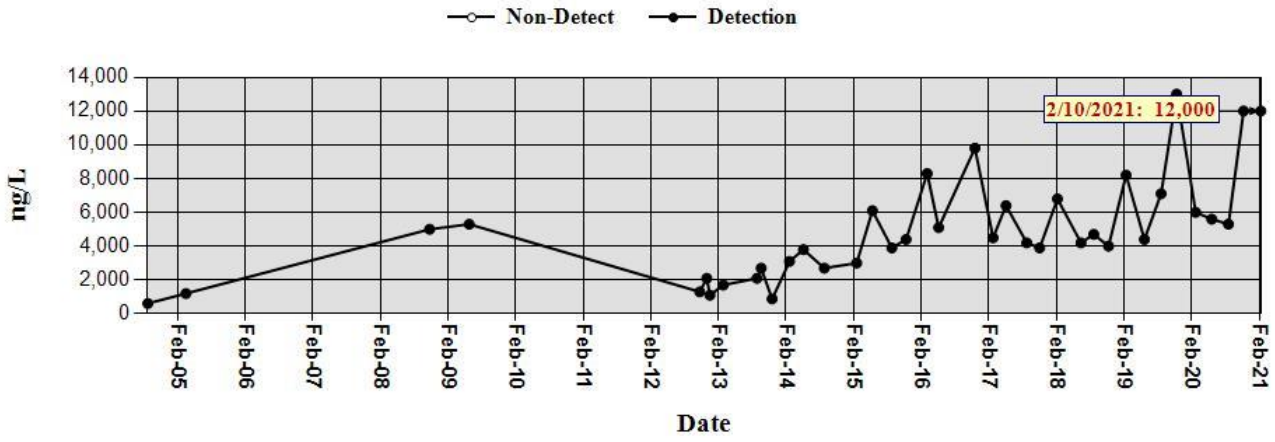
Analysis: 8260



Well ID: MPE-9
CAS RN: 62-75-9 N-Nitrosodimethylamine

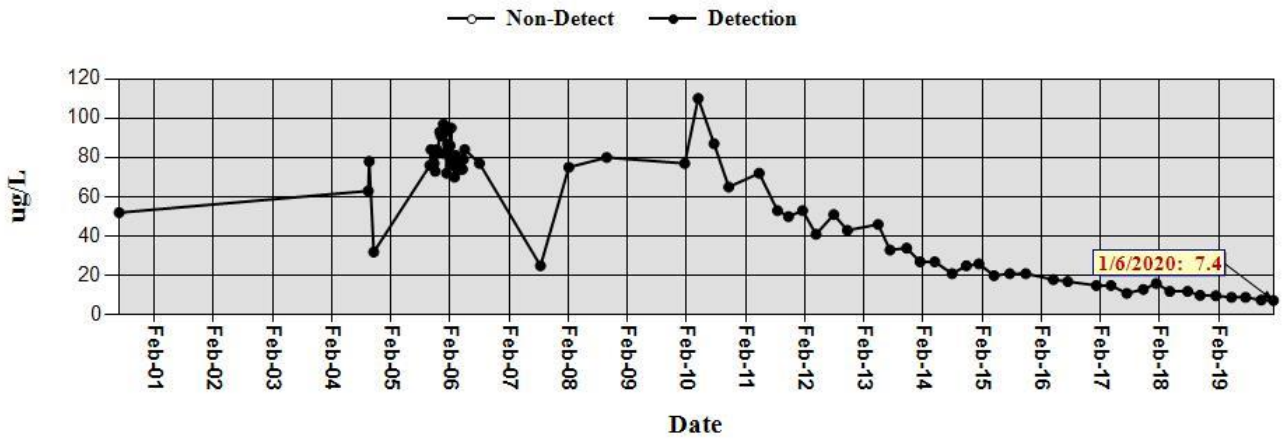
Analysis: 607

Results are Corrected for Extraction Efficiency



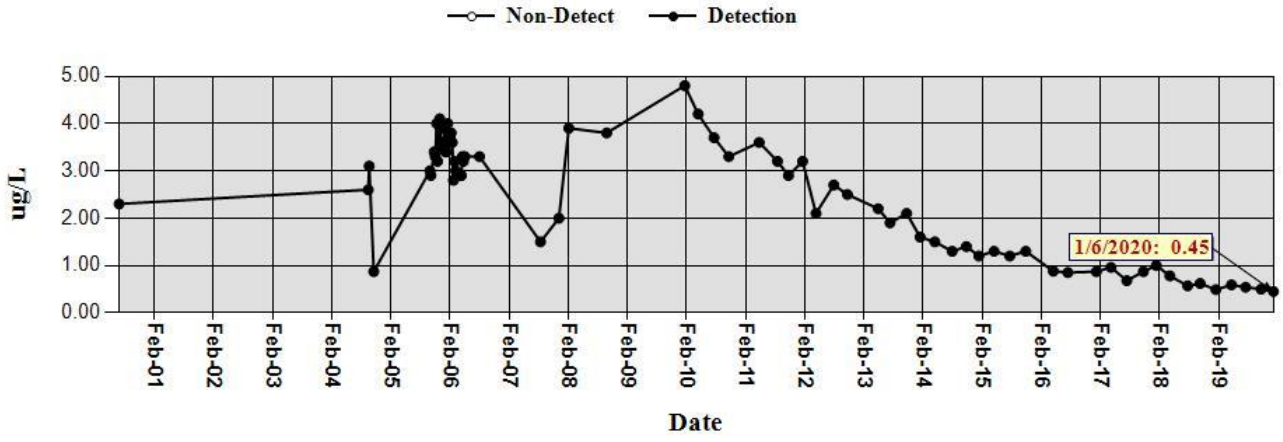
Well ID: PFE-1
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



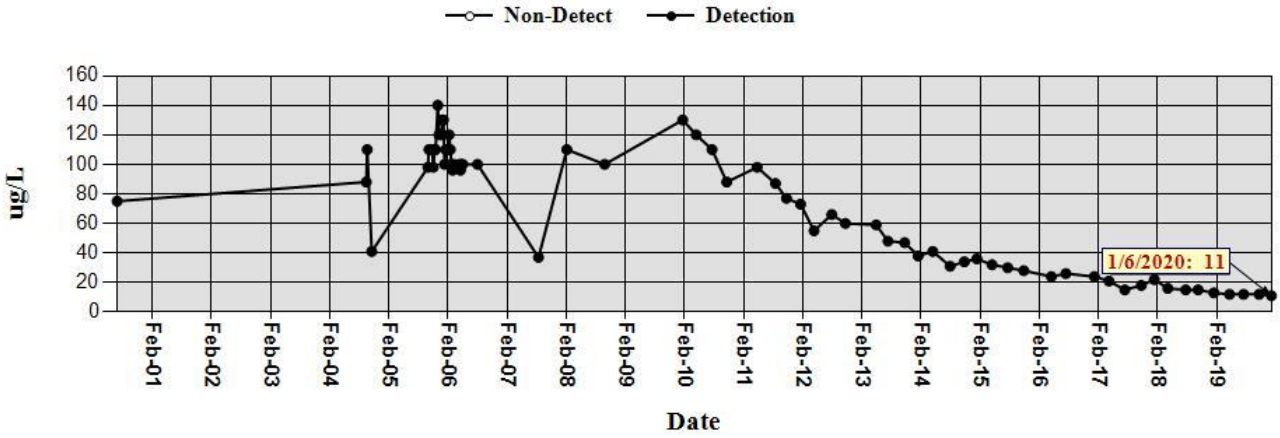
Well ID: PFE-1
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-1
CAS RN: 79-01-6 Trichloroethene

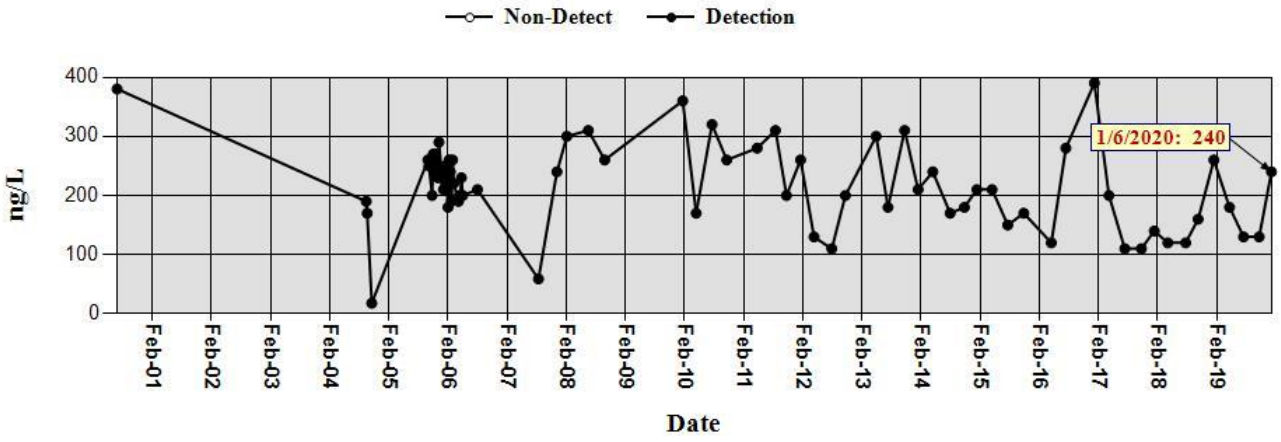
Analysis: 8260



Well ID: PFE-1
CAS RN: 62-75-9 N-Nitrosodimethylamine

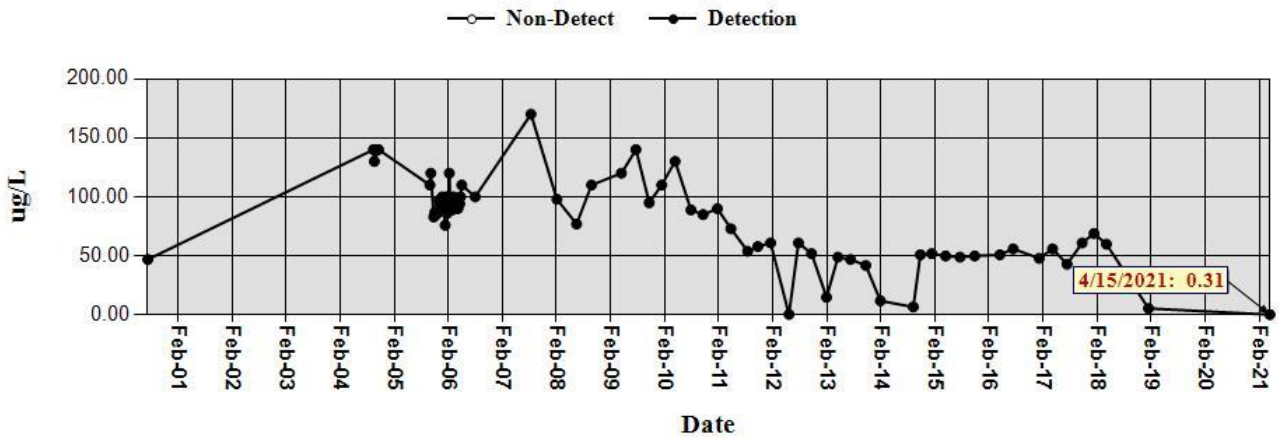
Analysis: 607

Results are Corrected for Extraction Efficiency



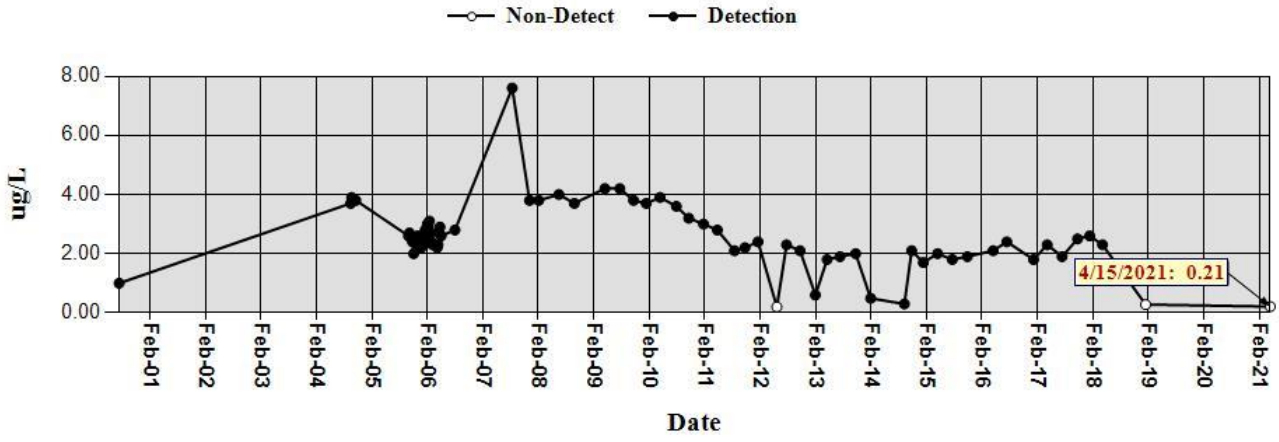
Well ID: PFE-2
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



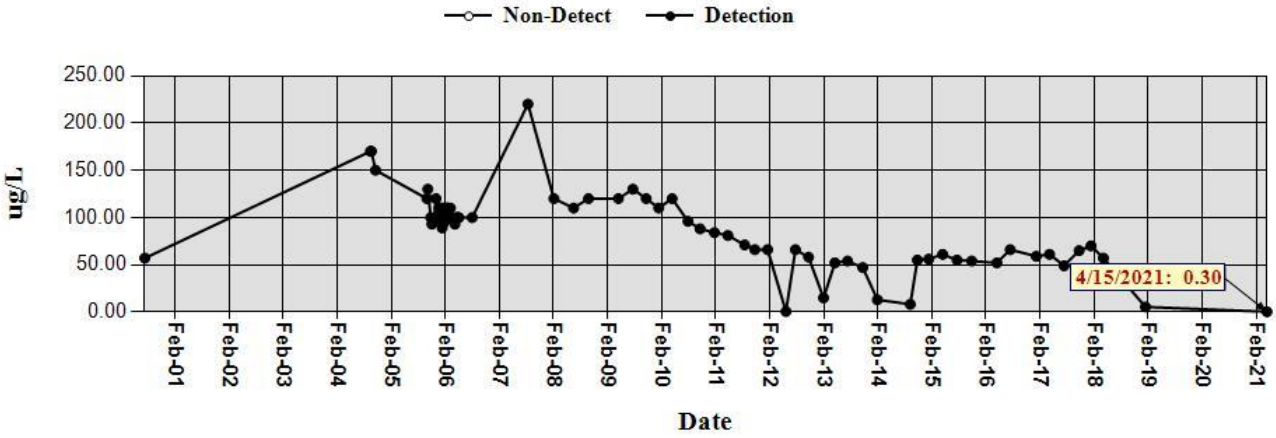
Well ID: PFE-2
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-2
CAS RN: 79-01-6 Trichloroethene

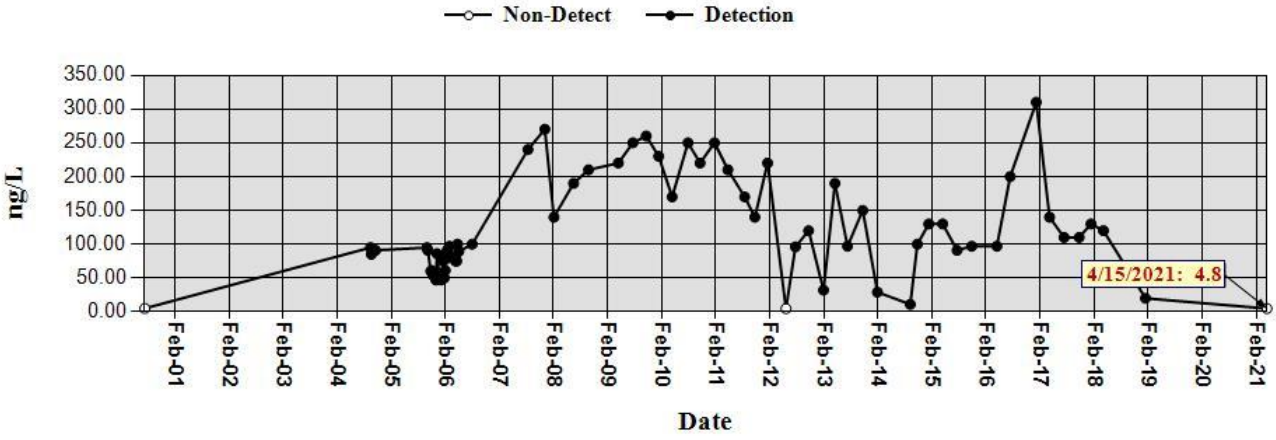
Analysis: 8260



Well ID: PFE-2
CAS RN: 62-75-9 N-Nitrosodimethylamine

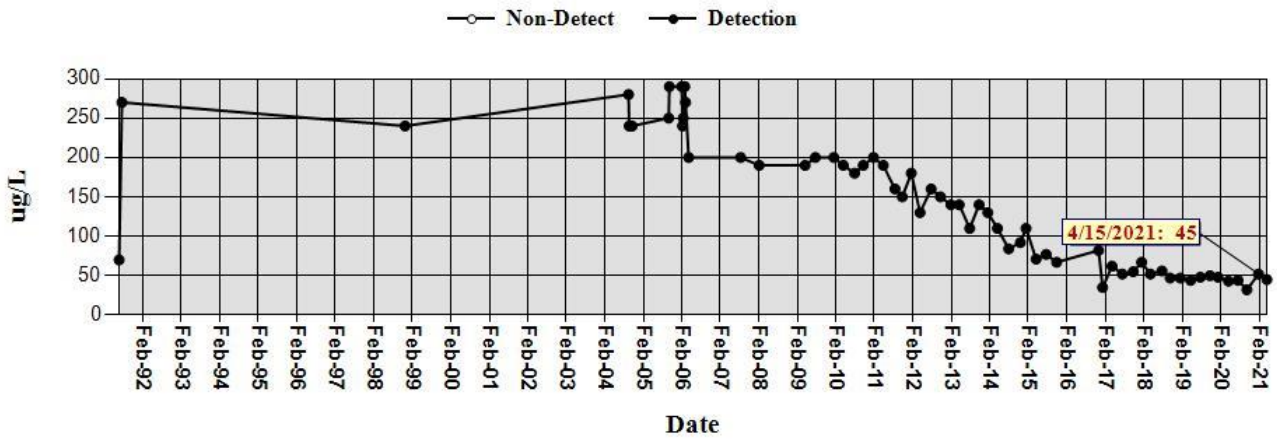
Analysis: 607

Results are Corrected for Extraction Efficiency



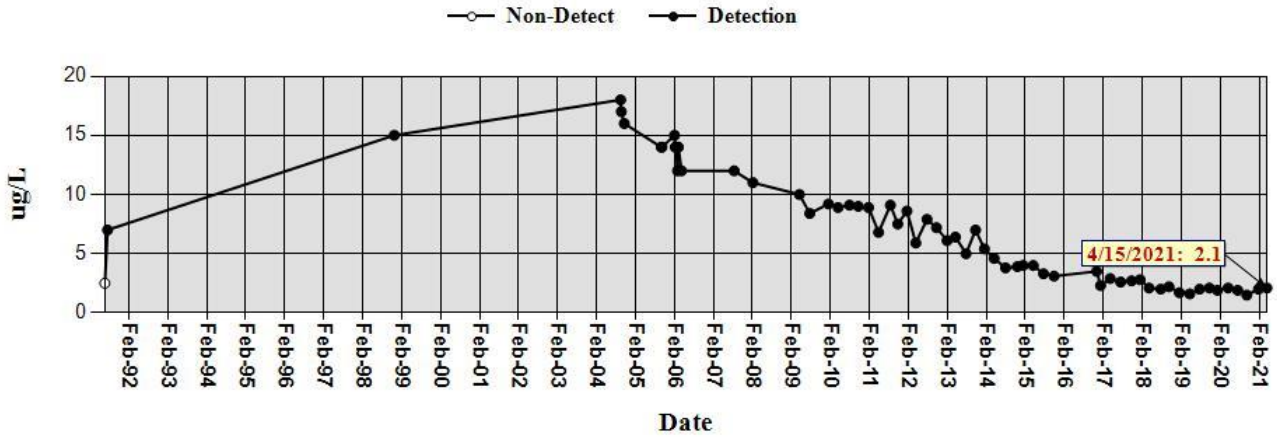
Well ID: PFE-3
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



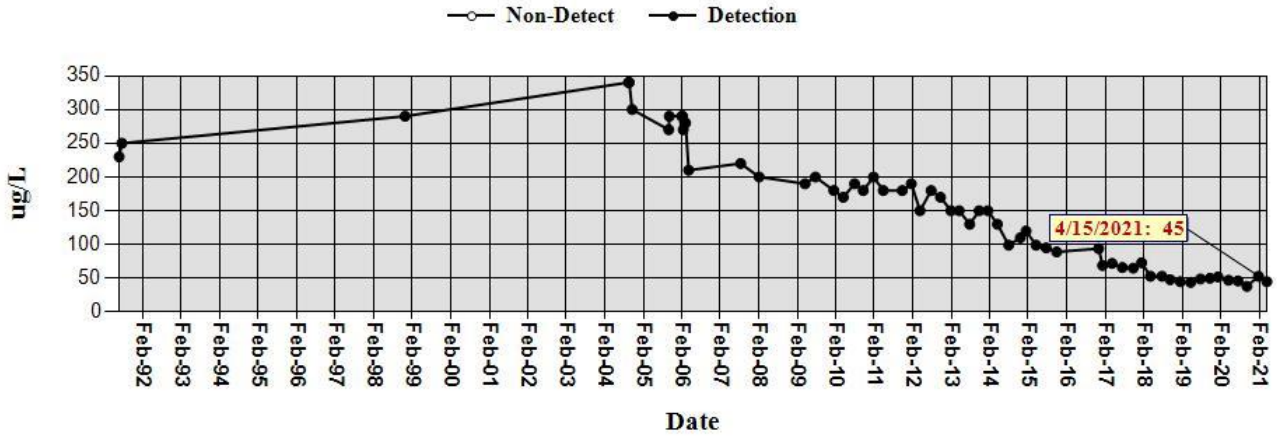
Well ID: PFE-3
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-3
CAS RN: 79-01-6 Trichloroethene

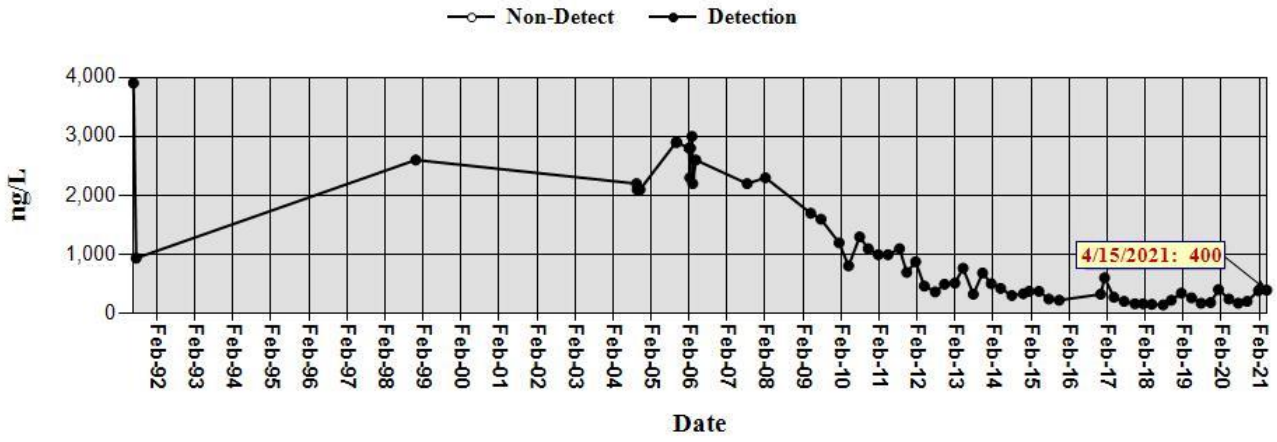
Analysis: 8260



Well ID: PFE-3
CAS RN: 62-75-9 N-Nitrosodimethylamine

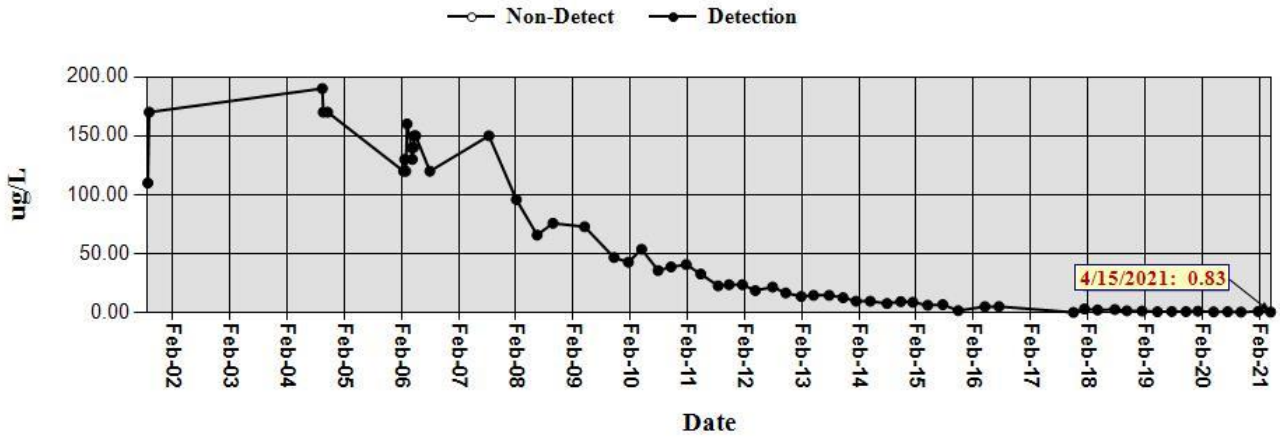
Analysis: 607

Results are Corrected for Extraction Efficiency



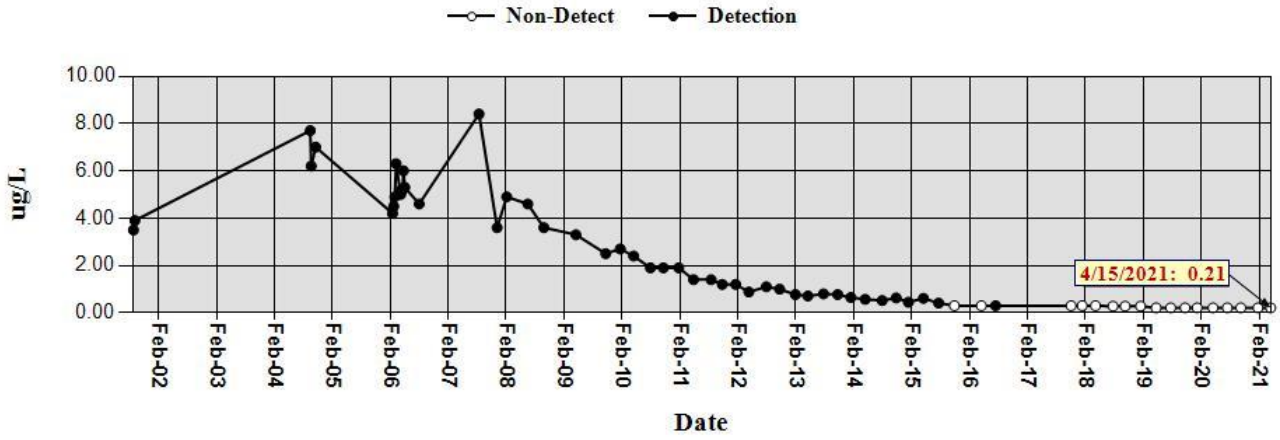
Well ID: PFE-4A
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



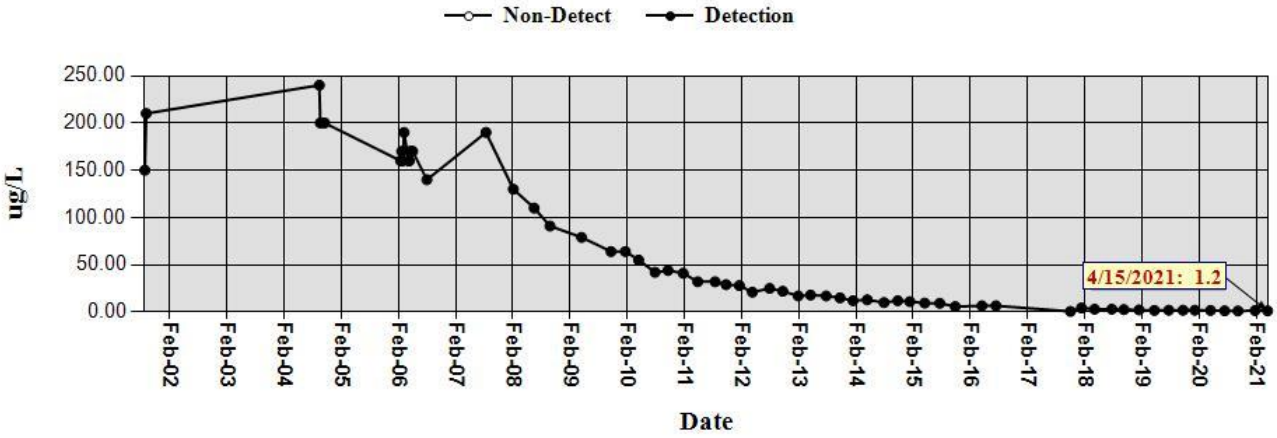
Well ID: PFE-4A
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-4A
CAS RN: 79-01-6 Trichloroethene

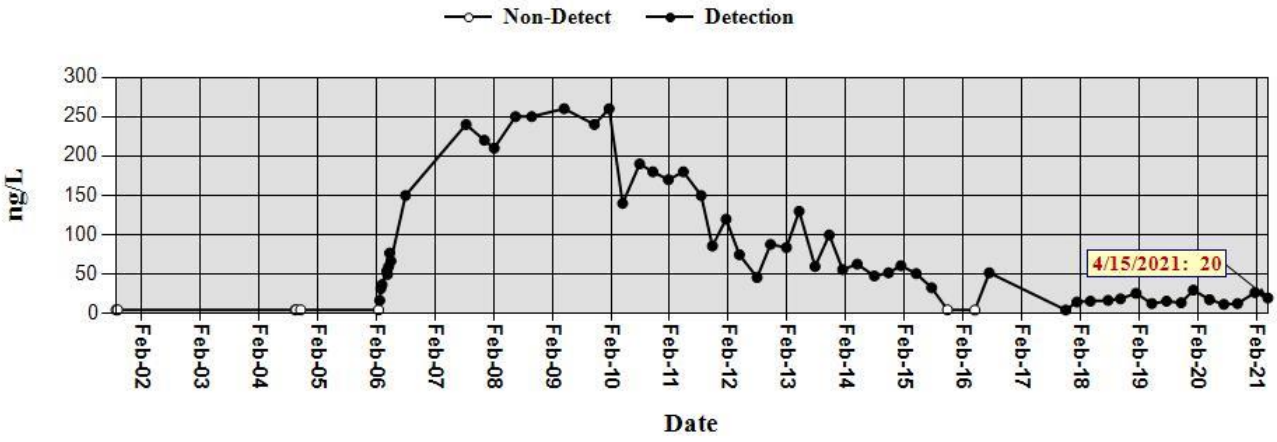
Analysis: 8260



Well ID: PFE-4A
CAS RN: 62-75-9 N-Nitrosodimethylamine

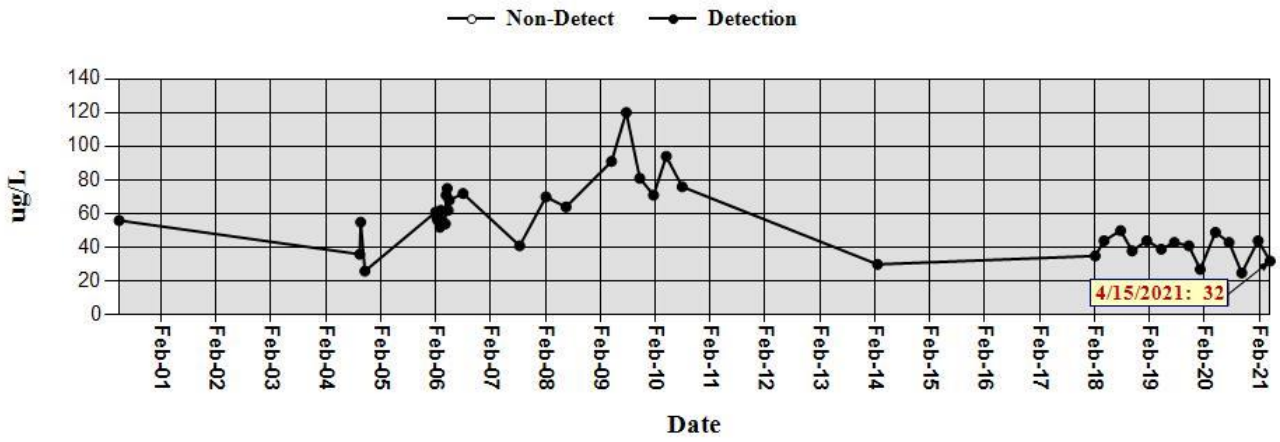
Analysis: 607

Results are Corrected for Extraction Efficiency



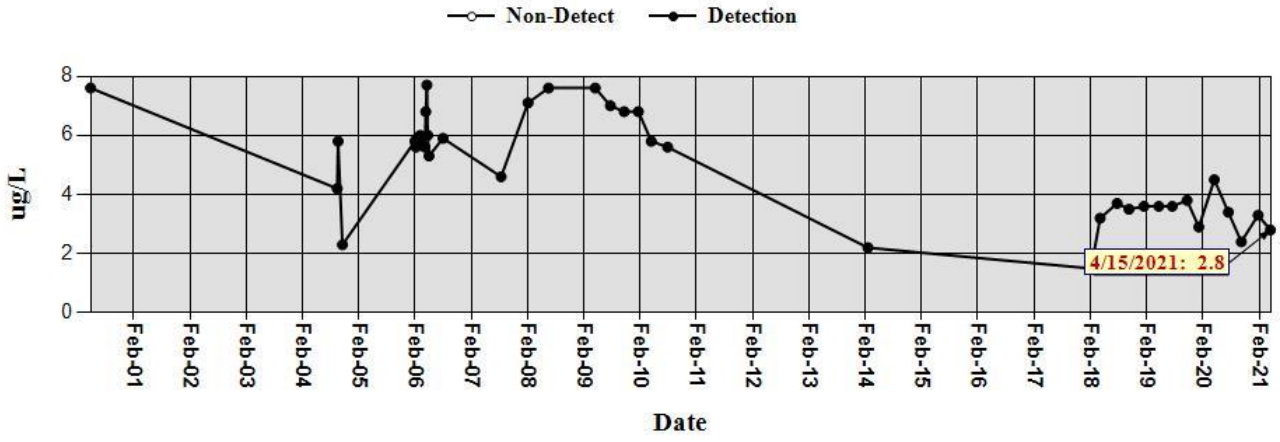
Well ID: PFE-5
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



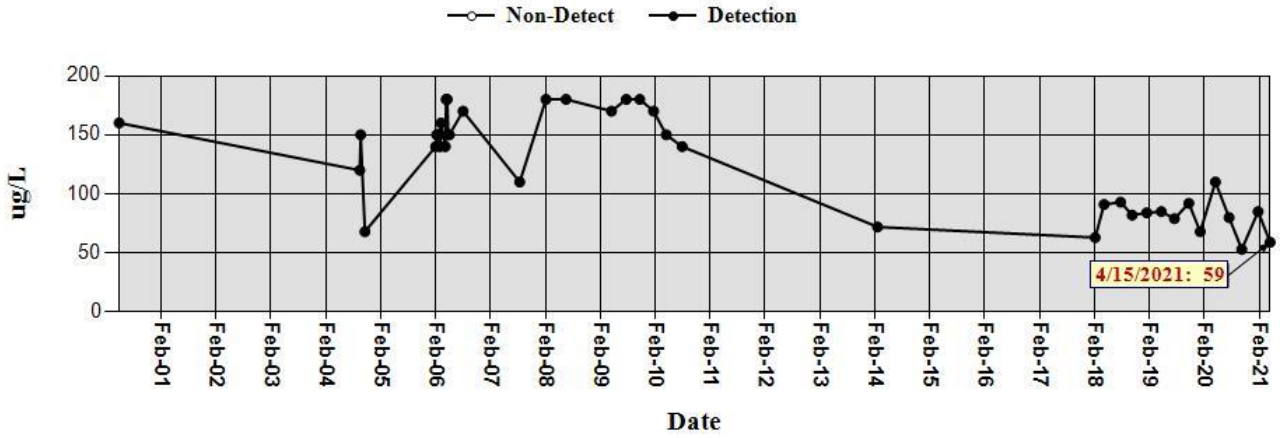
Well ID: PFE-5
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-5
CAS RN: 79-01-6 Trichloroethene

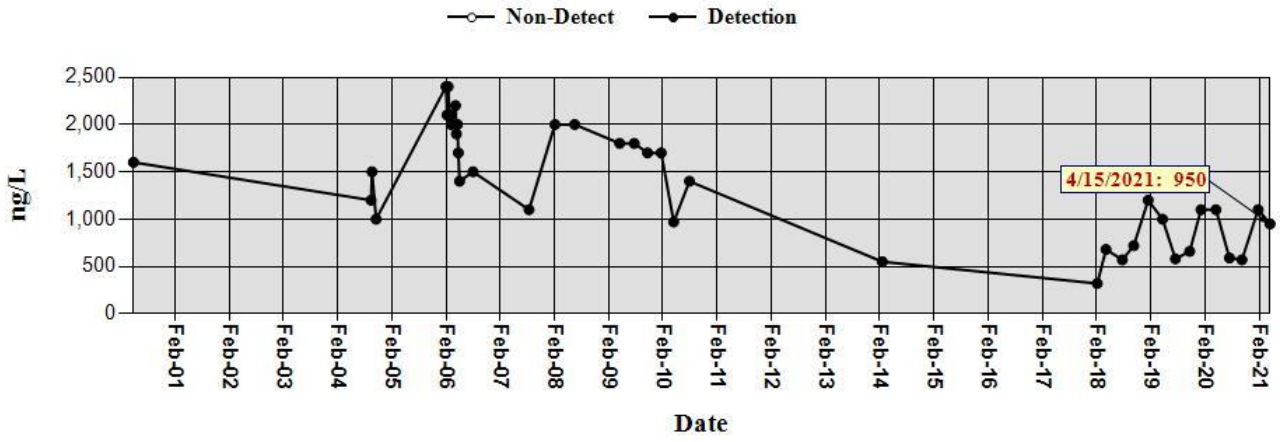
Analysis: 8260



Well ID: PFE-5
CAS RN: 62-75-9 N-Nitrosodimethylamine

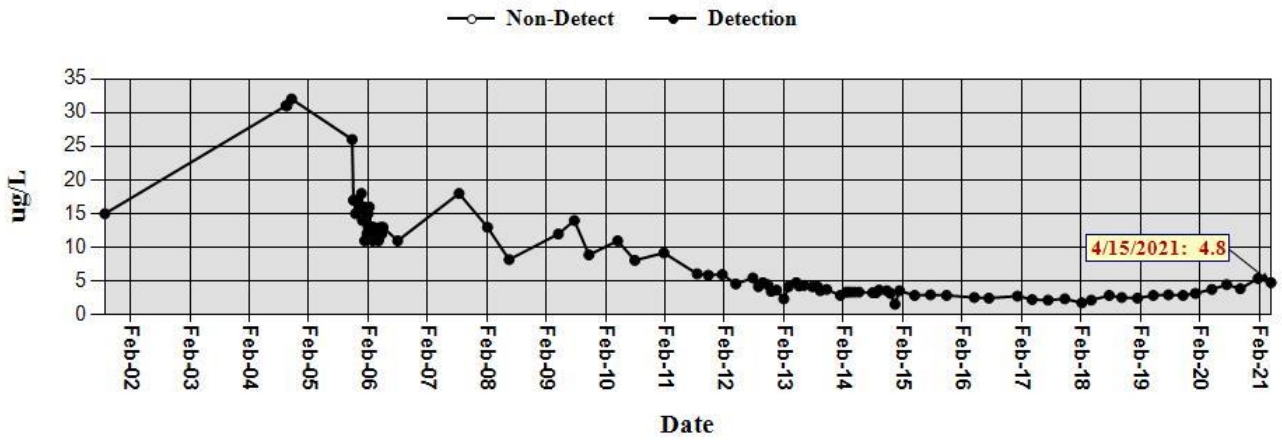
Analysis: 607

Results are Corrected for Extraction Efficiency



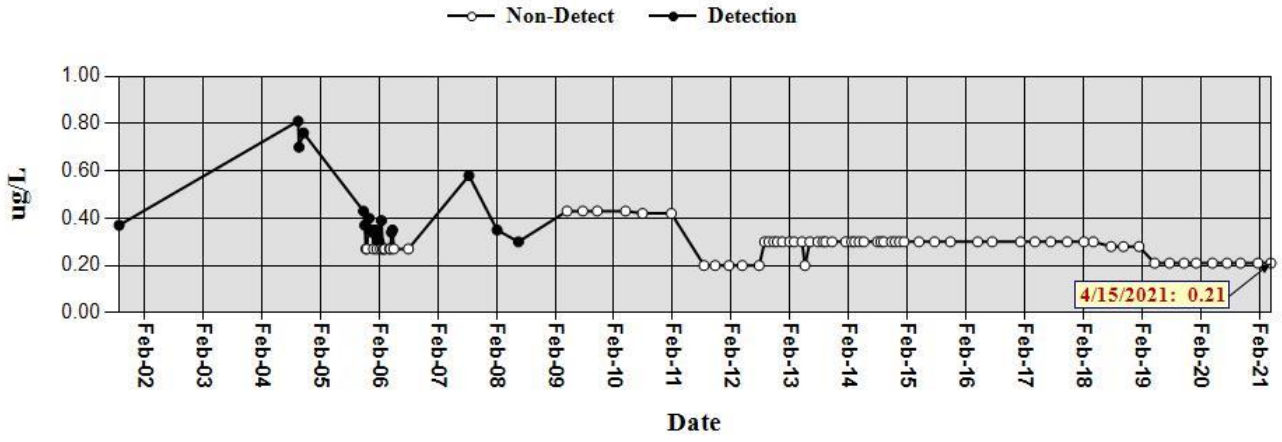
Well ID: PFE-7
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



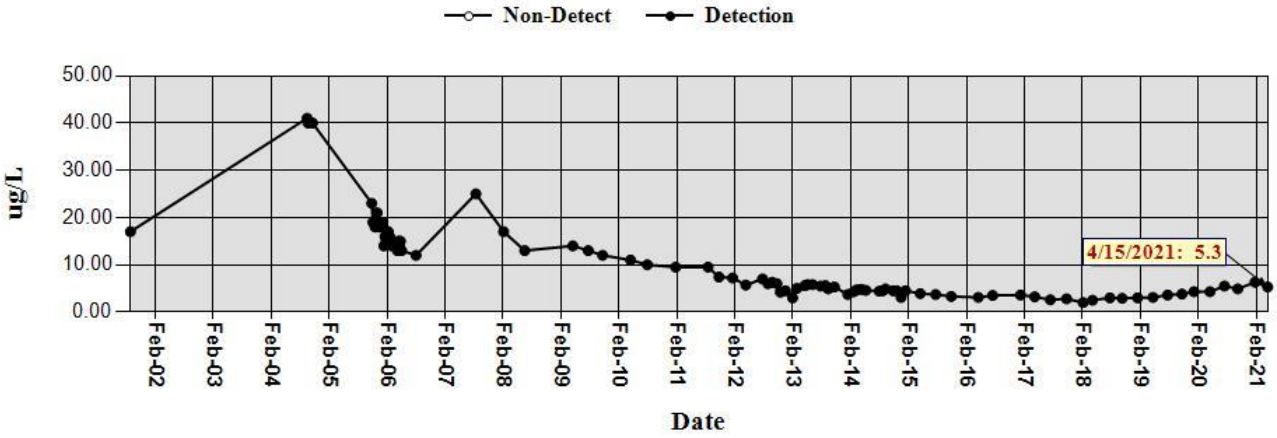
Well ID: PFE-7
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-7
CAS RN: 79-01-6 Trichloroethene

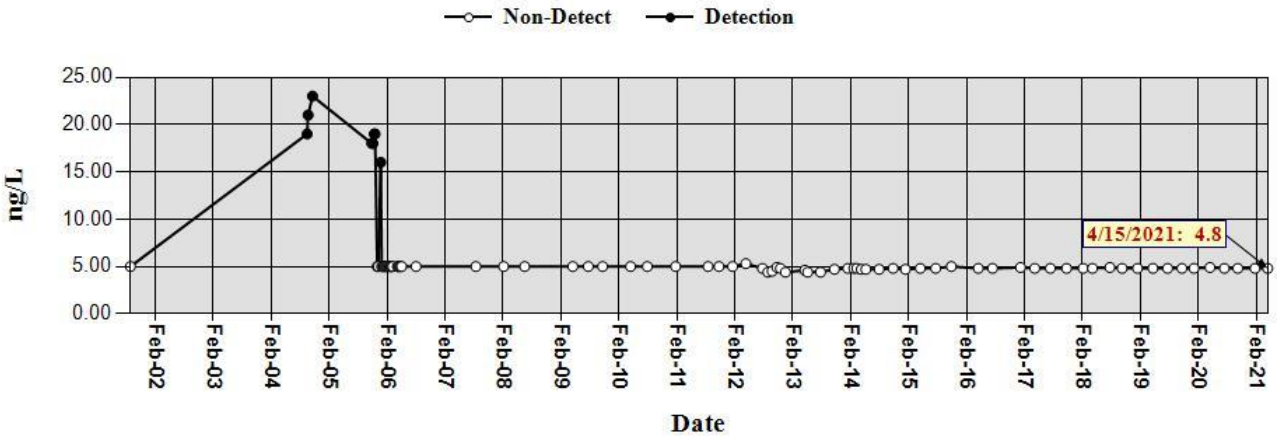
Analysis: 8260



Well ID: PFE-7
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: 607

Results are Corrected for Extraction Efficiency



Appendix F
Summary of Source Area Investigations

Summary of Groundwater Monitoring Projects and Source Area Investigations

1.0 Groundwater Monitoring Projects

1.1 Monitoring Well Installation and Well Plugging and Abandonment

NASA submitted the NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12 (the replacement for well PL-5) on December 27, 2017 and the Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42 on January 30, 2018.NMED approved the drilling work plans on September 10, 2018 (NMED, 2018o, 2018p). During the third quarter 2019, NASA completed installation of wells BLM-42 and PL-12. As part of the process, NASA submitted the required letter report *NASA WSTF BLM-42 Monitoring Well Design* on June 24, 2019 (NASA, 2019k) after submitting the letter report via email on June 21, 2019 (NASA, 2019j). NMED approved the well construction design by email on June 24, 2019 (NMED, 2019m). NASA submitted the required letter report *NASA WSTF PL-12 Monitoring Well Design* on July 19, 2019 (NASA, 2019o) after submitting the letter report via email the same day. NMED approved the PL-12 design by email on July 19, 2019.

Vendors contracted to provide the sampling systems for these wells experienced delays in obtaining the specialized material necessary to fabricate the inflatable packers for inclusion in the systems. NASA requested additional time to complete installation of the sampling systems, collect initial groundwater samples from both monitoring wells, and receive and evaluate analytical data for inclusion in the required well completion reports. NASA submitted the *Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports* on February 6, 2020 (NASA, 2020c). NMED approved the extension on February 17, 2020 (NMED, 2020f), extending the due date for submittal of the report from February 28, 2020 to April 30, 2020.

In the first quarter of 2020, NASA installed dedicated low-flow groundwater sampling systems in new groundwater monitoring wells BLM-42 (the replacement for well BLM-37) and PL-12 (the replacement for well PL-5) and performed the required initial groundwater sampling. In the second quarter of 2020,

NASA submitted the Well Completion Report for BLM-42 on May 4, 2020 (NASA, 2020j). NMED issued its Fee Assessment Well Completion Report for BLM-42 on May 28, 2020 (NMED, 2020j). NASA paid the *Fee Assessment for BLM-42 Well Completion Report (NMED Invoice Number HWB-NASA-20-004)* on August 3, 2020 (NASA, 2020p).

NASA also submitted the *Well Completion Report for Well PL-12* on May 4, 2020 (NASA, 2020k). NMED issued its *Fee Assessment Well Completion Report for PL-12* on May 28, 2020 (NMED, 2020k). NASA paid the *Fee Assessment for PL-12 Well Completion Report (NMED Invoice Number HWB-NASA-20-005)* on August 3, 2020 (NASA, 2020q).

1.2 Westbay Well Reconfiguration

NASA converted Westbay monitoring wells JP-3 and WW-2 from four-zone Westbay wells to two-zone conventional wells equipped with dedicated low-flow sampling systems in late 2013. NASA installed a three-zone Water FLUTe sampling system in the borehole at BLM-32 in August 2015. NASA reconfigured Westbay wells WW-4 and WW-5 to purgeable Water FLUTe sampling systems in November 2015 in accordance with the NMED approved schedule (NMED, 2015e). NASA installed Water FLUTe sampling systems in the conventional wells casings in wells JER-1, JER-2, ST-6, and ST-7 in January 2017. NASA submitted the *Well Reconfiguration Report for Westbay Wells JER-1, JER-2, ST-6, and ST-7* (NASA, 2017c) on March 22, 2017. NMED approved the report on July 7, 2017 with a

modification requiring NASA to complete recovery of the lodged Westbay casing from monitoring well BLM-37 or submit a work plan for well abandonment and replacement by January 31, 2018 (NMED, 2017f). Only portions of the casing could be recovered and on January 30, 2018, NASA submitted the *Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42* (NASA, 2018b). Following NMED approval of that plan (NMED, 2018p), NASA prepared and submitted a plugging plan to the NMOSE (New Mexico Office of the State Engineer) and continued planning fieldwork (NASA, 2019a). NMOSE approved the plan on March 12, 2019 (NMOSE, 2019a). NASA and the drilling subcontractor plugged monitoring well BLM-37 on June 15 and 16, 2019, in accordance with the approved work plan and NMOSE plugging plan. NASA supported the drilling contractor with preparation and submittal of the NMOSE plugging report.

On March 29, 2016, NMED approved NASA's fourth quarter 2015 PMR (NMED, 2016a) with direction to convert wells BLM-30, PL-5, PL-6, PL-7, PL-8, PL-10, ST-6, and WW-3 to purgeable sampling systems. The work plan for reconfiguring these wells was due to NMED by March 31, 2017. NASA reviewed NMED's requirements in conjunction with the available analytical data and other information for these wells and responded to NMED's approval on March 30, 2017 (NASA, 2017e) with a document including: a work plan for reconfiguring well BLM-30; a proposal for the replacement of well PL-5; and an evaluation of NDMA results from wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3, and a request for an extension of time for the reconfiguration work plan. NASA submitted the *NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12* (the replacement for well PL-5) on December 27, 2017 (NASA, 2017t) and the *Well Reconfiguration Work Plan for Well BLM-30* on December 28, 2017 (NASA, 2017v). NMED approved the work plans on September 10, 2018 (NMED, 2018p) and September 13, 2018 (NMED, 2018r), respectively.

In December 2018, NASA removed the Westbay casing from well PL-5 in preparation for plugging and abandonment. NASA prepared and submitted a plugging plan to the NMOSE and continued planning fieldwork (NASA, 2019a). NMOSE approved the plan on March 13, 2019 (NMOSE, 2019b). NASA plugged well PL-5 in July 2019.

1.2.1 BLM-28

In April 2019, NASA received additional system components to complete modifications to the low-flow sampling system scheduled for installation in the borehole at monitoring well BLM-28. NASA assembled the sampling system and installed the equipment in the borehole. NASA had planned to perform initial sampling at the reconfigured well. Although the dedicated system worked properly during the function testing following installation, it failed to produce groundwater. The dedicated sampling system, including the inflatable packer, was lodged in the borehole. In October 2019, NASA acquired, tested, and verified additional field equipment necessary for further attempts to recover the dedicated sampling system from well BLM-28. Using a hydraulic hoist (cherry picker), NASA attempted to recover the dedicated sampling system from well BLM-28 in November 2019. NASA applied gradually increasing upward pressure on the steel cable supporting the sampling system. The complete sampling system appears to be irrecoverable, as only the steel support cable, dedicated bladder pump, and tubing were removed from the borehole. In December 2019, NASA performed a downhole video log of the borehole at former well BLM-28. Field personnel identified a significant borehole wall collapse zone at approximately 400 ft bgs that resulted in several feet of fill on top of the inflatable packer that remains in the borehole at approximately 500 ft bgs. NASA evaluated the BLM-28 borehole and determined that future reuse for groundwater monitoring is not feasible. NASA submitted the *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon* on May 4, 2020 (NASA, 2020m). On November 19, 2020, NMED provided requirements for abandonment and replacement of the well (NMED, 2020w). A work plan for abandonment of BLM-28 was to be submitted to NMED no later than April 30, 2021. Following 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.

1.2.2 BLM-30

NASA attempted to remove the Westbay casing from well BLM-30 in December 2018. After numerous attempts to retrieve the Westbay casing from the borehole, NASA and the off-site contractors determined that the borehole had sloughed and that there is approximately 40 ft of material on top of the top packer, preventing removal of the system. NASA evaluated methods for removing the Westbay casing from well BLM-30 and determined that overwashing the Westbay casing with correctly sized drilling pipe may be effective. Requirements for this work were included in procurements for other drilling activities. On April 25, 2019, NASA submitted the *Request for Extension of Time for Well BLM-30 Reconfiguration Status Report* (NASA, 2019d). NMED approved the request on May 2, 2019, extending the due date for submittal of the reconfiguration report from April 30, 2019 to August 31, 2019 (NMED, 2019h). During July and August 2019, NASA and the drilling subcontractor attempted restoration of the well. Although most of the Westbay casing was removed or drilled out, approximately 90 ft of casing was not recoverable. NASA determined that reconfiguration of this borehole is not feasible and on August 29, 2019, submitted the *NASA WSTF Drilling Work Plan for Abandonment of Well BLM-30 and Drilling of New Groundwater Monitoring Well BLM-43* (NASA, 2019w). NMED issued the fee assessment for this work plan on September 20, 2019 (NMED, 2019v). NASA paid the fee on October 31, 2019 (NASA, 2019cc). On November 5, 2020, NMED issued an approval with modifications (NMED, 2020s), which required geophysical logging and a due date as November 30, 2021 for the well completion report. NASA provided a response to the Approval with Modifications on February 3, 2021 (NASA, 2021a) and corresponded with the New Mexico Office of the State Engineer (NASA, 2021e; 2021f) on the plugging plan for well BLM-30 and application for a permit to drill well BLM-43.

1.2.3 Data Representativeness and Westbay Well Reconfiguration Plan

On December 20, 2018, NASA submitted the *Request for Extension of Time for Well Reconfiguration Work Plan* (NASA, 2018u), which requested an extension for submittal of a work plan to reconfigure Westbay wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3. NMED approved the request on January 10, 2019 (NMED, 2019a). To support further Westbay reconfiguration efforts, NASA prepared and submitted the *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation* on December 21, 2018 (NASA, 2018v). NMED approved the work plan with modifications on May 13, 2019 (NMED, 2019i). NASA submitted the *Response to Approval with Modifications of Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation* (NASA, 2019k). 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, 2020b). NMED issued its *Fee Assessment Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* on March 20, 2020 (NMED, 2020g) and NASA paid the fee on April 20, 2020 (NASA, 2020i).

NASA believed that further evaluation of groundwater and sampling system data from WSTF groundwater monitoring wells is required to support the selection of an appropriate replacement sampling system. As a result, NASA submitted the *Request for Second Extension of Time for Well Reconfiguration Work Plan* on December 11, 2019 (NASA, 2019hh). NMED approved the extension request to submit the well reconfiguration work plan no later than December 31, 2020 (NMED, 2020d). On November 30, 2020, NASA submitted a *Request for Fourth Extension of Time for Well Reconfiguration Work Plan* (NASA, 2020z). 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).

1.2.4 Summary

To date, NASA has 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. NASA has replaced two Westbay wells (BLM-37 and PL-5) with wells BLM-42 and PL-12, respectively. Each has dual-zone dedicated low-flow bladder pumps.

2.0 Source Area Investigations

2.1 200 Area

NASA submitted the *200 Area Phase II Investigation Report* to NMED on June 29, 2015 (NASA, 2015d). NMED approved the Phase II report with modifications on November 30, 2015 (NMED, 2015d). NMED determined that a "no further action or corrective action" status for the 200 Area was not possible until the nature and extent of the soil vapor plume has been defined and all identified COC have been assessed. In addition to several other comments on the report, NMED agreed with NASA's recommendation to develop and submit a work plan to perform a quantitative assessment of complete soil vapor pathways in the 200 Area.

NASA developed and submitted the *200 Area and 600 Area Vapor Intrusion Assessment Work Plan* on February 25, 2016 (NASA, 2016b). NMED approved the vapor intrusion assessment work plan on May 27, 2016 (NMED, 2016b). Risk-based concentrations for soil vapor and air were updated for residential and commercial/industrial exposures and current and potential future land use scenarios and were submitted to NMED on January 26, 2017 (NASA, 2017a). NMED approved the RBCs on April 12, 2017 (NMED, 2017d). In June 2017, NASA performed an evaluation of the indoor air sampling locations to identify potential sources of interference with the planned sampling. A significant number of potential interferences were identified within the laboratory environment of Building 200 within the 200 Area. NASA catalogued these sources photographically prior to the indoor air sampling to ensure the most accurate and up-to-date assessment of interference. In August 2017, NASA performed the first of two vapor intrusion assessment sampling events in the 200/600 Areas in accordance with the NMED-approved work plan. NASA performed the second sampling event in February 2018. Samples were collected at indoor and outdoor locations and from several soil vapor monitoring wells, and were submitted to the off-site laboratory for analysis. NASA received all analytical results, completed an evaluation of those results, and developed and submitted the *200 Area and 600 Area Vapor Intrusion Assessment Report* on June 18, 2018 (NASA, 2018j). NMED disapproved the report on June 5, 2019 and directed NASA to address 12 NMED comments and submit a revised investigation report by October 31, 2019 (NMED, 2019k). On September 17, 2019, NASA requested additional time to complete the response and submit a revised report by December 20, 2019 (NASA, 2019y). On December 17, 2019, NASA submitted the *Request for Second Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report* (NASA, 2019ii), formalizing a request submitted via email on December 17, 2019. NMED had approved the request for extension on January 16, 2020, extending the due date for the response and revised report from December 20, 2019 to February 3, 2020 (NMED, 2020e). 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).

2.2 300 Area

Work in the 300 Area is primarily related to investigation and closure of the adjacent 400 Area. The first 300-Area related submittal NASA made was for the *400 Area Supplemental Groundwater and Soil Vapor*

Monitoring Plan on May 28, 2019 (NASA, 2019g) and the related *300 Area Supplemental Abbreviated Drilling Work Plan* for two additional multiport soil vapor and groundwater monitoring wells in the 300 Area on May 30, 2019 (NASA, 2019i). NASA received NMED's fee assessment for review of the 300 Area supplemental drilling work plan plans on July 3, 2019 (NMED, 2019o). NASA paid the 300 Area Supplemental Abbreviated Drilling Work Plan fee on August 13, 2019 (NASA, 2019v). NMED disapproved the *300 Area Supplemental Abbreviated Drilling Work Plan* (5/30/19) on March 19, 2021 (NMED, 2021f). NMED directed NASA to address four comments and submit a revised work plan no later than July 30, 2021.

2.3 400 Area

NASA performed investigation fieldwork at the 400 Area in accordance with the NMED-approved 400 Area Closure Investigation Work Plan (NASA, 2011) and 400 Area Investigation Abbreviated Drilling Work Plan and Notification of Fieldwork Commencement (NASA, 2016e) between September 2016 and July 2017. On December 27, 2017, NASA submitted the *NASA WSTF 400 Area Closure Investigation Report* (NASA, 2017s). NASA received NMED's March 27, 2018, *Disapproval 400 Area Well Completion Summary Report* (NMED, 2018j), responded with a revised report on June 13, 2018 (NASA, 2018i), and received NMED's July 26, 2018 approval of the report (NMED, 2018l).

NASA received NMED's August 14, 2018 disapproval of the Closure Investigation Report (NMED, 2018m) and revised the report as required. NASA submitted the *NASA WSTF 400 Area Closure Investigation Report – NMED Disapproval Response* on November 29, 2018 (NASA, 2018r). NMED disapproved the revised 400 Area Closure Investigation Report on September 16, 2019 (NMED, 2019u). NASA prepared the required response to the 14 comments and submitted the *NASA WSTF 400 Area Closure Investigation Report – NMED Second Disapproval Response* on December 30, 2019 (NASA, 2019ll). NMED disapproved the *400 Area Closure Investigation Report* (12/30/19; revised) on March 19, 2021 (NMED, 2021g). NMED directed NASA to address 17 comments and submit a revised report no later than July 30, 2021.

NASA submitted the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on May 28, 2019 (NASA, 2019g) and the related *300 Area Supplemental Abbreviated Drilling Work Plan* for two additional multiport soil vapor and groundwater monitoring wells in the 300 Area on May 30, 2019 (NASA, 2019i). NASA received NMED's fee assessment for review of the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on July 3, 2019 (NMED, 2019p). NASA paid the 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan fee on October 7, 2019 (NASA, 2019z). NMED disapproved the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (5/28/19) on March 15, 2021 (NMED, 2021e). NMED directed NASA to address three comments and submit a revised monitoring plan no later than July 30, 2021.

2.4 600 Area Perched Groundwater Extraction

2.4.1 Extraction

NASA initiated extraction of perched groundwater from monitoring well 600-G-138 on April 19, 2013, in accordance with NMED's March 1, 2013, *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area* (NMED, 2013c). The measured depth of perched groundwater declined from approximately 5 ft following well installation in October 2011 to approximately 3 ft. The well yields approximately 13 gallons daily when pumped twice per day. NASA extracted approximately 217 gallons from the well in April 2019, approximately 172 gallons in May 2019, and approximately 86 gallons in June 2019. On June 12, 2019, the non-dedicated purge pump failed and was removed from the well. NASA determined that further evaluation and repair are required and is

coordinating with the manufacturer to obtain the required services. Extracted groundwater was containerized for treatment and disposal at the MPITS in accordance with DP-1255 (NMED, 2017g).

NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 6* on April 30, 2019 (NASA, 2019e). NASA received the NMED fee assessment for review of the report (NMED, 2019j) and paid the 600 Area Perched Groundwater Extraction Pilot Test Interim Status Report fee on July 16, 2019 (NASA, 2019n). NMED approved the status report for the 600 area Perched Groundwater Extraction Pilot Test - Project Year 6 on September 3, 2019 (NMED, 2019t).

NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 7* on May 26, 2020 (NASA, 2020n). NMED Hazardous Waste Bureau (HWB) issued its *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Year Seven* on July 9, 2020 (NMED, 2020o), and NASA paid the fee on August 17, 2020 (NASA, 2020r).

2.4.2 Perched Groundwater Investigation.

NASA submitted a revised Abbreviated Investigation Work Plan for 600 Area Perched Groundwater, submitted to NMED on December 22, 2016 (NASA, 2016g). It was approved by NMED on March 31, 2017 (NMED, 2017b). In accordance with NMED extension request approval (NMED, 2018q), NASA delayed an additional investigation of 600 Area perched groundwater. On August 22, 2018, NASA requested an additional extension of time for implementation of the perched groundwater investigation to accommodate the ongoing investigation fieldwork at the 100 and 600 Area Wastewater Lagoons (NASA, 2018l). NMED approved the request on September 13, 2018 (NMED, 2018q) and required the submittal of a geophysical survey report by December 31, 2019 and the 600 Area perched groundwater investigation report by July 31, 2020. On August 7, 2019, NASA submitted the *Request to Remove Electrical Resistivity Component of the 600 Area Perched Groundwater Geophysical Survey* (NASA, 2019s). NMED reviewed the request and authorized removal of electrical resistivity from the investigation work scope on August 23, 2019 (NMED, 2019s).

In October and November 2019, NASA and the selected geophysics subcontractor performed fieldwork for the geophysical survey at the 600 Area Closure, consisting of seismic reflection and reflection in accordance with the *Abbreviated Investigation Work Plan for 600 Area Perched Groundwater* (NASA, 2016g) and NMED's approved *Work Scope Modification Request Abbreviated Investigation Work Plan for 600 Area Perched Groundwater* (NMED, 2019s). NASA submitted the *Synopsis of the Findings of the 600 Area Closure Geophysical Seismic Refraction Tomography and Reflection Surveys with Revised Soil Boring Locations* to NMED on December 19, 2019 (NASA, 2019kk). NMED issued its *Fee Assessment 600 Area Closure Geophysical Survey Status Report* on January 15, 2020 (NMED, 2020b). NASA submitted the fee on February 12, 2020 (NASA, 2020d).

Because of an indeterminate review period for the *600 Area Closure Geophysical Survey 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, 2020c). NMED approved the extension on July 1, 2020 to 150 days after NMED provides comments (NMED, 2020l). On December 22, 2020, NMED issued its *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020x) and set a due date for the 600 Area perched groundwater IR of December 31, 2021.

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

2.5.1 Pre-2019: Excavation and Characterization, Sludge and Liners

NASA submitted the *Wastewater Lagoon Areas Closure Investigation Work Plan and Wastewater Lagoon Areas Historical Investigation Summary* to NMED on October 15, 2012 (NASA, 2012). NASA received NMED's approval with modifications for the IWP (investigation work plan) and HIS (historical information summary) on January 3, 2013 (NMED, 2013a). NASA submitted a response to address the modifications in the February 21, 2013 revised report (NASA, 2013a). There were significant construction delays and legal issues associated with NASA's activation of its sanitary sewer system, which resulted in an NMED-approved extension of lagoon investigation fieldwork to August 31, 2015 (NMED, 2015b). NASA completed diversion of wastewater from the lagoons to the City of Las Cruces sewer system in July 2015 (NASA, 2015e).

NASA completed groundwater and wastewater sampling at the 100, 200, and 600 Area Lagoons in October 2015. After difficulties with sludge analysis because of its consistency, NASA completed sludge sampling at the 100 and 200 Area Lagoons in November 2016. Analytical data from sludge samples in the 100 and 200 Area Lagoons indicates that the majority of the sludge in those lagoons is considered New Mexico Special Waste. Based on these data, NASA continued development of the sludge management plan for removal of sludge from the 100 and 200 Area Wastewater Lagoons and continued planning for sludge removal throughout the reporting period. In January and February 2017, NASA performed soil sampling at the berms of the 100 Area, 200 Area, 600 Area, and STGT Wastewater Lagoons in order to characterize the soil for potential future reuse in site restoration as indicated in the work plan.

In July 2017, NASA secured the services of a qualified and experienced sludge excavation, disposal, and transportation subcontractor and continued planning for removal of sludge from the 100 Area and 200 Area Wastewater Lagoons. Using information provided by the vendor, NASA completed the 100 Area Wastewater Lagoons Sludge Disposal Management Plan and 200 Area Wastewater Lagoons Sludge Disposal Management Plan (NASA, 2017h, 2017i) and submitted them to the NMED SWB (Solid Waste Bureau) for review and concurrence. NMED SWB comments were received and incorporated into the 100 Area and 200 Area Wastewater Lagoons Sludge Disposal Management Plans. The revised 100 Area Wastewater Lagoons Sludge Disposal Management Plan was submitted to the NMED SWB and HWB (Hazardous Waste Bureau) on October 18, 2017 (NASA, 2017l).

NASA and the subcontractor selected to perform sludge excavation, disposal, and transportation-initiated lagoon closure fieldwork at the 100 Area and 200 Area Wastewater Lagoons on September 18, 2017. Initial efforts consisted of the removal and disposal of vegetation from the interior of the lagoons as solid waste in an appropriate landfill.

The revised 200 Area Wastewater Lagoons Sludge Disposal Management Plan was submitted to the NMED SWB and HWB on October 25, 2017 (NASA, 2017m). In order to complete waste characterization and disposal requirements, NASA collected sludge samples from the 100 and 200 Area Lagoons for analysis by the paint filter liquids test and toxicity characteristic leaching procedure (TCLP) as directed by the NMED SWB. The paint filter liquids test results were provided to the SWB on October 25, 2017 (NASA, 2017n). Results from TCLP analyses were submitted to the SWB on November 20, 2017 (NASA, 2017p). The SWB approved the 100 Area Wastewater Lagoons Sludge Disposal Management Plan and analytical results on December 19, 2017 (NMED, 2017k) and the 200 Area Wastewater Lagoons Sludge Disposal Management Plan and analytical results on December 21, 2017 (NMED, 2017l). The management plans were submitted to the NMED HWB, which provided fee assessments for their review on January 23, 2018 (NMED, 2018d, 2018e), and authorized sampling of the 100 and 200 Lagoon liners on January 31, 2018 (NMED, 2018f, 2018g).

2.5.1.1 100 Area Lagoons

NASA's sludge excavation and disposal subcontractor began removing sludge from the 100 Area Lagoons and transporting it to the Corralitos Regional Landfill in Las Cruces, NM for disposal on January 15, 2018. Following removal of sludge from the former 100 Area Lagoons, NASA determined that clay liners were not present in the form expected. As a result, NASA performed a study to characterize the shallow subsurface lithology. In February 2018, NASA completed the removal of sludge from the former 100 Area Wastewater Lagoons, and the sludge removed and disposed totaled 5,583 cubic yards (yd^3; 6,011 tons). NASA collected liner samples from the former 100 Area Lagoons in April 2018 and submitted them to the off-site laboratory for analysis. Following receipt and evaluation of the 100 Area Lagoons liner analytical results, NASA submitted the *NASA WSTF 100 Area Wastewater Lagoons Liner Management Plan Addendum* on July 3, 2018 (NASA, 2018k), which the NMED HWB approved with modifications on August 16, 2018 (NMED, 2018n).

2.5.1.2 200 Area Lagoons

During March 2018, NASA removed and disposed of 1,740 yd^3 (1,949 tons) of sludge from the former 200 Area Lagoons, which completed the sludge removal at these lagoons. NASA sampled the liner material within the 200 Area Lagoons in July 2018. NASA submitted the *NASA WSTF 200 Area Wastewater Lagoons Liner Management Plan Addendum* on October 4, 2018 (NASA, 2018o), and the NMED HWB provided the fee assessment for their review on November 30, 2018 (NMED, 2018x). The NMED HWB issued a memo to proceed on February 28, 2019 (NMED, 2019f).

2.5.1.3 600 Area Lagoons

NASA received and reviewed chemical analytical data from sludge samples collected at the west 600 Area Lagoon in December 2017. Several samples did not meet paint filter liquids test requirements and resampling was performed on January 30, 2018. NASA submitted the *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Sludge Disposal Management Plan* to the NMED SWB on February 26, 2018 (NASA, 2018c). The SWB approved the plan on March 1, 2018 (NMED, 2018i). From March through May 2018, NASA's sludge excavation and disposal subcontractor excavated, transported and disposed of 4,338 yd^3 (4,866 tons) of sludge from the former 600 Area Lagoons. All sludge excavated from the former wastewater lagoons was transported to the Corralitos Regional Landfill in Las Cruces, NM for disposal as New Mexico Special Waste. During sludge excavation activities at the west 600 Area Lagoon, NASA identified the presence of interbedded sludge and liner material in the northwestern lagoon berm. The interbedded materials were left in place pending liner sampling to fully characterize it prior to disposal. NASA sampled the liner material within the 600 Area Lagoons in August 2018, including the interbedded sludge and berm material within the northwestern berm of the 600 North Lagoon. NASA's sludge excavation and disposal subcontractor returned to WSTF on October 29, 2018, and continued excavation and disposal of sludge from the 600 Area Lagoons and transporting it to the Corralitos Regional Landfill in Las Cruces for disposal. Sludge excavation and disposal at the 600 Area Lagoons was completed in December 2018, the final quantity of sludge removed and disposed from these lagoons totaled 9,240 yd^3 (10,046 tons).NASA submitted the *NASA WSTF 600 Area Wastewater Lagoons Liner Management Plan Addendum* on October 30, 2018 (NASA, 2018q), and the NMED HWB provided the fee assessment for their review on November 30, 2018 (NMED, 2018y). The NMED HWB issued a memo to proceed on February 25, 2019 (NMED, 2019e).

2.5.1.4 STGT Lagoons

In June 2018, NASA and the off-site subcontractor used light duty construction equipment to manipulate the sludge in the STGT Lagoons to facilitate moisture reduction in preparation for sludge sampling.

Following sludge drying activities, NASA collected samples of sludge and evaluated sludge thickness at the STGT Lagoons in accordance with the approved Wastewater Lagoon Areas Closure Investigation Work Plan (NASA, 2013a).

NASA evaluated analytical data from STGT sludge samples and characterized the sludge as non-hazardous material. NASA submitted the *WSTF (White Sands Test Facility) STGT (Second TDRSS [Tracking and Data Relay Satellite System] Ground Terminal) Wastewater Lagoons Sludge Disposal Management Plan* on September 13, 2018 (NASA, 2018m). The NMED SWB approved this plan on September 28, 2018 (NMED, 2018s). The NMED HWB provided the fee assessment for their review on December 12, 2018 (NMED, 2018aa). NASA submitted the review fee to the NMED on December 13, 2018 (NASA, 2018s). The NMED HWB issued a memo to proceed on February 5, 2019 (NMED, 2019b).

In early October 2018, the rain gauge at the STGT Lagoons recorded approximately 2.5 in., which submerged the dried sludge in the STGT Lagoons with accumulated precipitation. NASA and the excavation contractor began sludge drying activities at the STGT Lagoons in December 2018, by pumping accumulated precipitation from the STGT South Lagoon into the North Lagoon so that mechanical sludge working and dewatering may proceed in the South Lagoon. In January 2019, the subcontractor completed mechanical manipulation of the sludge in the STGT Lagoons to facilitate sludge drying in order to meet paint filter test requirements prior to excavation and off-site disposal. During January 2019, NASA's off-site subcontractor removed approximately 30 yd^3 of sludge and debris from the southern STGT Lagoon. During February 2019, the subcontractor removed approximately 1,690 yd^3 of sludge and HDPE liner (approximately 1,700 tons) from the STGT Lagoons. During March 2019, the subcontractor removed approximately 220 yd^3 of sludge and 140 yd^3 of HDPE liner (approximately 244 tons of waste) from the STGT Lagoons. During April 2019, NASA removed approximately 180 yd^3 (approximately 176 tons) of residual sludge and 40 yd^3 of HDPE liner (approximately 1.9 tons of waste) from the STGT Lagoons. This completed removal of sludge and HDPE liner from the STGT Lagoons. All waste removed from the STGT Lagoons in 2019 was disposed of as New Mexico Special Waste at the Corralitos Regional Landfill.

NASA collected samples of the clay liner now exposed at the STGT Lagoons in April 2019. Clay liner samples were collected directly below the sludge sampling locations (three locations in the South Lagoon and two in the north), and additional liner samples were collected from areas potentially impacted by wastewater sludge as identified during waste removal activities. These samples were submitted to the off-site laboratories for chemical analyses. Results of these samples were evaluated and reported to the NMED in accordance with the approved work plan. NASA submitted the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on July 11, 2019 (NASA, 2019m).

2.5.2 Post-2019: Subsurface Investigations

In December 2018, NASA selected a drilling contractor to install soil borings at each lagoon area as indicated in the approved work plan. In January 2019, NASA's off-site drilling subcontractor installed 16 soil borings at the WSTF Wastewater Lagoons: nine borings within and adjacent to the 100 Area Lagoons; three borings adjacent to the 200 Area Lagoons; three borings adjacent to the 600 Area Lagoons; and, one boring adjacent to the STGT Lagoons. NASA collected soil samples from each boring at the intervals specified in the NMED-approved investigation work plan and submitted them to the off-site laboratories for analysis. NASA received and processed analytical data from soil samples collected from these 16 soil borings in February and March 2019. In June 2019, NASA's off-site drilling subcontractor installed 17 soil borings within and adjacent to 100, 200, 600, and STGT Wastewater Lagoons, completing the portion of the subsurface investigation for which NASA has NMED approval.

2.5.3 Interim Status Reports and Investigation Reports

2.5.3.1 100 Area Lagoons

NASA submitted the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report* on May 29, 2019 (NASA, 2019h), and the NMED HWB provided the fee assessment for their review on July 3, 2019 (NMED, 2019n). NASA paid the 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report fee on August 13, 2019 (NASA, 2019u). NMED responded to NASA's *100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report* on May 14, 2020 (NMED, 2020i). NMED 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, 2020l). NASA received NMED's fee assessment and invoice for $20,000 for *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report (*August 3, 2020) dated September 22, 2020. NASA requested a revised invoice in the amount of $18,000, and NMED issued the revised invoice on November 12, 2020 (NMED, 2020t). On November 30, 2020, NASA paid the fee assessment for NMED's review of the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report* (NASA, 2020y).

2.5.3.2 200 Area Lagoons

NASA submitted the *NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* to NMED on November 25, 2019 (NASA, 2019ee). NMED issued its *Fee Assessment 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* on January 15, 2020 (NMED, 2020a). NASA submitted the fee on February 25, 2020 (NASA, 2020e).

2.5.3.3 600 Area Lagoons

NASA submitted the *NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* to NMED on November 26, 2019 (NASA, 2019ff). NMED issued its *Fee Assessment NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* on January 15, 2020 (NMED, 2020c). NASA submitted the fee on February 25, 2020 (NASA, 2020f).

2.5.3.4 STGT Lagoons

NASA submitted the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on July 11, 2019. NMED HWB provided the fee assessment for their review on August 19, 2019 (NMED, 2019r). NASA paid the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* review fee on September 10, 2019 (NASA, 2019x).

NASA addressed NMED's comments in the *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum* (NMED, 2019x) and submitted *the Response to Approval with Modifications for NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on December 5, 2019 (NASA, 2019gg). 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 submitted the White Sands Test Facility WSTF STGT Wastewater Lagoons Closure (AOC 51) Investigation Report on October 13, 2020 (NASA, 2020w). NMED issued its *Fee Assessment NASA White Sands Test Facility (WSTF) STGT*

Wastewater Lagoons Closure (AOC 51) Investigation Report on November 19, 2020 (NMED, 2020v). NASA paid the review fee on February 18, 2021 (NASA, 2021c).

2.6 SWMU 10 (200 Area Hazardous Waste Transmission Lines)

NASA performed fieldwork activities to excavate and remove remaining sections of the abandoned Hazardous Waste Transmission Line (HWTL) between May and November 2016 in accordance with the NMED-approved 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Work Plan and Historical Information Summary on June 29, 2015 (NASA, 2015c). NASA identified, excavated, sampled, and removed all accessible portions of the stainless steel and PVC HWTL. NASA then backfilled and restored the remaining exposed trenches in various work areas.

On December 14, 2017, NASA submitted the *NASA WSTF 200 Area HWTL (SWMU 10) HWTL Investigation Report* (NASA, 2017r). NASA received NMED's January 12, 2018, Fee Assessment for the investigation report (NMED, 2018a) and submitted the *Fee Assessment – NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* on March 13, 2018 (NASA, 2018f). NMED disapproved the investigation report on November 16, 2018 (NMED, 2018v) and directed NASA to address 22 NMED comments and submit a revised report by July 31, 2019. NASA submitted the *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* on July 30, 2019 (NASA, 2019r). On November 16, 2020, NMED disapproved the *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* (July 30, 2019) (NMED, 2020u) and directed NASA to address 16 comments including resampling along the HWTL.

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

In November and December 2015, NASA performed investigation fieldwork at the 600 Area BLM Off-Site Soil Pile in accordance with the NMED-approved *NASA WSTF 600 Area BLM Off-Site Soil Pile (SWMU 16) Investigation Work Plan and Historical Information Summary* (NASA, 2014). On February 25, 2016, NASA submitted the SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report (NASA, 2016c) to NMED, which disapproved the report on October 14, 2016 (NMED, 2016d). NASA provided the *Response to Disapproval of NASA WSTF SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on January 26, 2017 (NASA, 2017b). NASA received NMED's June 27, 2017, *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report* (NMED, 2017e) and incorporated all pertinent comments into the revised SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report, completed the human health and ecological risk screening tasks, and prepared the revised investigation report. On November 28, 2017, NASA submitted the *Response to Second Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-site Soil Pile) Investigation Report* (NASA, 2017q). On June 19, 2018, NMED disapproved the revised investigation report and directed NASA to prepare and submit a revised report by October 31, 2018 (NMED, 2018k). NASA submitted a request for extension of time for submittal of the revised investigation report on October 4, 2018 (NASA, 2018p). NMED approved the extension request on October 19, 2018 (NMED, 2018u) and required the submittal of a revised investigation report by December 31, 2018. NASA submitted the *Response to Third Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on December 21, 2018 (NASA, 2018w).

NMED provided the *Disapproval 600 Area Bureau of Land Management Off-site Soil Pile (SWMU 16) Revised Investigation Report* on October 8, 2019 (NMED, 2019y). NMED directed NASA to address eight comments, revise the investigation report, and submit the response to comments and the revised investigation report no later than December 31, 2019. NASA addressed NMED's comments and submitted the *Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* to NMED on December 18, 2019 (NASA, 2019jj).

2.8 SWMUs 18–20 (700 Area High Energy Blast Facility, 800 Area Below Grade Storage Tank, and 800 Area Oxidizer Burner)

NASA performed investigation fieldwork at the 800 Area Below Grade Storage Tank (SWMU 19) in December 2015 in accordance with the NMED-approved 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan (NASA, 2015b; NMED, 2015c). On February 17, 2016, NASA submitted the SMWU 19 (800 Area Below Grade Storage Tank) Investigation Report (NASA, 2016a) to NMED. NMED disapproved the investigation report on July 29, 2016 (NMED, 2016c) and directed NASA to perform additional fieldwork and submit a revised investigation report. NASA completed and submitted the 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling on November 16, 2016 (NASA, 2016f). NMED approved the work plan with modifications on March 31, 2017 (NMED, 2017c). NASA submitted the *Response to NMED Approval with Modifications of the 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Sampling* on April 20, 2017 (NASA, 2017f). NASA performed the required additional fieldwork in October 2017. NASA submitted the *Request for Extension of Time for Submittal of 800 Area BGST (SWMU 19) Revised Investigation Report* on September 5, 2017 (NASA, 2017j). NMED approved the extension on September 29, 2017 (NMED, 2017i). NASA submitted the *Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* to NMED on January 30, 2018 (NASA, 2018a). NMED disapproved the investigation report on December 7, 2018 (NMED, 2018z) and directed NASA to address eight NMED comments and submit a revised investigation report no later than June 30, 2019. NASA submitted the *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* on June 27, 2019 (NASA, 2019l). NMED reviewed the *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* (NASA, 2019d), and issued the *Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report* on August 27, 2020 (NMED, 2020j).

2.9 SWMUs 21–27 (Septic Tanks)

NASA submitted the *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMU 21-27) Investigation Work Plan and WSTF Septic Tanks Historical Information Summary* to NMED on June 27, 2013 (NASA, 2013b). The IWP and HIS were approved by the NMED HWB on November 8, 2013 (NMED, 2013c). The removal plan portion of the IWP for non-SWMU tanks was approved by the NMED Liquid Waste Program on December 5, 2013 (NMED, 2013d).

The septic tank at Building 114 (SWMU 22) was the only one to have received hazardous waste. NASA performed investigation fieldwork at the SWMU 22 tank location in accordance with the approved work plan. Soil samples were collected from five borings and submitted to the contracted off-site laboratory for analysis of cyanide and silver. Following that initial fieldwork, NASA determined that additional soil sampling was required at the former location of the Building 114 septic tank (SWMU 22). NASA submitted the *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report Schedule Update* on September 6, 2017 (NASA, 2017k). In October 2017, NASA installed two additional borings through the former Building 114 septic tank (SWMU 22) location and collected soil samples at the interface between the clean fill and native soil.

NASA evaluated historical information available for SWMUs 21–27 and concluded that only SWMU 22, the Building 114 septic tank, received hazardous waste and required an investigation. NASA investigated the former Building 114 septic tank location and provided the results to NMED in the *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* submitted to NMED on February 27, 2018 (NASA, 2018d). NMED disapproved the investigation report on February 6, 2019 (NMED, 2019c) and directed NASA to address eight NMED comments and submit a revised investigation report no later than July 31, 2019. 2019. NASA submitted the *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27)*

Investigation Report on July 23, 2019 (NASA, 2019p). NMED disapproved NASA's July 23, 2019, *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* (the revised IR) on January 29, 2021 and directed NASA to address six comments no later than May 30, 2021 (NMED 2021b).

2.10 SWMUs 29-31 (Small Arms Firing Ranges)

NASA submitted the *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Accelerated Corrective Measures Work Plan and Historical Information Summary* on February 26, 2015 (NASA, 2015a). NMED approved the work plan with modifications on May 29, 2015 (NMED, 2015a). Following project planning and procurement activities, NASA performed initial pre-cleanup field screening in August and September 2015. In late 2015 and 2016, NASA consulted with NMED and determined that additional corrective action was required. NASA performed field screening, manual recovery of ammunition fragments, soil excavation, confirmation soil sampling, and waste management and off-site disposal at the three firing ranges. NASA completed and submitted the *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* on March 30, 2017 (NASA, 2017d). NASA received NMED's September 7, 2017, *Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* (NMED, 2017h) and requested an extension of time for submittal of the required response (NASA, 2017o). NMED approved the request on December 1, 2017, which extended the due date for NASA's response to March 30, 2018 (NMED, 2017j). NASA completed and submitted the *Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* to NMED on March 29, 2018 (NASA, 2018g). NMED disapproved the report February 21, 2019 (NMED, 2019d) and directed NASA to address seven NMED comments and submit a revised investigation report no later than December 31, 2019. NASA initiated additional fieldwork required to respond to NMED's February 21, 2019, *Second Disapproval of Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report.* In September 2019, NASA initiated and completed collection of discrete soil samples from randomly selected quadrants of each sampling grid cell. Grid cells located within the footprint of the former wastewater lagoons could not be sampled until NASA received NMED approval of the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* submitted on July 11, 2019.

In October 2019, NASA completed discrete soil sampling at the WB-2 firing range (SWMU 31). During that sampling exercise, NASA observed several residual ammunition fragments near the impact berm where soil was drug back by heavy equipment during previous soil excavation. NASA evaluated the quantity and distribution of these fragments and determined that additional soil excavation was required. On December 12, 2019, NASA excavated approximately 4 yd^3 of lead-impacted soil from the vicinity of the impact berm at the WB-2 firing range. Follow-on field screening indicated that the minimal fragments remaining in the soil could be recovered manually.

Following the *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum* (NMED, 2019x), which authorized NASA to perform additional fieldwork at the firing range floor that underlies the wastewater lagoon liner, NASA performed discrete soil sampling and additional corrective measures fieldwork at the STGT Firing Range (SWMU 29). NASA manually collected ammunition scraps and fragments from previously unsearched portions of the range thus accessible. Manual recovery was completed on November 18, 2019. NASA then collected discrete soil samples from all sampling grid cells at the STGT firing range and shipped samples to the off-site laboratory for analysis.

On October 28, 2019, NASA submitted the *Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report* (NASA, 2019bb). NMED approved the request on November 13, 2019 (NMED, 2019z), extending the due date for submittal of the disapproval response and revised remedy completion report from December 31, 2019 to February 28, 2020. 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, 2020h), 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, 2020m).

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

Anticipating closure of Test Stand 302A 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, 2020s), and on September 22, 2020, NMED issued its *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary* (NMED, 2020r).

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, 2018n). NASA received NMED's October 15, 2018 fee assessment for review of the work plan (NMED, 2018t) and submitted the $10,000 review fee on December 19, 2018 (NASA, 2018t). NMED disapproved the *500 Area Fuel Storage (SWMU 47) Investigation Work Plan* on August 8, 2019 and directed NASA to address 14 comments and submit a revised work plan no later than November 25, 2019 (NMED, 2019q). NASA responded to NMED's 14 comments and submitted the *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* on November 21, 2019 (NASA, 2019dd). NMED disapproved the *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* (November 21, 2019; the revised IWP) on March 29, 2021 and directed NASA to address five comments and submit a revised IWP no later than July 31, 2021 (NMED, 2021h).

2.13 SWMU 49 (700 Area Landfill)

NASA prepared and submitted the *NASA White Sands Test Facility (WSTF) SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (IWP) and Historical Information Summary (HIS)* to NMED on December 28, 2017 (NASA, 2017u). NASA received NMED's February 7, 2018 fee assessment for review of the work plan (NMED, 2018h) and submitted the *Fee Assessment for SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary* on March 5, 2018 (NASA, 2018e). NMED disapproved the work plan on November 29, 2018 (NMED, 2018w) and directed NASA to address eight NMED comments and submit a revised investigation work plan no later than May 31, 2019. NASA submitted the *Response to NMED Disapproval SWMU 49 (700 Area Landfill) Phase 1 Investigation Work Plan and Historical Information Summary* on March 28, 2019 (NASA, 2019c). NMED issued an approval with modifications on June 6, 2019 (NMED, 2019l). NASA responded to the approval with modifications on August 8, 2019 (NASA, 2019t).

In late November 2019, NASA systematically deployed 159 passive soil vapor samplers within the conduits for vapor implants, as well as within existing landfill methane and groundwater monitoring wells. This shallow soil vapor survey was described as investigation Phase 1A in the revised SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (NASA, 2019t). In early December 2019, NASA recovered the passive soil samplers after their 14-day residence time and shipped them to the off-site laboratory for analysis. In December 2019, NASA began removing vegetation from the landfill closure cap in accordance with NMED SWB approval (NMED, 2019w) in preparation for the planned

geophysical investigations. A contract was awarded to perform the electromagnetic induction and magnetic gradient surveys. NASA and the subcontracted geophysics firm performed the EMI and magnetic gradient field surveys between February 24 and 28, 2020.

In the second quarter of 2020, and due to 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, 2020l). NASA also completed procurement of ground penetrating radar and passive seismic surveys as described in the NMED-approved landfill investigation work plan. NMED issued an *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on July 1, 2020 (NMED, 2020m). The approved extension for the Phase I field investigation report was to March 31, 2021. 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 issued an *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on March 15, 2021 (NMED, 2021d). The approved extension for the Phase I field investigation report was April 29, 2022.

2.14 SWMU 50 (First TDRSS Diesel Release)

NASA prepared and submitted the *NASA WSTF First TDRSS Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary* to NMED on June 29, 2016 (NASA, 2016d). NMED disapproved the work plan on January 25, 2017 (NMED, 2017a). NASA revised the work plan in accordance with NMED comments and submitted the *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan* on July 27, 2017 (NASA, 2017g). NMED approved the revised work plan on January 17, 2018 (NMED, 2018c). In April 2018, NASA initiated investigation fieldwork in accordance with the *Approval Request for Deferral of Investigation of Subsurface at TDRSS Diesel Release* (NMED, 2018b) and the revision was submitted to NMED on April 9, 2018 (NASA, 2018h). Soil vapor, indoor air, and outdoor air sample locations were verified, and soil vapor implants were installed and allowed to equilibrate prior to sample collection. NASA performed investigation fieldwork in accordance with the approved plan in May and November 2018 and submitted soil vapor, indoor air, and outdoor air samples to the off-site laboratory for analysis. NASA received and evaluated analytical data from these sampling events in late 2018 and 2019. NASA submitted the *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report* on March 14, 2019 (NASA, 2019b). NASA received NMED's April 12, 2019 fee assessment for review of the investigation report (NMED, 2019g) and submitted the $7,500 review fee on May 28, 2019 (NASA, 2019f). NMED issued a disapproval of the First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report on July 8, 2020 (NMED, 2020n).

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, 2020t). NASA submitted the *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* to NMED HWB on February 18, 2021 (NASA, 2021d).

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, 2020v). 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, 2020x) 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. The NMED PSTB approved NASA's *Second TDRSS UST Minimum Site Assessment Work Plan* of November 18, 2020 (NASA, 2020x) on February 4, 2021 (NMED, 2021c).

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.

2.16 Newly Identified SWMU

While researching documentation related to the Fuel Treatment Unit (FTU), NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. NASA issued a *Fifteen-Day Notification of a Newly Identified SWMU within the WSTF 500 Area* on October 16 (NASA, 2019aa). NMED acknowledged receipt of the fifteen-day notification on November 13, 2019 (NMED, 2019aa) 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, 2020o). NMED HWB issued its *Fee Assessment 500 Area Newly Identified SWMU* on July 23, 2020 (NMED, 2020p), and NASA paid the fee on August 31, 2020 (NASA, 2020u).

3.0 References

NASA Johnson Space Center White Sands Test Facility. (2011, June 27). *400 Area Closure Investigation Work Plan, 400 Area Historical Information Summary (HIS), 400 Aspirator Discharge Pipes HIS, and 500 Fuel Storage Area HIS*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2012, October 15). *NASA White Sands Test Facility (WSTF) Wastewater Lagoon Areas Closure Investigation Work Plan and Wastewater Lagoon Areas Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2013a, February 21). *NMED Approval with Modifications Wastewater Lagoon Areas Historical Information Summary and Closure Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2013b, June 27). *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMU 21-27) Investigation Work Plan and WSTF Septic Tanks Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2014, December 29). *NASA WSTF 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015a, February 26). *NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Accelerated Corrective Measures Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015b, June 25). *NASA WSTF 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015c, June 29). *NASA WSTF 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015d, June 29). *NASA WSTF 200 Area Phase II Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015e, July 14). *Initiation of Sanitary Sewer Service to the City of Las Cruces and Implementation of the WSTF Wastewater Lagoon Areas Closure Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016a, February 17). *NASA WSTF SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016b, February 25). *200 and 600 Area Vapor Intrusion Assessment Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016c, February 25). *NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016d, June 29). *NASA WSTF First TDRSS Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016e, July 28). *400 Area Investigation Abbreviated Drilling Work Plan and Notification of Field Work Commencement*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016f, November 16). *800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016g, December 22). *Response to Disapproval of Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017a, January 26). *NASA White Sands Test Facility (WSTF) Updated Soil Vapor Risk-Based Concentrations (RBCs) Memorandum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017b, January 26). *Response to Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017c, March 22). *Well Reconfiguration Report for Westbay Wells JER-1, JER-2, ST-6, and ST-7*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017d, March 30). *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017e, March 30). *Work Plan for Westbay Wells Conversion WW-3, PL-5, PL-6, PL-7, PL-8*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017f, April 20). *Response to Approval with Modification 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan and Additional Required Sampling*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017g, July 27). *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017h, August 29). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017i, August 29). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017j, September 5). *Request for Extension of Time for Submittal of 800 Area BGST (SWMU 19) Revised Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017k, September 6). *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report Schedule Update*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017l, October 18). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017m, October 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017n, October 25). *Paint Filter Liquids Test Results for NASA White Sands Test Facility (WSTF) 100 Area and 200 Area Wastewater Lagoons Sludge*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017o, November 8). *Request for Extension of Time for Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017p, November 20). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge TCLP Sampling Results*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017q, November 28). *Response to Second Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017r, December 14). *NASA WSTF 200 Area HWTL (SWMU 10) HWTL Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017s, December 27). *NASA WSTF 400 Area Closure Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017t, December 27). *NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017u, December 28). *NASA White Sands Test Facility (WSTF) SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017v, December 28). *Well Reconfiguration Work Plan for Well BLM-30*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018a, January 30). *Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018b, January 30). *Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018c, February 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018d, February 27). *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21 – 27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018e, March 5). *Fee Assessment for SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary (NMED Invoice Number HWB-NASA-18-001)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018f, March 13). *Fee Assessment – NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018g, March 29). *Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018h, April 9). *Response to Approval with Modifications of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Revised Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018i, June 13). *Response to Disapproval – NASA White Sands Test Facility (WSTF) Well Completion Report 400 Area Monitoring Wells*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018j, June 18). *200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018k, July 3). *NASA WSTF 100 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018l, August 22). *Request for Extension of Time for Performing 600 Area Perched Groundwater Investigation due to Ongoing Wastewater Lagoon Investigation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018m, September 13). *WSTF (White Sands Test Facility) STGT (Second TDRSS [Tracking and Data Relay Satellite System] Ground Terminal) Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018n, September 26). *500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018o, October 4). *NASA WSTF 200 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018p, October 4). *Request for Extension of Time for 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU) Revised Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018q, October 30). *NASA WSTF 600 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018r, November 29). *NASA WSTF 400 Area Closure Investigation Report – NMED Disapproval Response*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018s, December 13). *Fee Assessment - WSTF STGT Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018t, December 19). *Fee Assessment for 500 Area Fuel Storage (SWMU 47) Investigation Work Plan (NMED Invoice Number HWB-NASA-18-016)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018u, December 20). *Request for Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018v, December 21). *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018w, December 21). *Response to Third Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019a, February 25). *Well Plugging Plan of Operations for NASA Wells BLM-37 (LRG-16097 POD 1) and PL-5*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019b, March 14). *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019c, March 28). *Response to NMED Disapproval SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019d, April 25). *Request for Extension of Time for Well BLM-30 Reconfiguration Status Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019e, April 30). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 6*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019f, May 28). *Fee Assessment for First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SMWU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019g, May 29). *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019h, May 29). *NASA WSTF (White Sands Test Facility) 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019i, May 30). *300 Area Supplemental Abbreviated Drilling Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019j, June 21). *NASA WSTF BLM-42 Monitoring Well Design*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019k, June 24). *NASA WSTF BLM-42 Monitoring Well Design*. Email. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019l, June 27). *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019m, July 11). *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019n, July 16). *Fee Assessment for NASA WSTF Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6, April 2019*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019o, July 19). *NASA WSTF PL-12 Monitoring Well Design*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019p, July 23). *Response to Disapproval of NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21-27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019q, July 30). *Response to Approval with Modifications of Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019r, July 30). *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019s, August 7). *Request to Remove Electrical Resistivity Component of the 600 Area Perched Groundwater Geophysical Survey based on Geophysical Subcontractor Input Received during the Procurement Process*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019t, August 8). *Response to NMED Approval with Modifications SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019u, August 13). *Fee Assessment for 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report (NMED Invoice Number HWB-NASA-19-012)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019v, August 13). *Fee Assessment for 300 Area Supplemental Abbreviated Drilling Work Plan (NMED Invoice Number HWB-NASA-19-010)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019w, August 29). *NASA WSTF Drilling Work Plan for Abandonment of Well BLM-30 and Drilling of New Groundwater Monitoring Well BLM-43*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019x, September 10). *Fee Assessment for STGT Wastewater Lagoons Liner Management Plan Addendum (NMED Invoice Number HWB-NASA-19-017)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019y, September 17). *Request for Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019z, October 7). *Fee Assessment for 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019aa, October 16). *Fifteen-Day Notification of a Newly Identified SWMU within the WSTF 500 Area*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019bb, October 28). *Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019cc, October 31). *Fee Assessment for BLM-30 Abandonment and BLM-43 Drilling Work Plan (NMED Invoice Number HWB-NASA-19-018)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019dd, November 21). *Response to Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ee, November 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ff, November 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019gg, December 5). *Response to Approval with Modifications for NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019hh, December 11). *Request for Second Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ii, December 17). *Request for Second Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Email. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019jj, December 18). *Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019kk, December 19). *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*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ll, December 30). *NASA WSTF 400 Area Closure Investigation Report – NMED Second Disapproval Response*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020a, January 29). *Second Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020b, January 30). *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020c, February 6). *Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020d, February 12). *Fee Assessment for NASA WSTF 600 Area Closure Geophysical Survey Status Report, November 2019 (NMED Invoice Number HWB-NASA-19-023)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020e, February 25). *Fee Assessment for NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report, November 2019 (NMED Invoice Number HWB-NASA-19-021)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020f, February 25). *Fee Assessment for NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report (NMED Invoice Number HWB-NASA-19-022)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020g, February 27). *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020h, March 24). *Request for Extension of Time for Submittal of the 600 Area Perched Groundwater Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020i, April 20). *Fee Assessment for Groundwater Data Representativeness Phase I: FLUTe Well Evaluation Abbreviated Investigation Report Invoice Number (HWB-NASA-20-003)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020j, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020k, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020l, May 4). *Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020m, May 4). *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020n, May 26). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 7*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020o, June 22). *500 Area Newly Identified SWMU Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020p, August 3). *Fee Assessment for BLM-42 Well Completion Report (NMED Invoice Number HWB-NASA-20-004)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020q, August 3). *Fee Assessment for PL-12 Well Completion Report (NMED Invoice Number HWB-NASA-20-005)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020r, August 17). *Fee Assessment for Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year Seven (NMED Invoice Number HWB-NASA-20-006)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020s, August 17). *NASA White Sands Test Facility (WSTF) 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020t, August 17). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020u, August 31). *Fee Assessment for NASA White Sands Test Facility (WSTF) 500 Area Newly Identified SWMU (NMED Invoice Number HWB-NASA-20-009)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020v, September 21). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Update*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020w, October 13). *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report*. Las Cruces, NM.

NASA White Sands Complex. (2020x, November 18). *Second TDRSS UST Minimum Site Assessment Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020y, November 30). *Fee Assessment for NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020z, November 30). *Request for Fourth Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021a, February 3). *Response to Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021b, February 3). *Second Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021c, February 18). *Fee Assessment for STGT Wastewater Lagoons Closure (AOC 51) Investigation Report (NMED Invoice Number HWB-NASA-20-016)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021d, February 18). *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021e, March 15). *Application for Permit to Drill Monitoring Well (BLM-43) with No Consumptive Use of Water at NASA-JSC White Sands Test Facility.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021f, March 15). *Well Plugging Plan of Operations for NASA Well BLM-30.* Las Cruces, NM.

NMED Hazardous Waste Bureau. (2013a, January 3). *Approval with Modifications Wastewater Lagoon Areas Historical Information Summary and Closure Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013b, March 1). *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013c, November 8). *Approval with Modifications WSTF Septic Tanks (SWMU 21-27) Historical Information Summary and Investigation Work Plan*. Santa Fe, NM.

NMED Liquid Waste Program. (2013d, December 5). *WSTF Septic Tanks Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau (2015a, May 29). *Approval with Modification NASA WSTF Small Arms Firing Ranges (SWMUS 29-31) Accelerated Corrective Action Measures Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015b, June 17). *Approval Request for Additional Extension of Time for Implementation of Lagoon Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015c, August 11). *Approval with Modifications 800 Area BGST (SWMU 19) Abbreviated Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015d, November 30). *Approval with Modification 200 Area Phase II Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015e, December 2). *Approval Request for Extension of Time for Conversion of Westbay Wells BLM-28, WW-4, and WW-5*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016a, March 29). *Approval NASA WSTF Periodic Monitoring Report Fourth Quarter 2015*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016b, May 27). *Approval 200 Area and 600 Area Vapor Intrusion Assessment Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016c, July 29). *Disapproval 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016d, October 14). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017a, January 25). *Disapproval First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017b, March 31). *Approval Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017c, March 31). *Approval with Modification 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017d, April 12). *Approval Updated Soil Vapor Risk Based Concentrations (RBCs) Memorandum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017e, June 27). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017f, July 7). *Approval with Modification Well Reconfiguration Summary Reports JER-1, JER-2, ST-6, and ST-7*. Santa Fe, NM.

NMED Ground Water Quality Bureau. (2017g, July 14). *Discharge Permit Renewal and Modification, DP-1255, NASA White Sands Testing Facility*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017h, September 7). *Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017i, September 29). *Approval Request for Extension of Time for Submittal of 800 Area Below Grade Storage Tank Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017j, December 1). *Approval Request for Extension of Time for Response to Disapproval Small Arms Firing Range (SWMUs 29-31)*. Santa Fe, NM.

NMED Solid Waste Bureau. (2017k, December 19). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 100 Area*. Santa Fe, NM.

NMED Solid Waste Bureau. (2017l, December 21). *Approval of Sludge Disposal Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 200 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018a, January 12). *Fee Assessment 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018b, January 17). *Approval Request for Deferral of Investigation of Subsurface at TDRSS Diesel Release*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018c, January 17). *Approval with Modifications First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Revised Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018d, January 23). *Fee Assessment 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018e, January 23). *Fee Assessment 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018f, January 31). *100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018g, January 31). *200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018h, February 7). *Fee Assessment SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Solid Waste Bureau. (2018i, March 1). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 600 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018j, March 27). *Disapproval 400 Area Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018k, June 19). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018l, July 26). *Approval 400 Area Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018m, August 14). *Disapproval 400 Area Closure Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018n, August 16). *100 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018o, September 10). *Approval Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018p, September 10). *Approval Work Plan for Abandonment of NASA WSTF Well PL-5 and Replacement with Monitoring Well PL-12*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018q, September 13). *Approval Request for Extension 600 Area Perched Groundwater Investigation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018r, September 13). *Approval Well Reconfiguration Work Plan for Well BLM-30*. Santa Fe, NM.

NMED Solid Waste Bureau. (2018s, September 28). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility, Second Tracking and Data Relay Satellite System Ground Terminal Wastewater Lagoons*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018t, October 15). *Fee Assessment 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018u, October 19). *Approval Request for Extension of Time for 600 Area Bureau of Land Management Off-Site Soil Pile Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018v, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018w, November 29). *Disapproval SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018x, November 30). *Fee Assessment 200 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018y, November 30). *Fee Assessment 600 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018z, December 7). *Disapproval Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018aa, December 12). F*ee Assessment WSTF STGT Wastewater Lagoon Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019a, January 10). *Approval Request for Extension of Time for Well Reconfiguration Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019b, February 5). *WSTF STGT Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019c, February 6). *Disapproval Septic Tanks (SWMUs 21-27) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019d, February 21). *Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019e, February 25). *600 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019f, February 28). *200 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019g, April 12). *Fee Assessment First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019h, May 2). *Approval Request for Extension of Time Well BLM-30 Reconfiguration Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019i, May 13). *Approval with Modifications Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water Flute Well Evaluation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019j, May 31). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019k, June 5). *Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019l, June 6). *Approval with Modifications SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019m, June 24). *Approval NASA WSTF BLM-42 Monitoring Well Design*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019n, July 3). *Fee Assessment 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019o, July 3). *Fee Assessment 300 Area Supplemental Abbreviated Drilling Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019p, July 3). *Fee Assessment 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019q, August 8). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019r, August 19). *Fee Assessment STGT Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019s, August 23). *Work Scope Modification Request Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019t, September 3). *Approval Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019u, September 16). *Disapproval 400 Area Closure Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019v, September 20). *Fee Assessment Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43*. Santa Fe, NM.

NMED Solid Waste Bureau. (2019w, September 25). *NASA White Sands Test Facility 700 Area Landfill, Phase I Investigation Request*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019x, October 8). *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019y, October 8). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019z, November 13). *Approval Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Response to Second Disapproval Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019aa, November 13). *Fifteen-Day Notification of a Newly Identified SWMU Within WSTF 500 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020a, January 15). *Fee Assessment 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020b, January 15). *Fee Assessment 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020c, January 15). *Fee Assessment NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020d, January 16). *Approval Request for Extension of Time for Well Reconfiguration Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020e, January 16). *Approval Request for Second of Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020f, February 17). *Approval Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020g, March 20). *Fee Assessment Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020h, March 21). *Approval Request for Second Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Response to Second Disapproval Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020i, May 14). *100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020j, May 28). *Fee Assessment Well Completion Report for BLM-42*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020k, May 28). *Fee Assessment Well Completion Report for PL-12*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020l, July 1). *Approval Request for Extension of Time for Submittal of 600 Area Perched Groundwater Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020m, July 1). *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020n, July 8). *Disapproval First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020o, July 9). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Year Seven*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020p, July 23). *Fee Assessment 500 Area Newly Identified SWMU*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020q, September 22). *Fee Assessment 100 Area Waste Water Lagoons Closure (SWMU2) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020r, September 22). *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020s, November 5). *Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement With Monitoring Well BLM-43*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020t, November 12). *Replacement Fee Assessment 100 Area Waste Water Lagoons Closure (SWMU 2) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020u, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020v, November 19). *Fee Assessment STGT Wastewater Lagoons Closure (AOC 51) Investigation Report. Santa Fe*, NM.

NMED Hazardous Waste Bureau. (2020w, November 19). *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020x, December 22). *Approval with Modifications 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021a, January 25). *Approval Request for Fourth Extension of Time for Well Reconfiguration Work Plan.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021b, January 29). *Disapproval Revised WSTF Septic Tanks (SWMUs 21-27) Investigation Report.* Santa Fe, NM.

NMED Petroleum Storage Tank Bureau. (2021c, February 4). *Technical Approval of Minimum Site Assessment Workplan for White Sand Complex.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021d, March 15). *Approval Request for Extension of Time for Submittal of The SWMU 49 (700 Area Landfill) Phase I Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021e, March 15). *Disapproval 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021f, March 19). *Disapproval 300 Area Supplemental Abbreviated Drilling Work Plan.* Santa Fe, NM.

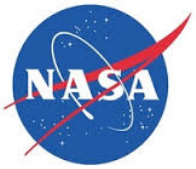
NMED Hazardous Waste Bureau. (2021g, March 19). *Disapproval 400 Area Closure Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021h, March 19). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan: Phase I.* Santa Fe, NM.

NM Office of the State Engineer. (2019a, March 12). *Plugging Plan Approval for LRG-16097 POD1*. Las Cruces, NM.

NM Office of the State Engineer. (2019b, March 13). *Plugging Plan Approval for LRG-17595 POD1 (PL-5)*. Las Cruces, NM.

National Aeronautics and Space Administration



NASA WSTF Periodic Monitoring Report for Second Quarter 2021

NM8800019434

NASA WSTF Periodic Monitoring Report for Second Quarter 2021

Reporting Period: February 1, 2021 through April 30, 2021

Report Deadline: July 30, 2021

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.

_____ _____

Timothy J. Davis
Chief, NASA Environmental Office

Date

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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, 2021 and April 30, 2021. The data were processed through the WSTF data management system during the second calendar quarter of 2021.

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
HIS	Historical Information Summary
HWTL	Hazardous Waste Transmission Lines
IDW	Investigation-Derived Waste
in.	Inch(es)
IWP	Investigation Work Plan
JDMB	Jornada del Muerto Basin
JER	Jornada Experimental Range
kg	Kilogram
L	Liter
MDL	Method detection limit
mg/L	Milligrams per liter
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
NMED PSTB	New Mexico Environment Department Petroleum Storage Tank Bureau
PCE	Tetrachloroethene
Permit	NMED Hazardous Waste Permit
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 TDRSS Ground Terminal
SWMU	Solid Waste Management Unit

T-C	Time-concentration
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TDRSS	Tracking and Data Relay Satellite System
TP	Toxic Pollutants
UV	Ultraviolet
VOC	Volatile Organic Compound
WSTF	NASA Johnson Space Center White Sands Test Facility
yd^3	Cubic Yard

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 (JSC) 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 216 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, 2019b), the Groundwater Monitoring Plan (GMP; NASA, 2021b), and the Remediation System Monitoring Plan (RSMP; NASA, 2021l).

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 2021. Between February 1, 2021 and April 30, 2021, groundwater samples were collected at 115 groundwater monitoring wells or zones (115 sample events), seven PFTS sampling locations (11 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 88 of 89 days during the reporting period at an average flow rate of 554 gallons per minute (gpm) while running. Approximately 223 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 88 of 89 days during the reporting period, treating approximately 3.6 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 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, 2021b) identifies the specific samples that are to be collected at each groundwater monitoring well. The RSMP (NASA, 2021l) 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 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 the Groundwater monitoring wells (Appendix D.1), PFTS (Appendix D.2), and 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, 2021b).

3.0 Cleanup Levels

Cleanup levels for all hazardous constituents detected in WSTF groundwater are summarized in the GMP update (NASA, 2021b) for 2020, submitted to NMED on May 26, 2020. That document outlines the process for developing cleanup levels as specified in Attachment 15 of the Permit (NMED, 2019b).

3.1 Discharge Standards for PFTS and MPITS Effluent

The Ground Water Discharge Permit Renewal and Modification, DP-1255 (NMED, 2017) 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, 2019a). Table 3.1 includes the updated DP-1255 discharge standards for the four constituents. Please note that previous versions of the quarterly PMRs

included constituents that are not listed in the current version of DP-1255 (NMED, 2017). This PMR only lists the four constituents required by the current DP-1255 (NDMA, TCE, PCE, and chloroform).

3.2 New Detections

The GMP requires that NASA report new detections of hazardous constituents in groundwater (NASA, 2021b). 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). No detection monitoring was performed 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, 2021b). Table 3.4 lists the resampling date and the resolution of some of the unconfirmed detections reported in previous Periodic Monitoring Reports (PMR). 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 2021. 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. Depth to water 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 depth to water 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 26 to May 3, 2021 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.

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

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 2021 and detections are included in Appendix A.2.

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, 2019b). 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 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. As requested by NMED (NMED, 2013a), 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 2021, 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.

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 COC.

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®[2] 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 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 with the exception of one NDMA detection in the effluent sample from April. Effluent sample results will be closely monitored to ensure the UV Reactor continues to function properly.

5.1.3 Extraction and Injection Well Performance

Extraction and injection well performance for the reporting period is summarized below using applicable volumetric flow rates, extraction well drawdown, and water levels and injection well specific capacities to ensure that the wells are properly functioning. 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. Well PFE-2 was brought offline on March 21, 2019 due to a motor failure. PFE-2 was returned to service in April 2021. Well PFI-1 started producing excessive gravel during backflushing in March 2019. The well was taken offline in December 2019. Subcontractor driller services required for diagnosis and repair of PFI-1 are scheduled. Well PFE-1 has been inoperable since March 2020 due to a motor failure. Subcontractor driller services for submersible motor replacement at PFE-1 are scheduled.

5.1.3.1 Extraction and Injection Well Flow Rates and Specific Capacities

Specific capacities for extraction and injection wells were measured and monitored throughout this period. While in operation during the reporting period, specific capacities for wells PFI-3 and PFI-4 were operating within the design flow rate. Well PFI-2 was operating slightly below the design flow rate. Well PFI-1was shut down in December 2019 in order to investigate a suspected casing breach. Specific capacities for the PFE wells were within or slightly below expected ranges; however, flow rates while

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

operating were near and sometimes greater than design flow rates. Well PFE-1 was offline during the period due to motor failure. A replacement motor was procured and is pending installation. Without PFE-1, and PFI-1 online the overall production of the treatment and injection system has been 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 four PFI wells are monitored on a continual basis using dedicated pressure transducers that record the levels at 3-minute intervals. Specific well capacities are tracked daily. 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 more stable injection operation. This has lowered the initial design rates at the four 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 two 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 2021. 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, 2020 and April 30, 2021. During this 12-month period, the PFTS removed approximately 17 kilograms (kg) of TCE, 16 kg of trichlorofluoromethane (Freon®[3] 11), 537 grams (g) of PCE, and 116 g of NDMA.

The contaminant mass removal was calculated as follows:

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

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

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

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.

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 with the exception of one Freon 11 detection in the effluent sample from March. 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 will be 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 percent 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. NDMA was detected in the effluent samples from April, though the concentrations were below the system design parameters. Effluent sample results will be closely monitored to ensure the UV Reactor continues to function properly.

5.2.4 MPITS Extraction Well and Infiltration Basin Performance

MPE-1, MPE-8, MPE-9, MPE-10, and MPE-11 operated at various flow rates during the reporting period. Operational records indicate that the MPITS performed favorably during the report period and was online for 95% of February, 98% of March, and 99.9% of April 2021. Notable events during the report period included outages of 33.8 hrs. beginning on February 2, 2021 and 14.2 hrs. starting on March 26, 2021.

Both outages were the result of anomalous communication losses within the industrial control system used to monitor and automate groundwater extraction and treatment operations. Brief shutdowns occurred on March 11 and April 20, 2021 to replace a failed ultraviolet lamp and to adjust the air stripper damper, respectively. 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 report period. Extraction well MPE-11 went out of operation on April 27, 2021 due to a loose power line on the transformer providing electrical serve to the well. The loose connection was repaired on April 28, 2021 and MPE-11 was placed back into operation.

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. Routine work to remove weeds within the basin was completed during the report 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, 2020 and April 30, 2021. Approximately 3.02 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 generated during other groundwater investigations. The contaminant mass removal was calculated as follows:

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

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, 2020 to April 30, 2021. The table summarizes the cost of the labor and materials for operation and maintenance of the both systems, and includes the electrical costs associated with system operations.

6.0 Discussion and Conclusions

Routine groundwater monitoring is conducted at WSTF to support a variety of projects. The primary objectives of routine groundwater monitoring at WSTF are to delineate the extensive contaminant plume

resulting from historical contaminant releases at the facility, support the development and implementation of corrective actions, and monitor the impact of these corrective actions during implementation and operation. Groundwater sampling at WSTF is currently focused on the Plume Front and Mid-plume areas, both of which are critical to NASA's overall remediation efforts.

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). ~~For per- and polyfluoroalkyl substances, all detections are noted as there are no regulatory cleanup levels or maximum contaminant levels with which to compare.~~ 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

This section presents new occurrences of wells that could not be sampled during the reporting period (February 1, 2021 – April 30, 2021) because of mechanical or well performance issues only; it does not address wells not sampled due to resource limitations.

- In April, NASA was unable to collect groundwater samples from monitoring well 400-C-143 because the water level in the well was insufficient for sampling.

These new occurrences plus the current 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.

- NMED reviewed the *Well Completion Report for BLM-42* (5/4/2020) and issued an approval with modifications on May 6, 2021 (NMED, 2021j). NASA submitted a response to the approval with modifications of the BLM-42 well completion report on May 18, 2021 (NASA, 2021g).
- NMED reviewed the *Well Completion Report for Well PL-12* (5/4/2020) and issued an approval on May 6, 2021 (NMED, 2021h).

6.1.3 Westbay Well Reconfiguration

There was no physical Westbay well reconfiguration activity this quarter. The current status of reconfiguration is given below.

- NASA has reconfigured two Westbay wells (JP-3 and WW-2) to dual-zone dedicated low-flow bladder pumps.
- NASA has replaced two Westbay wells (BLM-37 and PL-5) with wells BLM-42 and PL-12, respectively. Each has dual-zone dedicated low-flow bladder pumps.
- Seven Westbay wells (BLM-32, JER-1, JER-2, ST-6, ST-7, WW-4, and WW-5) have been converted to multiport Water FLUTe sampling systems.
- NASA will plug and abandon well BLM-28. 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, 2021f). NMED issued a fee assessment for review of the BLM-28 well abandonment work plan on June 15, 2021 (NMED, 2021m). NASA will subsequently 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.
- NASA will plug, abandon, and replace well BLM-30. NMOSE approvals are in place for both plugging and drilling of replacement well BLM-43. The well completion report for BLM-43 is due November 30, 2021.
- Well BW-4 was not among the Westbay wells that NMED directed to be reconfigured in NMED's March 29, 2016 letter, *Approval NASA WSTF Periodic Monitoring Report Fourth Quarter 2015*. The Westbay sampling system was drilled out in February 2018. Upon further evaluation of the BW-4 borehole, NASA determined that the well can be reconfigured for continued use and submitted a well reconfiguration work plan for well BW-4 on June 29, 2021 (NASA, 2021m).
- NMED has also required reconfiguration of Westbay wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3. 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, 2021e). NMED issued a fee assessment for review of the work plan on June 15, 2021 (NMED, 2021n).

Historical information and full submittal history for well reconfiguration projects are provided in Appendix F.

6.1.4 Groundwater Monitoring Data Representativeness

Activities in the second quarter 2021 included the following:

- NMED reviewed the *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* (2/27/2020) and on June 3, 2021issued an Approval with Modifications (NMED, 2021k). This approval required a change to the investigation report indicating a need for an expanded investigation, and a subsequent work plan for the investigation.

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, 2021b). 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, 2021l) and DP-1255 (NMED, 2017). 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, but exceeded the ~~and~~ Permit cleanup level for NDMA in April 2021~~s~~. No other Permit cleanup levels were exceeded.

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, 2021l) and DP-1255 (NMED, 2017). Chemical analytical data from these sampling events were presented in Section 5.2.5 and Appendix A.6. Appendix D.3 includes any MPITS influent data that exceeded cleanup levels during the current analytical reporting period. The MPITS effluent met all DP-1255 discharge limits and Permit cleanup levels.

6.3 Contaminant Plume Evaluation

The plume evaluation for the second quarter of 2021 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 Plume Front Area this quarter. These included NDMA detections at wells at BLM-32 (2.7 ng/L), JER-1 (1.8 ng/L), and JER-2 (4 ng/L). Four exceedances of NDMA cleanup levels were observed in sentinel wells this quarter. These comprised NDMA detections at PL-7 (4.9 ng/L), PL-10 (5.7 ng/L), PL-11 (2.4 ng/L), and WW-5 (6.5 ng/L). VOCs were not detected at or above the cleanup level at these wells. The following quality exceptions exist:

- PL-7 was qualified with an “RB” data quality exception
- WW-5 was qualified with a “*” data quality exception.

“RB” indicates NDMA was detected in the reference blank. “*” indicates a user defined qualifier and to see the quality assurance narrative.

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 schedule as presented in this report. A detailed evaluation of the concentration trends shown in T-C plots that may develop 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 the GMP (NASA, 2021b; Table 5). T-C plots are generated using analytical data from each monitoring and remediation well. The analytical data for each well is reviewed by technical personnel in order to evaluate the latest trends over time. The concentration trends for four of the primary COC (Freon 11, TCE, PCE and NDMA) in groundwater are reviewed 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, results are presented for both EPA Method 607 and low-level laboratory analysis. T-C trend evaluation places greater emphasis on the most recent analytical results reported over the last several years. As a result, the current T-C interpretation may 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 determination of a trend for an anomalous COC concentration within a specific well requires the evaluation of analytical data collected over several sampling events (typically three to four) in

conjunction with other potentially influencing factors (including hydrogeology, aquifer recharge conditions, monitoring well development activities, and 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 quickly revert back to former conditions.

A summary figure depicting the most recent interpreted T-C trend for each individual well is included in Appendix E. 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.

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 wells are all classified as ND.

100/600 Area Well Group: Monitoring wells in this group are located within the 100 Area and adjacent easternmost part 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, the wells typically show decreasing groundwater concentration trend for Freon 11, TCE, and PCE. This trend is applicable to both wells within the primary aquifer, and well 600-G-138 (T-C plot provided) that is screened across a localized perched groundwater horizon on the top of bedrock at the alluvial-bedrock interface. 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 contamination for the WSTF TCE and Freon 11 groundwater plume, with maximum concentrations identified in the late 1980s through mid-1990s. Over the last 30 years, 200 Area T-C plots have typically displayed a decreasing trend in contaminant concentrations for VOCs. As an example, well 200-D-240 (T-C plot provided) has decreased from 110 µg/L TCE in 1990 to 16 µg/L TCE in 2020. The declines are interpreted to 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. Wells that display more irregular concentrations with no distinct trend are typically associated with screened intervals with reduced hydraulic conductivity and groundwater flow.

300/400 Area Well Group: The T-C plots for monitoring wells show groundwater VOC concentration trends that have been either fluctuating (most notably wells installed recently in January 2017 within poorly fractured andesite bedrock as part of the 400 Area Closure investigation) or have declined over the long term following initial well installation. Declining concentrations are inferred to correlate to wells characterized by higher hydraulic conductivity and/or groundwater flow. 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 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 300 and 400 Area declines 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. A disparity reported between relatively higher and lower concentrations within adjacent bedrock monitoring wells (particularly for NDMA) is interpreted to be a result of both the limited number and connectivity of andesite bedrock fractures, and the position of the screened intervals relative to the alluvial-bedrock interface. Higher hydraulic conductivity, groundwater flow, and contaminant declines are characteristic of screened intervals within the alluvium.

Northern Boundary Well Group: The monitoring wells in this group are generally characterized by low-level contaminant concentrations that do not display any sustained T-C trends or are ND. Fluctuating low-level NDMA is reported this quarter from the latest samples collected in four wells BLM-32 (2.7 ng/L), BLM-41-670 (1.5 ng/L) JER-1 (1.8 ng/L), and JER-2 (4.0 ng/L). All four 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: The monitoring wells in this group are predominantly 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 report a low fluctuating concentration of TCE (2.0 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, 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 plumes sources (Freon 11 and TCE originate from the 200 Area [predominant in upgradient well BLM-14-327], and NDMA originates from the 300 and 400 Areas [predominant in well upgradient BLM-15-305]). Contaminant concentrations in BLM-21-400 since installation in 1991 show a decreasing trend for Freon 11 (320 to 25 µg/L), TCE (220 to 9.2 µg/L), and NDMA (5.6 to 1.09 µg/L). This well is being monitored with respect to potential pumping-related migration related to 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 a "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 from the MPCA by continued operation of the extraction wells. Well BLM-5-527 is currently the only monitoring well on-site interpreted as "natural migration – increasing T-C" trend. Increases in this well are inferred to reflect the migration of contaminants into low conductivity bedrock of the extreme northwest section of the northwest arm not yet been impacted by the inception of MPITS pumping. Pumping activity within well BLM-5-527 between 4/6/20 and 5/5/20 as part of the targeted monitoring remediation pumping project at WSTF (13,350 gallons extracted) may also have impacted contaminant concentrations, and this well is being monitored carefully.

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. VOC 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 since early 2012. The latest groundwater sampling indicated that Freon 11 (detection limit 0.24 µg/L) and TCE (detection limit 0.20 µg/L) are both ND, and that low-level NDMA was also ND at a concentration of 0.38 ng/L. Well ST-7 is located west of PFTS extraction well, PFE-2, and south of extraction well PFE-7. NASA believes low level TCE (0.82 µg/L) has migrated northward to ST-7, due to continued pumping of well PFE-7. The fluctuating concentration 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, a fluctuating low-level NDMA detection was identified in one sentinel well (PL-7 [4.9 ng/L]).

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 have been identified in three of the sentinel wells (PL-10 [5.7 ng/L], PL-11 [2.4 ng/L], and WW-5 [6.5 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 and MPE-10 have displayed a generally increasing trend since 2013, under the influence of pumping-related plume migration. Wells MPE-1 (decreasing), MPE-9 (fluctuating), and MPE-11 (fluctuating) are also under the influence of 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 generally 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 no overall trend and a relatively elevated concentration of NDMA.

6.4 Summary of Source Area Investigations

This section summarizes the status of source area investigation planning, fieldwork, or reporting during the second calendar quarter of 2021, April 1, 2021 – June 30, 2021. Historical information, investigation status, and full submittal history for each potential source area are provided in Appendix F.

6.4.1 200 Area

NASA continues work associated with the investigation of two HWMUs and six SWMUs in the 200 Area. NASA recently 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 2021, activities related to this SWMU included:

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

6.4.2 300 Area

NASA performed routine groundwater sampling at the 300 Area and recommended a corrective measures study in conjunction with the 400 Area. There was activity at the 300 Area based on NMED's prior disapproval of the 300 Area *Supplemental Abbreviated Drilling Work Plan* (5/30/19) and resulting direction. See next Section and Appendix F, Section 2.2.

6.4.3 400 Area

During the second quarter of 2021, NASA continued response and revision to three documents based on NMED disapprovals received in the first quarter of 2021:

- The *300 Area Supplemental Abbreviated Drilling Work Plan* (5/30/19).
- The *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (5/28/19).
- The *400 Area Closure Investigation Report* (12/30/19; revised).

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 investigating the presence of additional perched groundwater beneath and adjacent to the 600 Area Closure. During the second quarter of 2021, activities related to this SWMU included:

- NASA continued extraction of perched groundwater from monitoring well 600-G-138 in accordance with NMED's March 1, 2013, *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Approximately 638 gallons of perched groundwater were removed from 600-G-138 from April 2021 through June 2021 and transported to the MPITS for treatment.
- NMED approved the Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 7 (5/26/20) on May 6, 2021 (NMED, 2021g).
- NASA submitted the Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 8 on April 29, 2021 (NASA, 2021d).
- NMED issued a fee assessment for review of the *600 Area Perched Groundwater Extraction Pilot Test Project Year 8* on June 15, 2021 (NMED, 2021l).

On May 18, NASA submitted a letter to NMED in partial response to NMED's December 22, 2020 Approval with Modifications of the *Synopsis of the Findings of the 600 Area Closure Geophysical Seismic Refraction Tomography and Reflection Surveys with Revised Soil Boring Locations* (12/19/2019). This letter (NASA, 2021h) addressed NMED's Comment 2 (Further Investigation) and proposed a different approach for collection of geophysical data up- and down-gradient of the 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 boreholes to the predicted depths from the geophysical survey before expanding the geophysical survey.

- Upon return to on-site work, NASA will drill boreholes at the 600 Area closure per NMED's *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020e) and submit the Investigation Report.

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 System (TDRSS) Ground Terminal (STGT). Activities during the second quarter of 2021 included:

- NMED is reviewing the WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report (NASA, 2020f).
- NMED is reviewing the NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report (NASA, 2019c).
- NMED is reviewing the NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report (NASA, 2019d).
- NMED is reviewing the *NASA White Sands Test Facility WSTF STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* (NASA, 2020j).

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. Activities during the second quarter of 2021 included the following:

- NASA is revising the HWTL investigation report (7/30/2018) in response to NMED's November 16, 2020 disapproval. This includes planning to resample along the HWTL as required by the disapproval.
- The revised IR is due August 30, 2021. On May 19, 2021, NASA requested that the IR due date be extended to November 30, 2021 (NASA, 2021j).

6.4.7 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 continues to work with NMED to address NMED comments on multiple iterations of the investigation report.

- NMED issued an Approval with Modifications of the Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report (12/1819) on May 6, 2021 (NMED, 2021i).

6.4.8 SWMUs 18–20 (700 Area High Energy Blast Facility, 800 Area Below Grade Storage Tank, and 800 Area Oxidizer Burner)

NASA performed investigation fieldwork at the 800 Area Below Grade Storage Tank (SWMU 19) in December 2015 and October 2017 and provided the results to NMED in an investigation report, which NMED disapproved twice.

- NASA submitted a November 9, 2020 Response to Approval with Modifications of Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report (NASA, 2020l). This response followed NMED's Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report on August 27, 2020 (NMED, 2020b).

6.4.9 SWMUs 21–27 (Septic Tanks)

Activities during the second quarter of 2021 included the following:

- NASA addressed six comments from NMED's January 29, 2021 disapproval of NASA's *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* (7/23/19; the revised IR) and submitted a revised IR on May 18, 2021 (NASA, 2021i).

6.4.10 SWMUs 29–31 (Small Arms Firing Ranges)

NASA performed initial corrective measures fieldwork at the three closed small arms firing ranges, summarized the results for NMED, and recommended additional fieldwork based on NMED feedback. NASA 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, 2020g). During the fourth quarter of 2020, activities related to these SWMUs included:

- NASA awaits a fee assessment for NMED's review of the disapproval response.

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

The *300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)* (NASA, 2020i) were submitted to the NMED HWB on August 17, 2020. NASA received and paid the NMED HWB Fee Assessment (NMED, 2020c; NASA, 2020k). During the fourth quarter of 2020, activities related to this SWMU included the following:

- NMED is reviewing the 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) IWP and HIS.

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 2021, activities related to this SWMU included the following:

- NASA addressed five comments from NMED's March 19, 2021 disapproval of NASA's *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* (11/21/19; the revised IWP) and submitted a response to this second disapproval and revised IWP on June 29, 2021 (NASA, 2021n).

6.4.13 SWMU 49 (700 Area Landfill)

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 2021 include the following:

- Fieldwork that had been in suspense due to the pandemic resumed. NASA completed ground penetrating radar and passive seismic surveys as described in the NMED-approved landfill investigation work plan.

- The Phase I field investigation report is due April 29, 2022.

6.4.14 SWMU 50 (First TDRSS 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 2021 include the following:

- NASA submitted a November 9, 2020, *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report* (NASA, 2020m). This response followed NMED's disapproval of the First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report on July 8, 2020 (NMED, 2020a).

6.4.15 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 WSTF personnel informed the NMED HWB of the release on August 17, 2020 in the *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification* (NASA, 2020h). In the first quarter of 2021, NASA had submitted the Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report to NMED HWB on February 18, 2021 (NASA, 2021da). NMED HWB issued a fee assessment for review of the report on April 8, 2021 (NMED, 2021f), and NASA remitted the fee on April 21, 2021 (NASA, 2021MMc). SWMU 52 related activities performed during the second quarter of 2021 included the following:

- Indoor and ambient outdoor air samples were taken May 3 and 4 to support worker risk assessment.
- NASA submitted the STGT UST Minimum Site Assessment Report to NMED Petroleum Storage Tank Bureau (PTSB) on June 25, 2021 (NASA, 2021k). The HWB was copied. The work conducted for the investigation and report had been under a PTSB-approved Minimum Site Investigation Work Plan (NMED 2021c).

6.4.16 Newly Identified SWMU

While researching documentation related to the Fuel Treatment Unit (FTU), NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. Activities during the second quarter of 2021 include the following:

- NMED is reviewing the Release Assessment Report issued on June 22, 2020 (NASA, 2020e).

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 Groundwater Monitoring

NASA plans to continue routine groundwater monitoring in accordance with the submitted and as yet not approved GMP for 2021 (NASA, 2021b).

7.1.2 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, 2021 through April 30, 2021) 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.

- Sampling failure issues were unresolved for monitoring well 400-C-143.
- Well 400-C-143 had insufficient water for sampling. The water level in this well will be monitored and the well samples if the water level recovers enough to obtain a representative sample.
- There were no prior period sampling failure issues resolved this quarter.

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.

7.1.4 Monitoring Well Installation

Planned well installations include well BLM-43 to replace well BLM-30 after it is plugged and abandoned, and a well to replace BLM-28.

7.2 Groundwater Remediation System Monitoring

The RSMP (NASA, 2021l) and DP-1255 (NMED, 2017) 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, 2021b).

8.0 References

NASA Johnson Space Center White Sands Test Facility. (2018, December 21). *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019a, March 14). *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019b, August 8). *Response to NMED Approval with Modifications SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019c, November 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019d, November 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020a, January 30). *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020b, February 27). *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020c, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020d, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020e, June 22). *500 Area Newly Identified SWMU Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020f, August 3). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020g, August 3). *Response to Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report and Risk Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020h, August 17). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020i, August 17). *NASA White Sands Test Facility (WSTF) 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020j, October 13). *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020k, October 28). *Fee Assessment for 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) IWP and HIS (NMED Invoice Number HWB-NASA-20-013)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020l, November 9). *Response to Approval with Modifications of Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020m, November 9). *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report and Risk Screen Evaluation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021a, February 18). *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021b, April 19). *NASA White Sands Test Facility (WSTF) Groundwater Monitoring Plan (GMP) Update for 2021*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021c, April 21). *Fee Assessment for STGT (SWMU 52) Release Assessment Report (NMED Invoice Number HWB-NASA-21-002)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021d, April 29). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 8*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021e, April 29). *NASA WSTF Westbay Well Reconfiguration Work Plan for Wells PL-7, PL-8, PL-10, ST-5, and WW-3*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021f, April 29). *Well Abandonment Work Plan for Well BLM-28*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021g, May 18). *Response to Approval with Modifications for NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021h, May 18). *Response to NMED Approval with Modifications for the 600 Area Closure Geophysical Survey Status Report – Comment 2 (Further Investigation)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021i, May 18). *Response to Second Disapproval of NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21–27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021j, May 19). *Request for Extension of Time for Submittal of Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021k, June 25). *Second TDRS UST Minimum Site Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021l, June 29). *NASA WSTF Remediation System Monitoring Plan Annual Update for 2021*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021m, June 29). *NASA WSTF Well Reconfiguration Work Plan for Well BW-4*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021n, June 29). *Response to Second Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NMED Hazardous Waste Bureau. (2013a, January 9). *NASA WSTF PMRs*. Email. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013b, March 1). *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Santa Fe, NM.

NMED Ground Water Quality Bureau. (2017, July 14). *Discharge Permit Renewal and Modification, DP-1255, NASA White Sands Testing Facility*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019a, June 19 [Revision 2]). *Risk Assessment Guidance for Investigations and Remediation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019b, December 11). *Fee Assessment Administrative Completeness and Fee Assessment Transmittal of Class I Permit Modification Without Prior Approval*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020a, July 8). *Disapproval First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020b, August 27). *Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020c, September 22). *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020d, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020e, December 22). *Approval with Modifications 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021a, January 29). *Disapproval Revised WSTF Septic Tanks (SWMUs 21-27) Investigation Report*. Santa Fe, NM.

NMED Petroleum Storage Tank Bureau. (2021b, February 4). *Technical Approval of Minimum Site Assessment Workplan for White Sand Complex NASA, 12600 NASA Road, Las Cruces, New Mexico.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021c, March 15). *Disapproval 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021d, March 19). *Disapproval 300 Area Supplemental Abbreviated Drilling Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021e, March 19). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan: Phase I*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021f, April 8). *Fee Assessment Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021g, May 6). *Approval Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 7*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021h, May 6). *Approval PL-12 Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021i, May 6). *Approval with Modifications 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021j, May 6). *Approval with Modification BLM-42 Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021k, June 3). *Approval with Modifications Groundwater Data Representativeness Phase I: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021l, June 15). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year Eight*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021m, June 15). *Fee Assessment Well Abandonment Work Plan for Well BLM-28*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021n, June 15). *Fee Assessment Well Reconfiguration Work Plan for Westbay Wells PL-7, PL-8, PL-10, ST-5, and WW-3*. Santa Fe, NM.

Figures

Figure 1.1 **WSTF Location Map**

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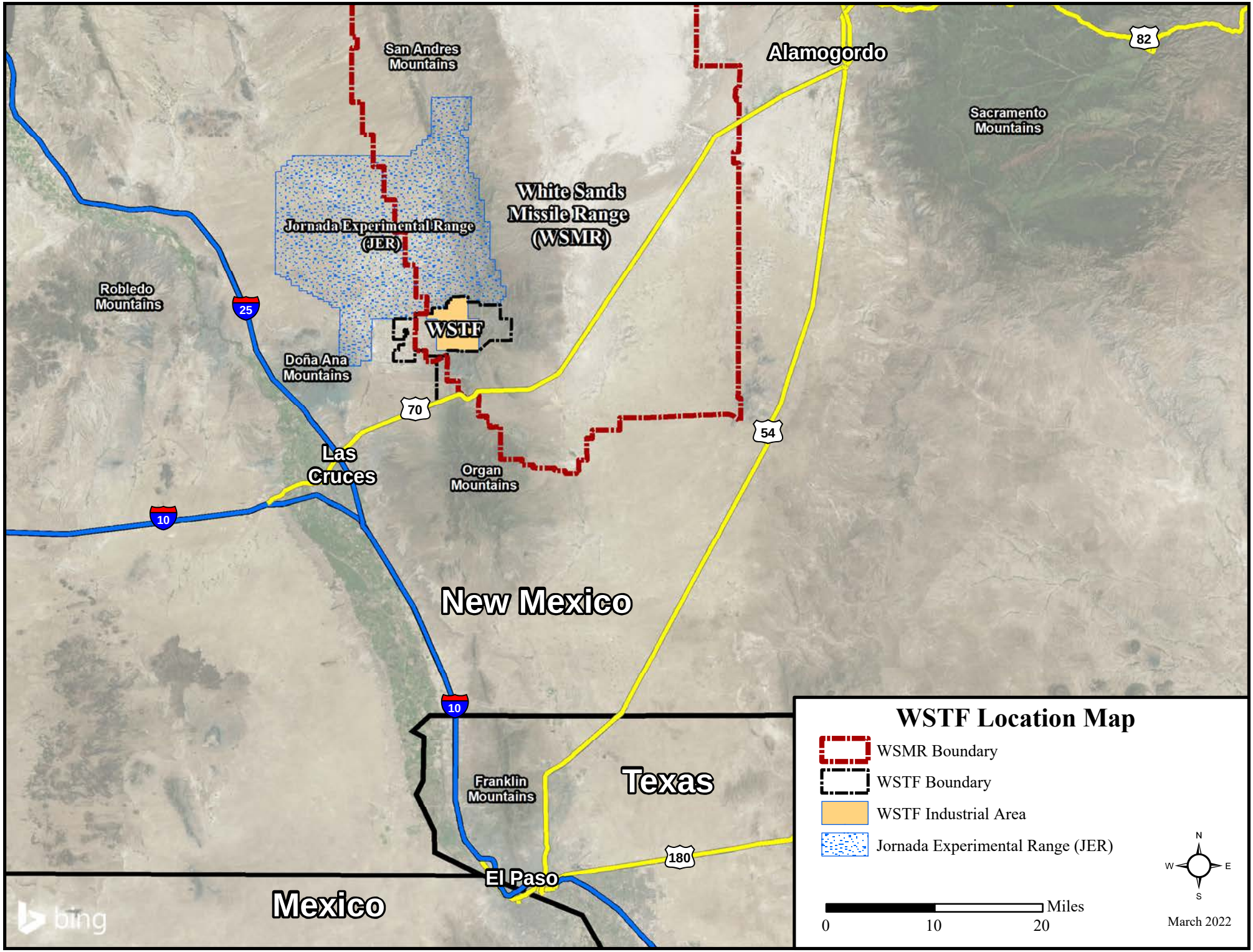
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Jornada Experimental Range (JER)
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Las Cruces
Organ Mountains
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New Mexico
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Franklin Mountains
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WSTF Location Map
WSMR Boundary
WSTF Boundary
WSTF Industrial Area
Jornada Experimental Range (JER)
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March 2022

Figure 1.2 **WSTF Well Location Map**

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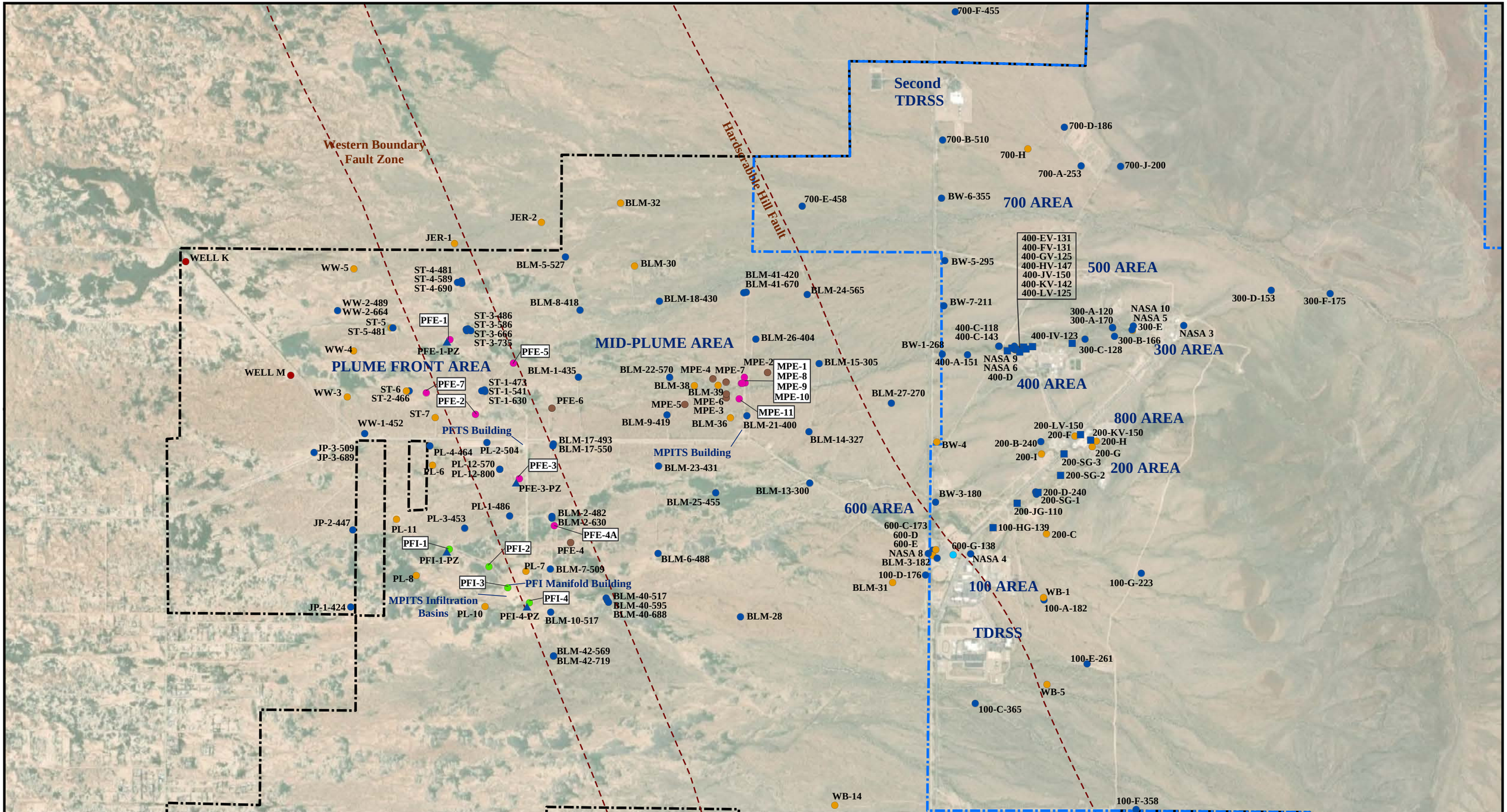


WSTF Well Location Map

- Multiport
- Conventional Well
- Perched Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Fault
- WSTF Boundary
- WSTF Industrial Area

0 2,500 5,000 7,500 Feet

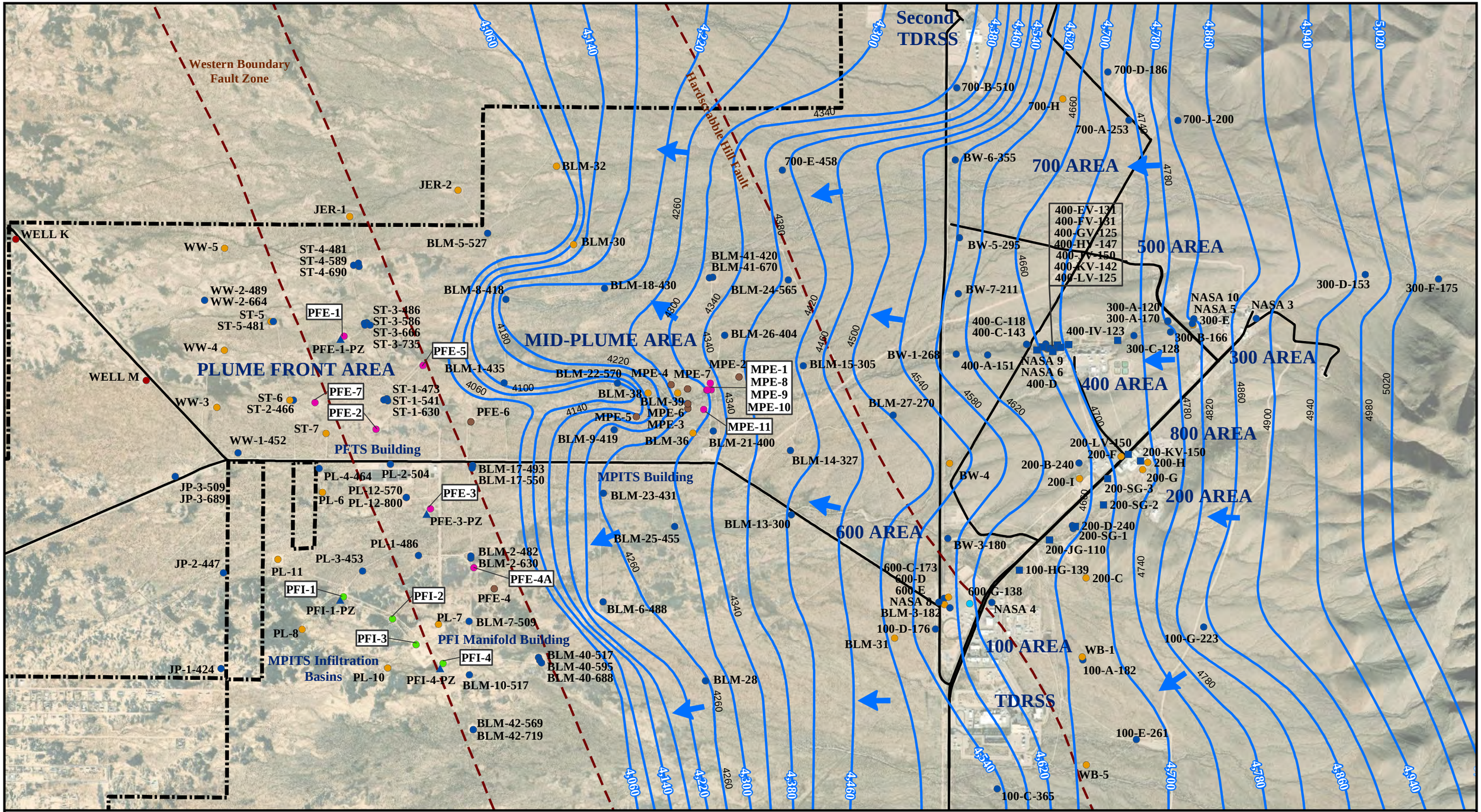
0 0.5 1 1.5 Miles

N W E S

March 2022

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

(SEE NEXT PAGE)

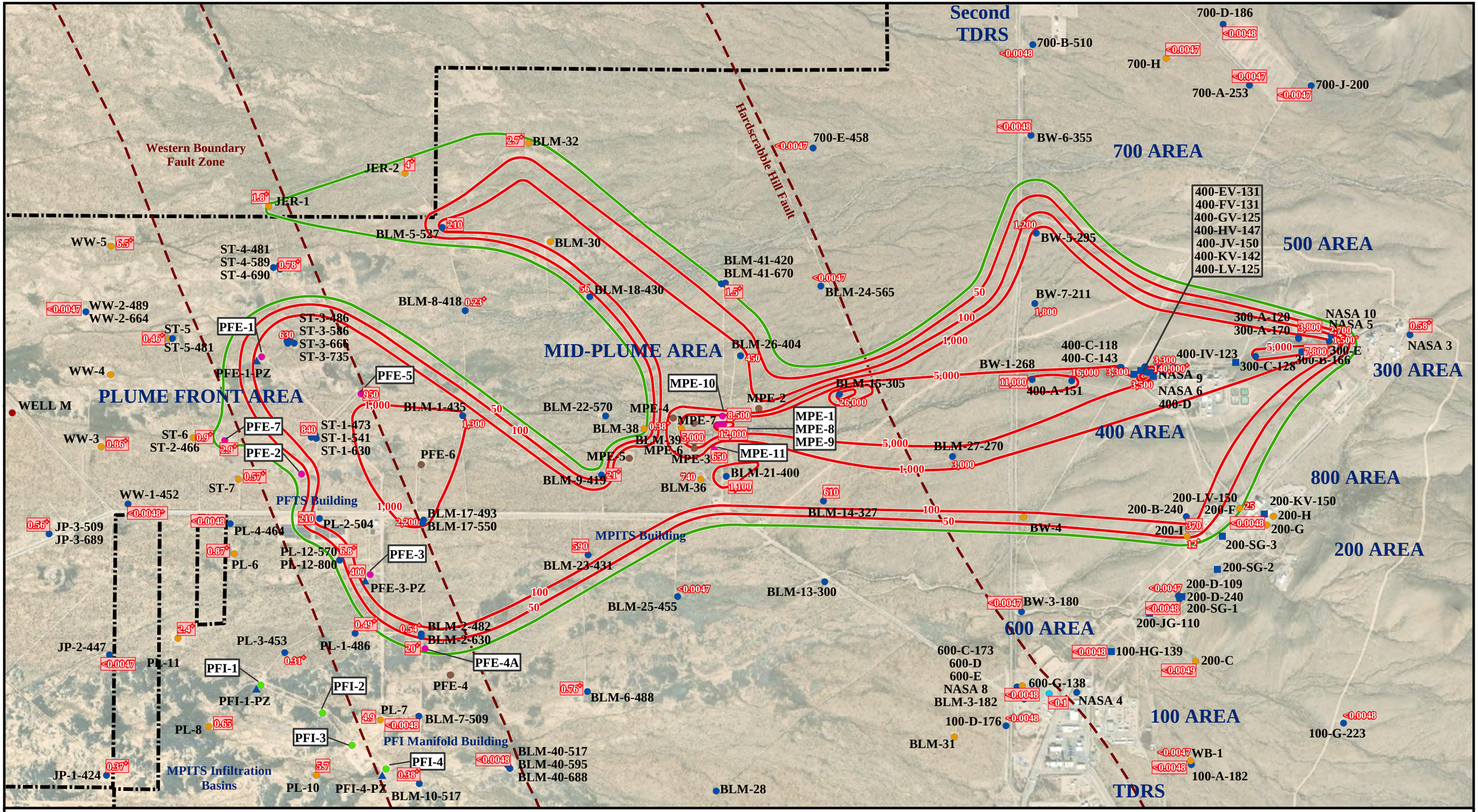


Site-Wide Groundwater Elevations for Second Quarter 2021

- 4064 Groundwater Elevation Contour (Feet)
- Groundwater Flow Direction
- Multiport
- Conventional Well
- Perched Well
- MSVGM Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Main Road
- WSTF Boundary
- Faults

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

(SEE NEXT PAGE)



NDMA Maximum Concentrations in Groundwater for Second Quarter 2021

Note:
Method 607 NDMA results corrected for extraction efficiency.
* - The analytical batch LCS_01MAR21 laboratory control sample recoveries of NDMA (1.4%) were outside laboratory control limits; corrected detections were excluded for 2Q2021.
\+ - 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"
- No value indicates the well has not been sampled in the last year.

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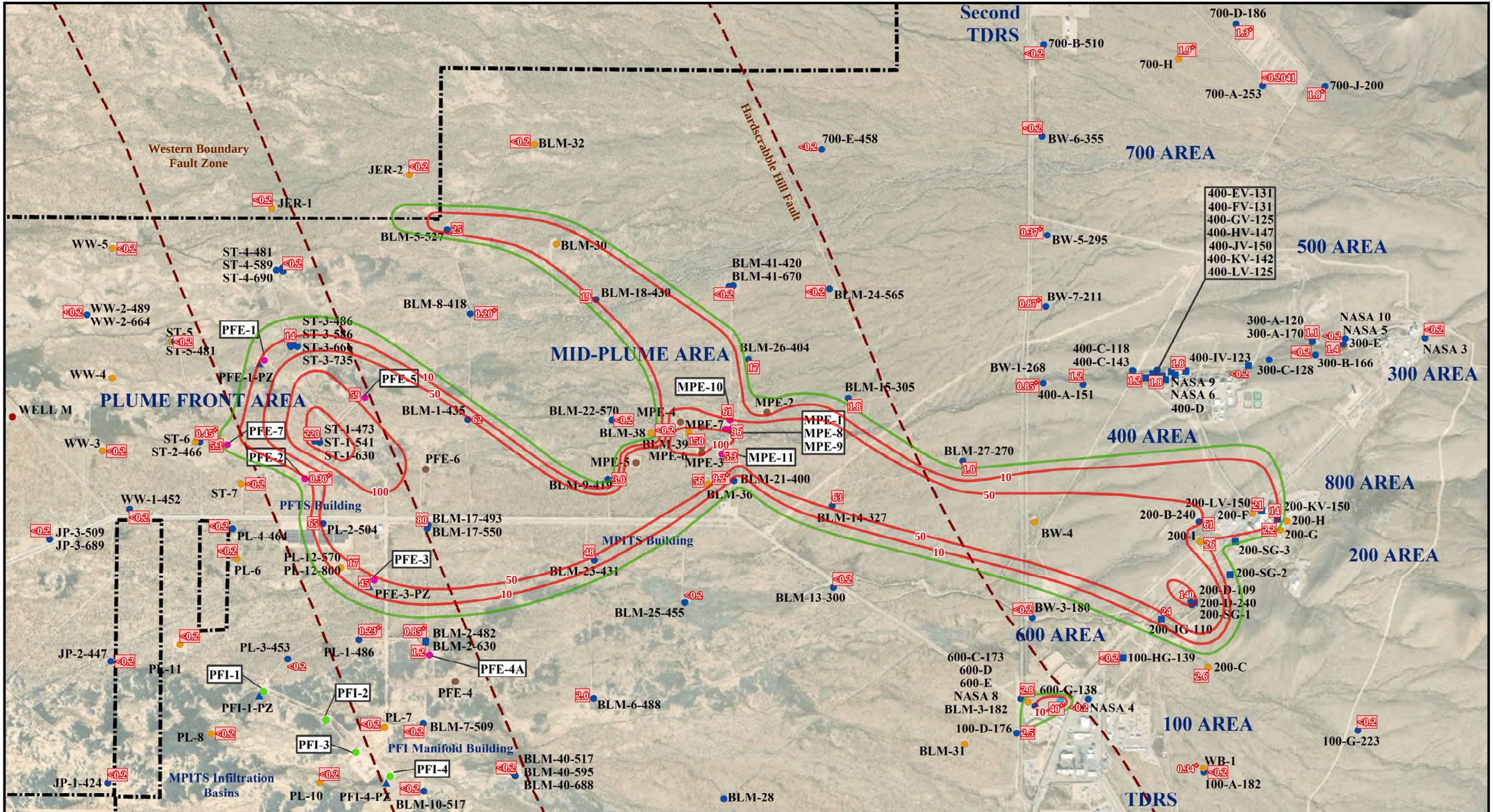
Figure 4.3 Site-Wide Trichloroethene (TCE) Concentrations for the Reporting Period

(SEE NEXT PAGE)



TCE Maximum Concentrations in Groundwater for Second Quarter 2021

- Equiconcentration Line (ug/L) — 10
- 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

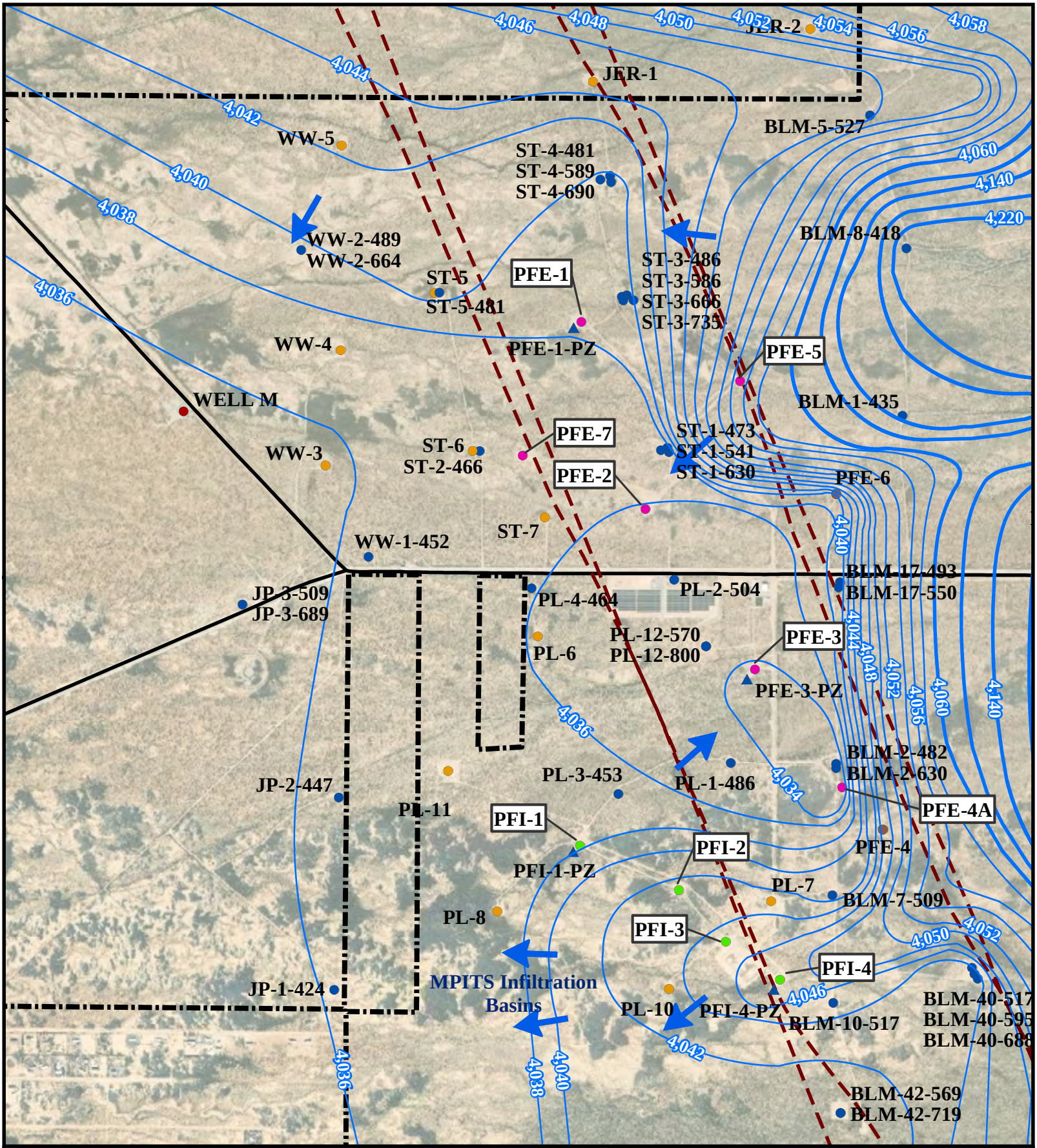
Note:
+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit"
- No value indicates the well has not been sampled in the last year.

N W E S

March 2022

Figure 6.1 Plume Front Groundwater Elevations for the Reporting Period

(SEE NEXT PAGE)



Plume Front Groundwater Elevations for Second Quarter 2021

- 4060 40 Foot Contour
- 4048 2 Foot Contour
- Groundwater Flow Direction
- Multiport
- Conventional Well
- Extraction Well
- Injection Well
- Piezometer
- Exploration Well
- Production Well
- Western Boundary Fault Zone
- WSTF Boundary

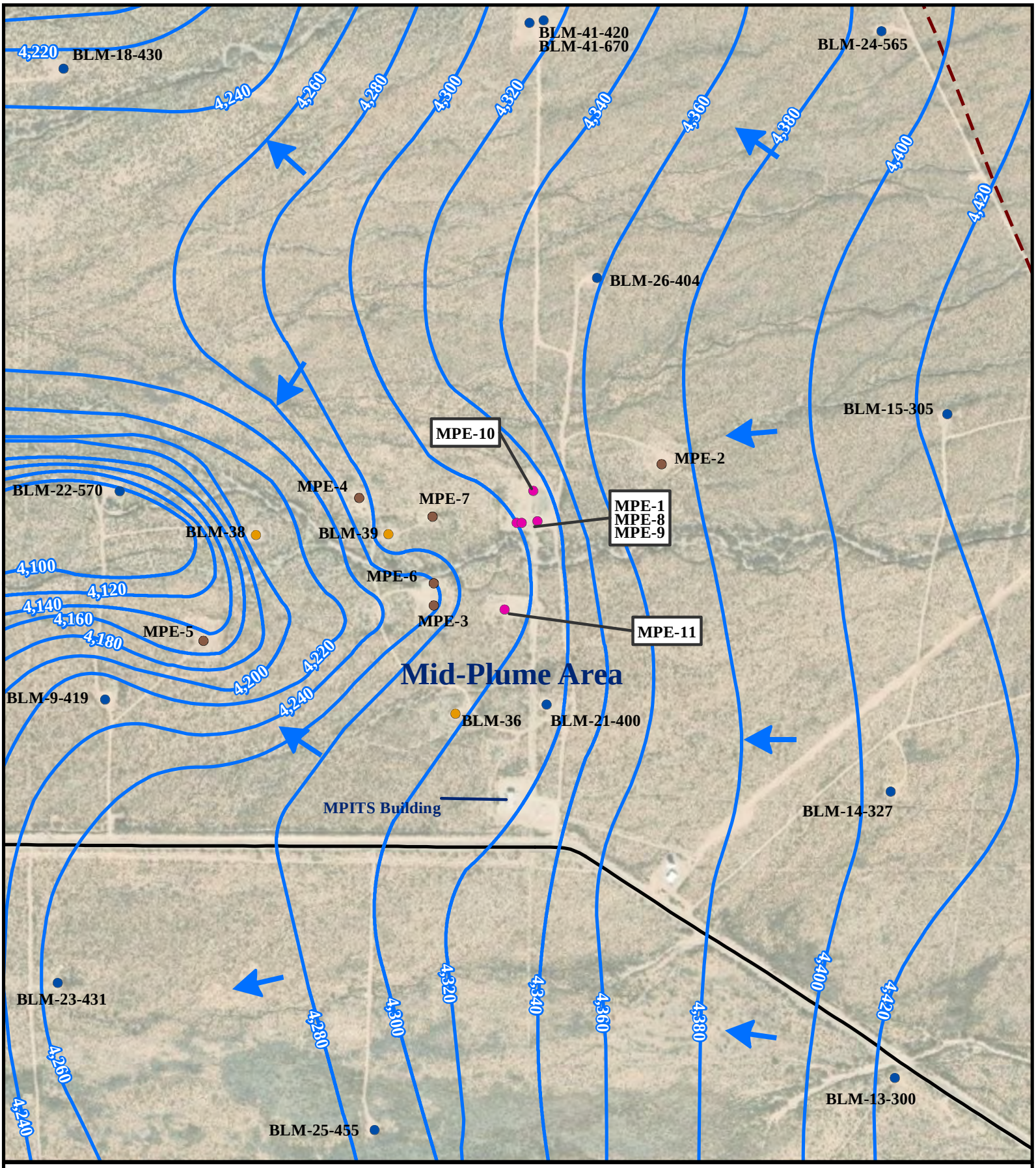
0 500 1,000 2,000 Feet

N W E S

March 2022

Figure 6.2 Mid-plume Groundwater Elevations for the Reporting Period

(SEE NEXT PAGE)



Mid-Plume Groundwater Elevations for Second Quarter 2021

-4,300- Groundwater Elevation 20 Feet Contour

Groundwater Flow Direction

- Conventional Well
- Multiport Well
- Extraction Well
- Exploration Well

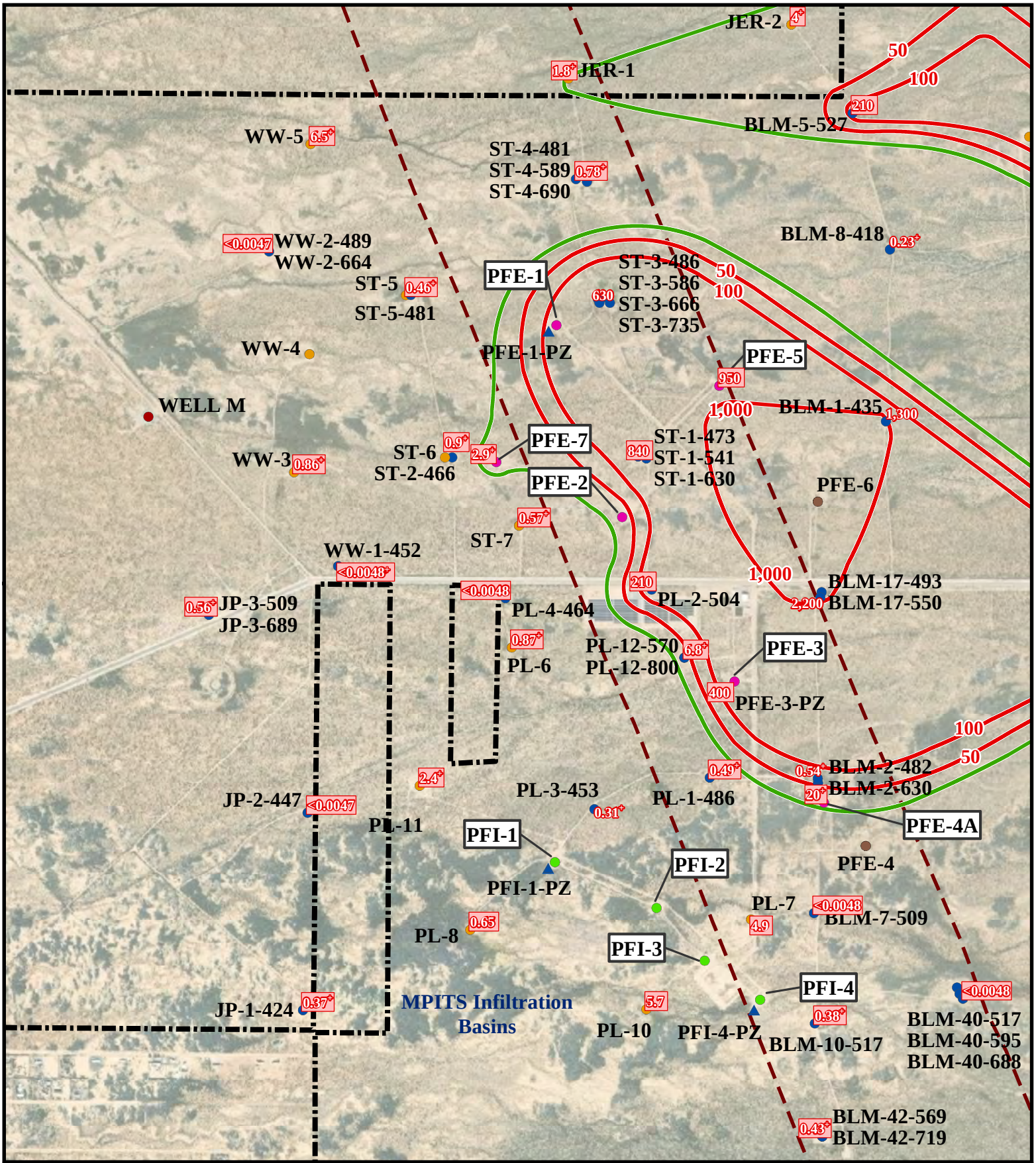
N
W E
S

0 625 1,250 Feet

March 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 2021

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

0 750 1,500 Feet

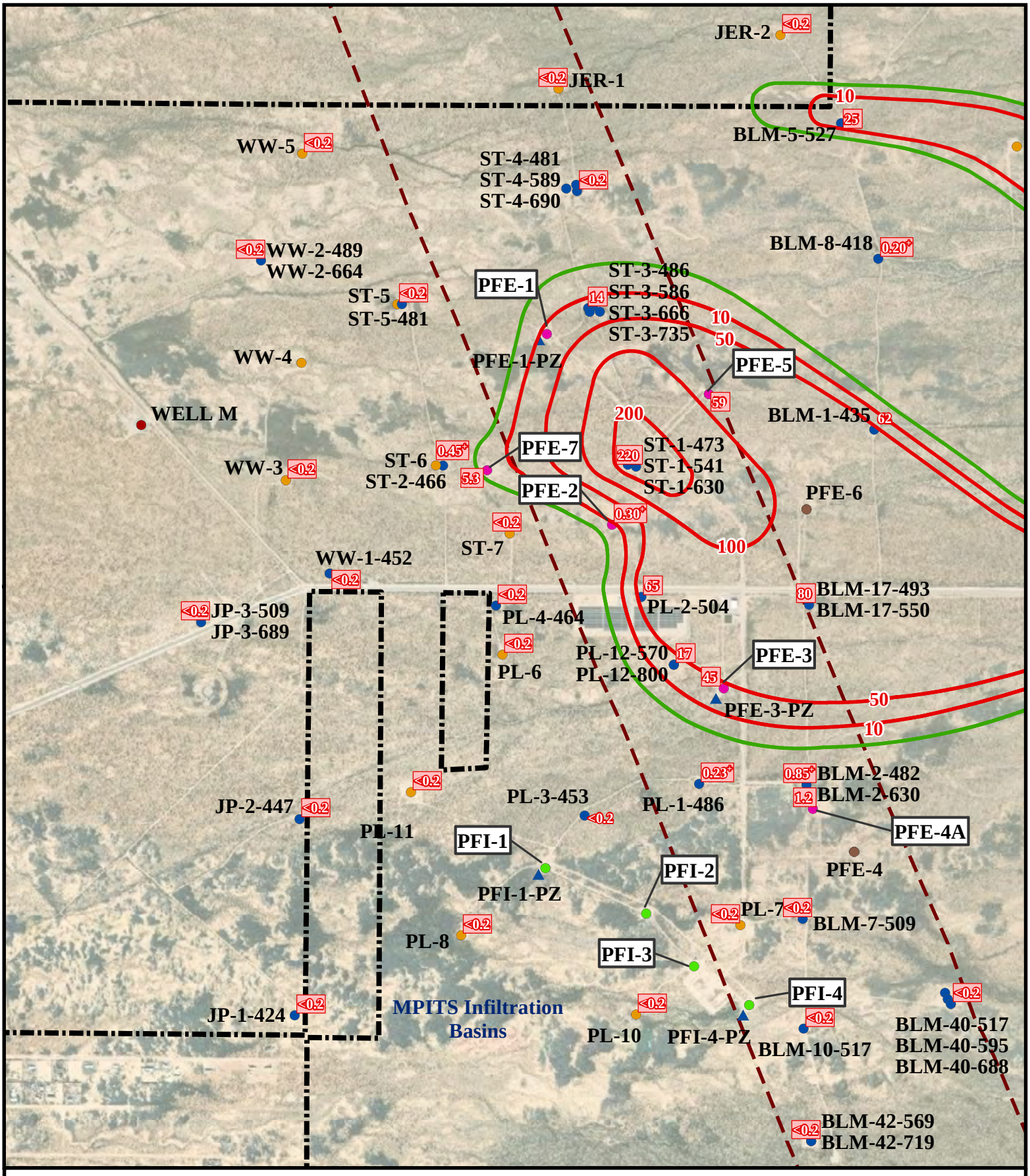
Note:
Method 607 NDMA results corrected for extraction efficiency.
\+ - Data value has a QA flag. See Appendix A.2 for specific flags.
50 - Sample event result was within the quarterly date range. No outline indicates an earlier sample event.
- Non-detect values displayed "<Detection Limit"
- No value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

N W E S

March 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 2021

10 Equiconcentration Line (ug/L)

TCE Cleanup Level (4.9 ug/L)

Multiport

Conventional Well

Extraction Well

Injection Well

Piezometer

Exploration Well

Production Well

Western Boundary Fault Zone

WSTF Boundary

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"

- No value indicates the well has not been sampled in the last year.

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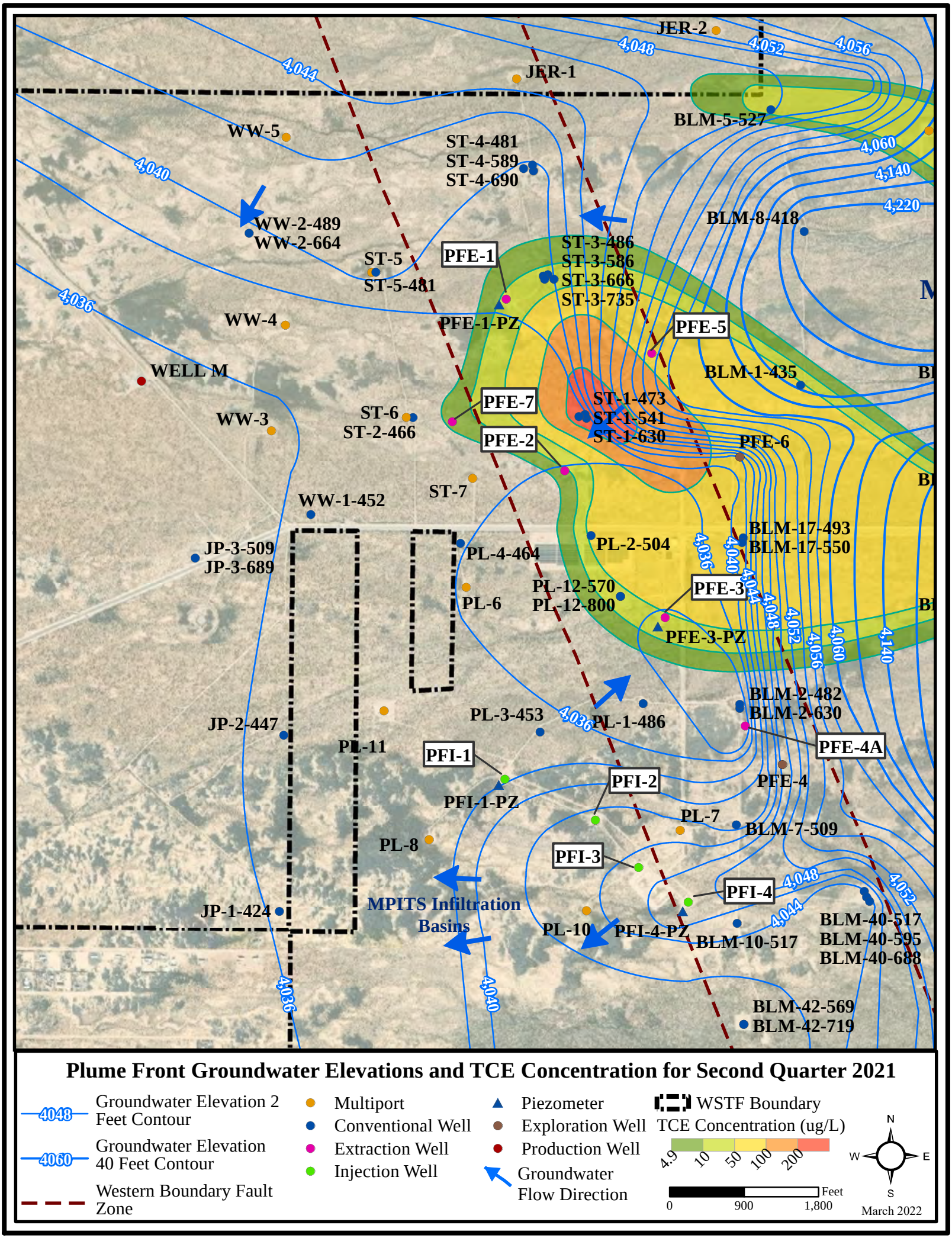
Figure 6.5 Plume Front Groundwater Elevations and Trichloroethene Concentrations for the Reporting Period

(SEE NEXT PAGE)


JER-2
JER-1
BLM-5-527
WW-5
ST-4-481
ST-4-589
ST-4-690
WW-2-489
WW-2-664
ST-5
ST-5-481
PFE-1
ST-3-486
ST-3-586
ST-3-666
ST-3-735
BLM-8-418
WW-4
PFE-1-PZ
PFE-5
WELL M
BLM-1-435
PFE-7
ST-1-473
ST-1-541
ST-1-630
WW-3
ST-6
ST-2-466
PFE-2
PFE-6
ST-7
WW-1-452
BLM-17-493
BLM-17-550
JP-3-509
JP-3-689
PL-4-464
PL-2-504
PL-12-570
PL-12-800
PL-6
PFE-3
PFE-3-PZ
BLM-2-482
BLM-2-630
JP-2-447
PL-3-453
PL-1-486
PFE-4A
PL-11
PFI-1
PFI-2
PFE-4
PFI-1-PZ
PL-7
BLM-7-509
PL-8
PFI-3
PFI-4
MPITS Infiltration Basins
JP-1-424
PL-10
PFI-4-PZ
BLM-10-517
BLM-40-517
BLM-40-595
BLM-40-688
BLM-42-569
BLM-42-719
4,036
4,040
4,044
4,048
4,052
4,056
4,060
4,140
4,220
Plume Front Groundwater Elevations and TCE Concentration for Second Quarter 2021
4048 Groundwater Elevation 2 Feet Contour
4060 Groundwater Elevation 40 Feet Contour
Western Boundary Fault Zone
Multiport
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
0
900
1,800
Feet
N
W
E
S
March 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 2020 GMP update (NASA, 2021b).

[2] Cleanup Level based on Maximum Contaminant Levels found in 40 Code of Federal Regulations Parts 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-14-327	7439-89-6	Iron, Total
200-KV-150	7439-96-5	Manganese, Total

Table 3.3 Unconfirmed New Detections – Resolution Pending

Well ID	CAS Number	Analyte	Scheduled Resample Date
BLM-36-800	314-40-9	Bromacil	5/3/2021
PL-7-480	314-40-9	Bromacil	5/11/2021
ST-1-541	7440-47-3	Chromium, Total	5/11/2021
BLM-38-620	7440-02-0	Nickel, Total	5/12/2021
NASA 4	78-93-3	2-Butanone (MEK)	5/20/2021
NASA 4	67-64-1	Acetone	5/20/2021
PL-8-455	123-91-1	1,4-Dioxane	6/2/2021
PL-3-453	314-40-9	Bromacil	6/4/2021
ST-3-486	7440-50-8	Copper, Total	6/15/2021
700-E-458	314-40-9	Bromacil	7/22/2021
BLM-18-430	314-40-9	Bromacil	7/25/2021
BLM-32-632	314-40-9	Bromacil	8/6/2021
ST-4-589	314-40-9	Bromacil	8/13/2021
200-H-331	314-40-9	Bromacil	8/18/2021
BW-1-268	7429-90-5	Aluminum, Total	9/9/2021
PL-8-605	314-40-9	Bromacil	9/9/2021
PL-11-470	314-40-9	Bromacil	9/15/2021
PL-11-980	314-40-9	Bromacil	9/17/2021
WW-4-948	314-40-9	Bromacil	9/18/2021
700-D-186	314-40-9	Bromacil	9/23/2021
WW-5-909	117-81-7	Bis(2-ethylhexyl) Phthalate	10/22/2021
BLM-2-630	7440-02-0	Nickel, Total	11/9/2021
200-I-795	314-40-9	Bromacil	11/18/2021
200-I-795	62-75-9	N-Nitrosodimethylamine	11/18/2021
PL-6-1195	7440-47-3	Chromium, Total	1/6/2022
PL-6-1335	4164-28-7	N-Nitrodimethylamine	1/7/2022
100-F-358	12672-29-6	Aroclor 1248	1/20/2022
100-F-358	314-40-9	Bromacil	1/20/2022
ST-2-466	314-40-9	Bromacil	2/2/2022
BLM-13-300	314-40-9	Bromacil	3/4/2022
BLM-40-517	314-40-9	Bromacil	4/1/2022
BLM-14-327	7429-90-5	Aluminum, Total	4/15/2022
BLM-40-595	14797-73-0	Perchlorate	4/12/2023

Table 3.4 Unconfirmed Detections Resolved This Reporting Period

Well ID	CAS Number	Analyte	Scheduled Resample Date	Resolution
100-C-365	314-40-9	Bromacil	2/22/2021	Unconfirmed
200-F-370	314-40-9	Bromacil	2/22/2021	Unconfirmed
NASA 3	7429-90-5	Aluminum, Total	2/24/2021	Unconfirmed
WW-2-489	314-40-9	Bromacil	3/7/2021	Confirmed
PL-8-965	314-40-9	Bromacil	3/11/2021	Unconfirmed
BLM-18-430	7429-90-5	Aluminum, Total	3/17/2021	Confirmed
PL-4-464	314-40-9	Bromacil	3/18/2021	Unconfirmed
PL-8-780	314-40-9	Bromacil	3/20/2021	Unconfirmed
BW-6-355	314-40-9	Bromacil	3/21/2021	Unconfirmed
PL-10-813	314-40-9	Bromacil	4/1/2021	Unconfirmed
PL-6-725	314-40-9	Bromacil	4/8/2021	Confirmed
JP-2-447	314-40-9	Bromacil	4/11/2021	Confirmed

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

Well Name	Event Date	Well Group
100-A-182	02/03/21	100/600
100-C-365	02/22/21	S. Boundary
100-HG-139	03/11/21	100/600
200-B-240	03/15/21	200
200-C-170	02/18/21	200
200-C-225	02/18/21	200
200-C-270	02/17/21	200
200-D-240	03/16/21	200
200-F-225	02/23/21	200
200-F-370	02/22/21	200
200-F-420	02/22/21	200
200-KV-150	03/10/21	200
300-A-170	02/18/21	300/400
300-B-166	02/03/21	300/400
300-E-138	02/23/21	300/400
300-E-183	02/24/21	300/400
400-EV-131	02/01/21	300/400
400-FV-131	04/21/21	300/400
400-GV-125	02/01/21	300/400
400-HV-147	04/21/21	300/400
400-JV-150	02/02/21	300/400
600-E-280	02/04/21	100/600
600-G-138	04/27/21	100/600
700-A-253	03/22/21	N. Boundary
700-D-186	03/23/21	N. Boundary
700-H-350	03/23/21	N. Boundary
700-H-535	03/22/21	N. Boundary
700-H-670	03/22/21	N. Boundary
700-J-200	03/22/21	N. Boundary
BLM-10-517	04/01/21	Plume Front
BLM-13-300	03/04/21	S. Boundary
BLM-14-327	03/15/21	Mid-plume
BLM-21-400	02/08/21	Mid-plume
BLM-23-431	02/04/21	Mid-plume
BLM-32-543	02/02/21	N. Boundary
BLM-32-571	02/02/21	N. Boundary
BLM-32-632	02/02/21	N. Boundary
BLM-39-385	04/07/21	Mid-plume
BLM-39-560	04/07/21	Mid-plume
BLM-40-517	04/01/21	S. Boundary
BLM-40-595	04/12/21	S. Boundary
BLM-40-688	04/14/21	S. Boundary
BLM-41-420	04/20/21	N. Boundary
BLM-41-670	04/20/21	N. Boundary
BLM-42-569	03/10/21	Sentinel
BLM-42-709	03/10/21	Sentinel
BLM-5-527	03/15/21	Mid-plume
BLM-6-488	04/14/21	S. Boundary
BLM-7-509	03/01/21	Plume Front
BLM-9-419	03/02/21	Mid-plume
BW-1-268	03/09/21	300/400
BW-3-180	04/19/21	100/600
BW-6-355	03/11/21	N. Boundary
JER-1-483	04/08/21	N. Boundary
JER-1-563	04/08/21	N. Boundary
JER-1-683	04/08/21	N. Boundary
JER-2-504	04/20/21	N. Boundary
JER-2-584	04/20/21	N. Boundary
JER-2-684	04/20/21	N. Boundary
JP-1-424	04/13/21	Sentinel
JP-2-447	04/13/21	Sentinel
JP-3-509	04/15/21	Sentinel
JP-3-689	04/15/21	Sentinel
NASA 3	03/17/21	Upgradient
PL-10-484	04/06/21	Sentinel
PL-10-592	04/05/21	Sentinel
PL-10-813	04/01/21	Sentinel
PL-10-962	04/05/21	Sentinel
PL-11-470	03/02/21	Sentinel
PL-11-530	03/02/21	Sentinel
PL-11-710	03/02/21	Sentinel
PL-11-820	03/04/21	Sentinel
PL-11-980	03/04/21	Sentinel
PL-12-570	02/08/21	In Plume
PL-12-800	02/08/21	In Plume
PL-1-486	04/19/21	In Plume
PL-2-504	03/15/21	In Plume
PL-4-464	03/11/21	Plume Front
PL-6-545	04/08/21	Plume Front
PL-6-725	04/08/21	Plume Front
PL-7-480	02/03/21	Plume Front
PL-7-560	02/02/21	Plume Front
PL-7-630	02/02/21	Plume Front
PL-8-455	03/04/21	Sentinel

Well Name	Event Date	Well Group
PL-8-605	03/03/21	Sentinel
PL-8-780	03/08/21	Sentinel
PL-8-965	03/03/21	Sentinel
ST-1-473	04/12/21	In Plume
ST-2-466	02/02/21	Plume Front
ST-4-481	03/03/21	Plume Front
ST-4-589	02/04/21	Plume Front
ST-4-690	03/02/21	Plume Front
ST-5-481	02/17/21	Plume Front
ST-5-485	02/01/21	Plume Front
ST-5-655	02/01/21	Plume Front

Well Name	Event Date	Well Group
ST-6-528	03/09/21	Plume Front
ST-6-568	03/09/21	Plume Front
ST-6-678	03/09/21	Plume Front
ST-6-824	03/11/21	Plume Front
ST-6-970	03/11/21	Plume Front
ST-7-453	04/06/21	Plume Front
ST-7-544	04/06/21	Plume Front
ST-7-779	04/06/21	Plume Front
ST-7-970	04/06/21	Plume Front
WW-1-452	03/01/21	Plume Front
WW-2-489	03/08/21	Sentinel

Well Name	Event Date	Well Group
WW-2-664	03/08/21	Sentinel
WW-3-469	03/02/21	Sentinel
WW-3-569	03/01/21	Sentinel
WW-3-710	03/01/21	Sentinel
WW-3-978	03/02/21	Sentinel
WW-5-459	04/13/21	Sentinel
WW-5-579	04/13/21	Sentinel
WW-5-809	04/13/21	Sentinel
WW-5-909	04/13/21	Sentinel

Plume Front	
Well Name	**Event Date**
B650-EFF-1	02/09/21
B650-EFF-1	03/05/21
B650-EFF-1	04/14/21
B650-INF-1	02/09/21
B650-INF-1	03/05/21
B650-INF-1	04/14/21

Plume Front	
Well Name	**Event Date**
PFE-2	04/15/21
PFE-3	04/15/21
PFE-4A	04/15/21
PFE-5	04/15/21
PFE-7	04/15/21

Mid-plume	
Well Name	**Event Date**
B655-EFF-2	02/09/21
B655-EFF-2	03/05/21
B655-EFF-2	04/14/21
B655-INF-2	02/09/21
B655-INF-2	03/05/21
B655-INF-2	04/14/21

Mid-plume	
Well Name	**Event Date**
MPE-1	02/10/21
MPE-10	02/10/21
MPE-11	02/10/21
MPE-8	02/10/21
MPE-9	02/10/21

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	4,669.41	4/26/2021
100-C-365	391	365	386	4,534.70	4/26/2021
100-D-176	201	176	196	4,570.48	4/26/2021
100-E-261	277	261	271	4,682.73	4/26/2021
100-F-358	378	358	368	4,713.25	4/26/2021
100-G-223	238	223	233	4,851.44	4/26/2021
100-HG-139	165	139	159	4,647.53	4/26/2021
200-B-240	255	240	250	4,646.73	4/26/2021
200-C(170)[i]	290	N/A	N/A	4,674.68	5/3/2021
200-G(220)[i]	515	N/A	N/A	4,720.31	5/3/2021
200-H(331)[i]	458	N/A	N/A	4,734.74	5/3/2021
200-I(300)[i]	815	N/A	N/A	4,650.94	5/3/2021
200-KV-150	175	150	170	4,726.31	4/26/2021
200-LV-150	175	150	170	4,725.87	4/26/2021
200-SG-1	138	123	138	4,655.55	4/26/2021
300-A-120	151	120	146	4,781.30	4/26/2021
300-B-166	181	165	176	4,772.80	4/26/2021
300-C-128	160	128	154	4,731.37	4/26/2021
300-D-153	179	153	174	4,949.49	4/26/2021
300-E(138)[i]	395	N/A	N/A	4,804.54	5/3/2021
300-F-175	195	175	185	5,043.47	4/26/2021
400-A-151	187	151	176	4,636.45	4/26/2021
400-C-143	159	143	153	4,668.18	4/26/2021
400-D(275)[i]	380	N/A	N/A	4,662.32	5/3/2021
600-C-173	199	172	193	4,569.80	4/26/2021
600-E(280)[i]	690	N/A	N/A	4,554.08	5/3/2021
700-A-253	269	253	263	4,716.44	4/26/2021
700-B-510	536	510	531	4,344.02	4/26/2021
700-D-186	202	168	196	4,710.37	4/26/2021
700-E-458	484	458	479	4,411.21	4/26/2021
700-H(350)[i]	695	N/A	N/A	4,635.18	5/3/2021
700-J-200	230	200	220	4,828.62	4/26/2021
BLM-10-517	532	517	527	4,044.17	4/26/2021
BLM-13-300	316	300	310	4,422.32	4/26/2021
BLM-14-327	343	327	337	4,400.62	4/26/2021
BLM-1-435	451	435	446	4,145.86	4/26/2021
BLM-15-305	321	305	315	4,424.20	4/26/2021
BLM-17-493	519	493	513	4,039.31	4/26/2021
BLM-18-430	456	430	451	4,226.10	4/26/2021

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
BLM-22-570	597	570	592	4,093.91	4/26/2021
BLM-23-431	447	431	441	4,262.61	4/26/2021
BLM-24-565	590	565	585	4,385.45	4/26/2021
BLM-25-455	470	455	465	4,284.21	4/26/2021
BLM-2-630	498	482	493	4,033.59	4/26/2021
BLM-26-404	420	404	414	4,358.48	4/26/2021
BLM-27-270	286	270	280	4,500.75	4/26/2021
BLM-28 (Borehole)[i]	555	N/A	N/A	4,258.63	4/26/2021
BLM-3-182	208	182	203	4,569.23	4/26/2021
BLM-40-517	532	517	527	4,043.35	4/26/2021
BLM-41-420	435	420	430	4,318.08	4/26/2021
BLM-5-527	560	527	538	4,046.63	4/26/2021
BLM-6-488	503	488	498	4,231.45	4/26/2021
BLM-7-509	525	509	520	4,039.92	4/26/2021
BLM-8-418	434	418	428	4,223.99	4/26/2021
BLM-9-419	445	419	440	4,227.76	4/26/2021
BW-1-268	294	268	289	4,607.39	4/26/2021
BW-3-180	205	180	200	4,565.78	4/26/2021
BW-5-295	311	295	305	4,581.81	4/26/2021
BW-6-355	381	355	376	4,573.38	4/26/2021
BW-7-211	225	211	222	4,608.54	4/26/2021
JP-1-424	440	424	434	4,036.53	4/26/2021
JP-2-447	462	446	457	4,037.72	4/26/2021
MPE-2	600	400	580	4,370.19	4/26/2021
MPE-5	590	450	570	4,145.79	4/26/2021
NASA 10	135	110	130	4,823.51	4/26/2021
NASA 3	144	119	139	4,888.77	4/26/2021
NASA 4	171	146	166	4,638.28	4/26/2021
NASA 5	135	110	130	4,812.12	4/26/2021
NASA 6	153	128	148	4,690.53	4/26/2021
NASA 8	197	172	192	4,568.47	4/26/2021
PFE-1-PZ	609	588	598	4,038.01	4/26/2021
PFE-3-PZ	620	590	600	4,032.51	4/26/2021
PFE-4	877	397	876	4,046.60	4/26/2021
PFE-6	539	434	534	4,039.70	4/26/2021
PL-10(484)[ii]	1000	479	489	4,062.74	5/3/2021
PL-1-486	502	486	496	4,035.77	4/26/2021
PL-2-504	520	504	514	4,035.18	4/26/2021
PL-3-453	469	453	464	4,037.19	4/26/2021

Well Name	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Groundwater Elevation (ft amsl)	Measurement Date
PL-4-464	480	464	474	4,037.56	4/26/2021
PL-6(545)[ii]	1860	540	550	4,035.19	5/3/2021
PL-7(480)[ii]	655	475	485	4,044.32	5/3/2021
PL-8(455)[ii]	1000	448	458	4,035.41	5/3/2021
ST-1-473	488	473	483	4,037.18	4/26/2021
ST-2-466	481	466	476	4,037.48	4/26/2021
ST-3-486	502	486	496	4,039.01	4/26/2021
ST-4-481	497	481	491	4,039.93	4/26/2021
ST-5-481	497	481	491	4,040.63	4/26/2021
WB-14(520)[i]	545	N/A	N/A	4,427.01	5/3/2021
WB-5(250)[i]	400	N/A	N/A	4,667.75	5/3/2021
WW-1-452	468	452	462	4,037.84	4/26/2021
WW-3(469)[ii]	1014	464	474	4,035.44	5/3/2021

[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-21	27 of 28	529	68.6	27 of 28	9.6	1.08
Mar-21	31 of 31	538	74.5	31 of 31	9.8	1.39
Apr-21	30 of 30	594	79.5	30 of 30	10	1.17

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			
2/27/21	3/1/21	Unplanned	The system shut down automatically because of a UV wiper fault.
2/27/21	3/1/21	Unplanned	The system shut down automatically because of a UV wiper fault.
3/16/21	3/16/21	Unplanned	The system shut down automatically because of a disruption in the off-site electrical power supply.
3/20/21	3/20/21	Unplanned	The system shut down automatically because of a communication loss.
4/13/21	4/13/21	Planned	NASA shut the system down to perform several required repairs.
4/14/21	4/14/21	Unplanned	The system shut down automatically due to a low UV irradiance alarm while reactivating extraction well PFE-2.
4/22/21	4/23/21	Unplanned	The system shut down automatically as a result of water detected within a section of secondary containment piping associated with extraction well PFE-2.
Mid-plume Interception and Treatment System Shutdowns			
2/14/21	2/16/21	Unplanned	The system shut down automatically because of a communication loss.
3/11/21	3/11/21	Unplanned	They system shut down automatically because of a transmissivity lamp failure.
3/26/21	3/27/21	Unplanned	The system shut down automatically because of a communication loss.
4/20/21	4/20/21	Planned	NASA shut down the system to adjust the air stripper damper.
4/26/21	4/27/21	Planned	NASA shut the system down to remove mineral scale buildup from the piping between the blower piping and air stripper.

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

	Analyte	Unit	Design	Feb-21	Mar-21	Apr-21
Air Stripper Influent Concentrations	TCE	µg/L	130	17	17	14
	PCE	µg/L	0.66	0.48 J	0.83 J	0.58 J
	Freon 11	µg/L	860	11	15	13
	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	195[a]	160[b]	90[c]
UV Reactor Effluent Concentrations	NDMA[4]	ng/L	< 2.0	<0.33[2]	<0.33[2]	3.5

NS – Not sampled during the reporting period.[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 MDL (provided).

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 40%[a], 40%[b], 50%[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	NA	NA	NA	NA
	PFE-2	224	232	144	104%	64%
	PFE-3	213	230	197	108%	92%
	PFE-4A	200	165	140	83%	70%
	PFE-5	5.5	4.3	3.5	79%	63%
	PFE-7	125	153	131	122%	105%
Injection Wells (gpm)	**PFI-1**	269	N/A	N/A	N/A	N/A
	PFI-2	269	237	203	88%	75%
	PFI-3	344	240	205	70%	60%
	PFI-4	194	232	199	120%	102%

[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.

NA - The value/result was either not analyzed for or not applicable.

Table 5.5 Comparison of Specific Capacities for the Plume Front Wells

Well Name	Specific Capacity at Installation	Specific Capacity Jul-20	Specific Capacity Oct-20	Specific Capacity Jan-21	Specific Capacity Apr-21
PFE-1	8.3	NA[1]	NA[1]	NA[1]	NA[1]
PFE-2	5.7	NA[1]	NA[1]	NA[1]	6.4
PFE-3	19.4	11.8	10.3	11.6	10.6
PFE-4A	3.1	2.6	2.3	2.3	2.3
PFE-5	0.14	0.1	<0.1	<0.1	<0.1
PFE-7	6	6.4	6.0	6.3	5.9
Well Name	**Specific Capacity at Installation (Ideal Range)**	**Specific Capacity Jul-20**	**Specific Capacity Oct-20**	**Specific Capacity Jan-21**	**Specific Capacity Apr-21**
PFI-1	2.8–5	NA[2]	NA[2]	NA[2]	NA[2]
PFI-2	2.8–7	1.8	2.3	2.9	2.3
PFI-3	2–4	2.0	1.9	2.4	2.3
PFI-4	2.3–3.5	1.6	1.6	2.0	2.3

NA[1] – Not Applicable due to well being inoperative during reporting period.
NA[2] – Not Applicable due to questionable transducer readings during reporting period.
Note: Specific capacities are used to measure well performances and have units of gallons per minute per foot of drawdown.

Table 5.6 Plume Front Mass Removal[1]

Date	TCE (kg)	Freon 11 (kg)	Chloroform(g)	PCE (g)	NDMA (g)
May-20	1.6	1.6	ND	66	9.3
Jun-20	1.8	1.8	ND	54	5.6
Jul-20	2.1	2.0	ND	66	8.1
Aug-20	1.6	1.4	ND	37	8.0
Sep-20	1.8	2.1	ND	60	8.6
Oct-20	1.0	1.0	ND	43	4.7
Nov-20	<0.1	<0.1	ND	<0.1	<0.1
Dec-20	1.5	1.1	ND	38	14
Jan-21	1.7	1.5	ND	57	18
Feb-21	1.4	0.91	ND	23	16
Mar-21	1.5	1.4	ND	57	15
Apr-21	1.4	1.3	ND	36	8.5
Total[2]	**17**	**16**	**ND**	**537**	**116**

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-21	Mar-21	Apr-21
Air Stripper Influent Concentrations (MPE Wells)	TCE	µg/L	140	53	44	44
	PCE	µg/L	6.4	2.5	2.1	2.1
	Freon 11	µg/L	240	110	84	95
	Chloroform	µg/L	NA[2]	<0.24[1]	<0.24[1]	<0.24[1]
Air Stripper Influent Concentrations (Well 600-G-138)	TCE	µg/L	140	NS	NS	40 Q
	PCE	µg/L	6.4	NS	NS	<0.21[1] Q
	Freon 11	µg/L	240	NS	NS	0.48 J Q
	Chloroform	µg/L	NA[2]	NS	NS	0.51 J
Air Stripper Effluent Concentrations	TCE	µg/L	1.0	< 0.20[1]	< 0.20[1]	< 0.20[1]
	PCE	µg/L	1.0	< 0.21[1]	< 0.21[1]	< 0.21[1]
	Freon 11	µg/L	50	< 0.24[1]	0.31 J	< 0.24[1]
	Chloroform	µg/L	NA[2]	< 0.24[1]	< 0.24[1]	< 0.24[1]
UV Reactor Influent Concentrations (MPE Wells)	NDMA[3]	ng/L	25,500	5,500[a]	4,000[b]	3,600[c]
UV Reactor Influent Concentrations (Well 600-G-138)	NDMA	ng/L	25,500	NS	NS	< 278[d]
UV Reactor Effluent Concentrations[4]	NDMA[4]	ng/L	< 2.0	< 0.33	< 0.34	0.38 J * FB

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.

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, 2021b). Analytical data are provided in this table when available.

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

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

[3] Reported NDMA concentration is corrected for extraction efficiency. Modified EPA Method 607 batch-specific laboratory control sample recovery of NDMA: 40%[a], 40%[b], 50%[c], 36%[d]

[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-20	76	180	ND	4.0	3.9
Jun-20	79	180	ND	4.1	4.0
Jul-20	71	170	ND	3.7	3.6
Aug-20	82	180	0.01	4.1	3.6
Sep-20	87	190	0.01	4.4	3.8
Oct-20	77	170	0.01	3.9	2.7
Nov-20	69	130	ND	3.2	9.4
Dec-20	72	140	ND	3.4	9.8
Jan-21	66	130	ND	3.1	9.0
Feb-21	94	190	0.01	4.0	11
Mar-21	120	190	0.01	5.2	14
Apr-21	100	210	0.01	4.4	12
Total[2]	**993**	**2,060**	**0.06**	**47.5**	**86.8**

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-20	19,483,810	$68,003	$32,997	$5.18	$12,064	$0.62	$113,063	$5.80
Jun-20	26,159,906	$121,143	$87,747	$7.99	$28,268[3]	$1.08	$237,158	$9.07
Jul-20	25,924,307	$100,952	$70,171	$6.60	$34,799[3]	$1.34	$205,923	$7.94
Aug-20	24,188,238	$141,333	$84,184	$9.32	$30,617[3]	$1.27	$256,134	$10.59
Sep-20	25,417,256	$125,181	$134,111	$10.20	$27,120[3]	$1.07	$286,412	$11.27
Oct-20	21,912,518	$96,914	$41,441	$6.31	$27,556[3]	$1.26	$165,911	$7.57
Nov-20	378,947	$60,571	$86,828	$388.97	$5,714	$15.08	$153,113	$404.05
Dec-20	13,448,852	$60,571	$69,775	$9.69	$10,076	$0.75	$140,422	$10.44
Jan-21	25,292,665	$60,571	$66,177	$5.01	$26,323	$0.40	$153,071	$5.41
Feb-21	22,918,654	$60,571	$62,487	$5.37	$23,938	$1.04	$152,996	$6.41
Mar-21	24,723,395	$60,571	$89,304	$6.06	$21,923	$0.89	$171,798	$6.95
Apr-21	26,173,206	$48,457	$56,956	$4.03	$24,106	$0.92	$129,519	$4.95
12-Month Total	256,021,754	$1,004,839	$882,178	$7.37[2]	$272,504	$1.06[2]	$2,165,521	$8.46[2]

Notes:
1) Gallons treated reflects amount of water extracted during power reporting period.
2) 12-month cost.
3) 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				
NASA 3	Feb-21	Unable to collect groundwater sample because the water level in the well was insufficient for sampling.	Yes / Aug-21 (semi-annually for NDMA, VOCs; annually for others)	Resolved within this reporting period. Sampled in March 2021.
400-C-143	Apr-21	Unable to collect groundwater sample because the water level in the well was insufficient for sampling.	Yes / Apr-22 (annually)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
Unresolved Issues				
PL-3-453	Dec-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	Yes / Jun-21 (quarterly for NDMA, VOC; annual for others)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
400-C-118	Nov-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	No / May-21 (annually)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
400-IV-123	Nov-20	Unable to collect groundwater sample because the water level in the well was insufficient for sampling. Insufficient recharge.	Yes / May-21 (quarterly for VOC; annually for others)	Monitor the water level in this well and sample if the water level recovers enough to obtain a representative sample.
300-C-128	Aug-20	Could not be sampled - the water level in the well has dropped below the bottom of the screened interval.	Yes / when water level recovers	Monitor the water level in this well and sample when the water level has recovered enough to obtain a representative sample.
NASA 9	Oct-20	Could not be sampled - intrusion of roots into the well casing and screen.	No / Oct-21 (annually)	NASA is evaluating the potential future of this monitoring well.
200-LV-150	Nov-19	Insufficient recharge ~~- Sampled on February 13, 2020 and May 12, 2020 using 500~~	No / Nov-21 (annually)	NASA will evaluate well 200-LV-150 by assessing recovery rate and volume of water

Well	Date of Discovery	Description	Scheduled for Sampling this Qtr? / Next Sampling Date per GMP	Description of Future Plan or Resolution
		~~milliliters capacity HydraSleeve Speedbags (passive sampling), for engineering purposes. Not an approved sample method.~~		in the well after recovery. If not viable, NASA will submit a work plan for the P&A of this well. NASA will then propose to sample the most proximal groundwater well, 200-F, as part of the GMP.
WW-4	Jul-19 (FLUTe removal)	Water FLUTe sampling system removed *Data Representativeness Phase 1: Water FLUTe Well Evaluation.*	No / TBD (quarterly)	FLUTe system to be reinstalled and sampled following return to site work (COVID-19).
BLM-1-435	Apr-20	Sampling failed, as there was not enough water in the screen to fill the sample bottles. Failed again, Apr-21.	Yes / Oct-21 (semiannually)	Well is a poor producer. It is typically purged dry the first day, then sampled the following day. The condition of the well is being evaluated.
Issues Resolved this Quarter (will not appear in future Periodic Monitoring Reports)				
None.				

Appendix A
Indicator Parameters and Analytical Data

Appendix A.1: Monitor Well Indicator Parameters
Appendix A.2: Monitor Well Analytical Data
Appendix A.3: PFTS Indicator Parameters
Appendix A.4: PFTS Analytical Data
Appendix A.5: MPITS Indicator Parameters
Appendix A.6: MPITS 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** 2/3/2021

Sample	Parameter	Result	Units
2102030955C	Conductivity	1292	µS/cm
2102030955C	DO	3.83	mg/L
2102030955C	DTW	177.25	ft
2102030955C	ORP	199	mV
2102030955C	pH	6.96	NA
2102030955C	Temperature	20.51	ºC
2102030955C	Turbidity	0.97	NTU
2102030957C	Conductivity	1284	µS/cm
2102030957C	DO	3.76	mg/L
2102030957C	DTW	178.50	ft
2102030957C	ORP	197	mV
2102030957C	pH	6.95	NA
2102030957C	Temperature	20.54	ºC
2102030957C	Turbidity	1.08	NTU
2102030959C	Conductivity	1288	µS/cm
2102030959C	DO	3.70	mg/L
2102030959C	DTW	178.50	ft
2102030959C	ORP	198	mV
2102030959C	pH	6.94	NA
2102030959C	Temperature	20.48	ºC
2102030959C	Turbidity	1.10	NTU

Well ID	100-C-365	Event Date	2/22/2021	
Sample	**Parameter**		**Result**	**Units**
2102220940B	Conductivity		851	µS/cm
2102220940B	DO		4.15	mg/L
2102220940B	DTW		285.75	ft
2102220940B	ORP		-10	mV
2102220940B	pH		8.23	NA
2102220940B	Temperature		19.85	ºC
2102220940B	Turbidity		0.74	NTU
2102220941B	Conductivity		855	µS/cm
2102220941B	DO		4.02	mg/L
2102220941B	DTW		285.75	ft
2102220941B	ORP		-10	mV
2102220941B	pH		8.24	NA
2102220941B	Temperature		19.87	ºC
2102220941B	Turbidity		0.68	NTU
2102220942B	Conductivity		849	µS/cm
2102220942B	DO		3.92	mg/L
2102220942B	DTW		285.75	ft
2102220942B	ORP		-10	mV
2102220942B	pH		8.25	NA
2102220942B	Temperature		19.87	ºC
2102220942B	Turbidity		0.81	NTU

Well ID	100-HG-139	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111415B	Conductivity		1139	µS/cm
2103111415B	DTW		127.50	ft
2103111415B	pH		7.92	NA
2103111415B	Temperature		20.2	ºC
2103111415B	Turbidity		1.75	NTU
2103111418B	Conductivity		1146	µS/cm
2103111418B	DTW		128.53	ft
2103111418B	pH		7.90	NA
2103111418B	Temperature		20.3	ºC
2103111418B	Turbidity		1.49	NTU
2103111421B	Conductivity		1149	µS/cm
2103111421B	DTW		128.53	ft
2103111421B	pH		7.86	NA
2103111421B	Temperature		20.5	ºC
2103111421B	Turbidity		1.24	NTU

Well ID 200-B-240 **Event Date** 3/15/2021

Sample	Parameter	Result	Units
2103151000C	Conductivity	1260	µS/cm
2103151000C	DO	4.22	mg/L
2103151000C	DTW	195.36	ft
2103151000C	ORP	-9	mV
2103151000C	pH	8.66	NA
2103151000C	Temperature	21.44	ºC
2103151000C	Turbidity	1.03	NTU
2103151001C	Conductivity	1253	µS/cm
2103151001C	DO	4.18	mg/L
2103151001C	DTW	195.55	ft
2103151001C	ORP	-9	mV
2103151001C	pH	8.65	NA
2103151001C	Temperature	21.22	ºC
2103151001C	Turbidity	1.25	NTU
2103151002C	Conductivity	1257	µS/cm
2103151002C	DO	4.15	mg/L
2103151002C	DTW	195.55	ft
2103151002C	ORP	-9	mV
2103151002C	pH	8.66	NA
2103151002C	Temperature	21.30	ºC
2103151002C	Turbidity	1.09	NTU

Well ID 200-C-170 **Event Date** 2/18/2021

Sample	Parameter	Result	Units
2102181500Y	Atmospheric Pressure	12.58	psia
2102181500Y	Conductivity	1320	µS/cm
2102181500Y	DTW	149.00	ft
2102181500Y	Formation Pressure	29.90	psia
2102181500Y	pH	7.14	NA
2102181500Y	Temperature	18.4	ºC
2102181500Y	Turbidity	1.31	NTU
2102181545Y	Atmospheric Pressure	12.55	psia
2102181545Y	Conductivity	1498	µS/cm
2102181545Y	DTW	149.20	ft
2102181545Y	pH	7.05	NA
2102181545Y	Temperature	14.4	ºC
2102181545Y	Turbidity	0.72	NTU

Well ID 200-C-225 **Event Date** 2/18/2021

Sample	Parameter	Result	Units
2102181050Y	Atmospheric Pressure	12.60	psia
2102181050Y	Conductivity	1485	µS/cm
2102181050Y	DTW	148.70	ft
2102181050Y	Formation Pressure	53.70	psia
2102181050Y	pH	7.96	NA
2102181050Y	Temperature	19.8	ºC
2102181050Y	Turbidity	0.43	NTU
2102181350Y	Atmospheric Pressure	12.62	psia
2102181350Y	Conductivity	1358	µS/cm
2102181350Y	DTW	149.00	ft
2102181350Y	pH	7.90	NA
2102181350Y	Temperature	15.1	ºC
2102181350Y	Turbidity	0.27	NTU

Well ID 200-C-270 **Event Date** 2/17/2021

Sample	Parameter	Result	Units
2102171530Y	Atmospheric Pressure	12.38	psia
2102171530Y	Conductivity	1492	µS/cm
2102171530Y	DTW	148.37	ft
2102171530Y	Formation Pressure	73.03	psia
2102171530Y	pH	7.90	NA
2102171530Y	Temperature	18.8	ºC
2102171530Y	Turbidity	0.64	NTU
2102180923Y	Atmospheric Pressure	12.59	psia
2102180923Y	Conductivity	1534	µS/cm
2102180923Y	DTW	148.70	ft
2102180923Y	pH	7.65	NA
2102180923Y	Temperature	14.4	ºC
2102180923Y	Turbidity	0.50	NTU

Well ID	200-D-240	Event Date	3/16/2021	
Sample	**Parameter**		**Result**	**Units**
2103161000C	Conductivity		1345	µS/cm
2103161000C	DO		3.75	mg/L
2103161000C	ORP		-39	mV
2103161000C	pH		8.60	NA
2103161000C	Temperature		20.01	ºC
2103161000C	Turbidity		2.25	NTU
2103161005C	Conductivity		1335	µS/cm
2103161005C	DO		3.76	mg/L
2103161005C	ORP		-39	mV
2103161005C	pH		8.53	NA
2103161005C	Temperature		19.53	ºC
2103161005C	Turbidity		2.11	NTU
2103161010C	Conductivity		1335	µS/cm
2103161010C	DO		3.79	mg/L
2103161010C	ORP		-39	mV
2103161010C	pH		8.59	NA
2103161010C	Temperature		19.69	ºC
2103161010C	Turbidity		2.06	NTU

Well ID	200-F-225	Event Date	2/23/2021	
Sample	**Parameter**		**Result**	**Units**
2102231010Y	Atmospheric Pressure		12.48	psia
2102231010Y	Conductivity		1387	µS/cm
2102231010Y	DTW		176.06	ft
2102231010Y	Formation Pressure		42.62	psia
2102231010Y	pH		7.67	NA
2102231010Y	Temperature		20.0	ºC
2102231010Y	Turbidity		4.03	NTU
2102231106Y	Atmospheric Pressure		12.50	psia
2102231106Y	Conductivity		1371	µS/cm
2102231106Y	DTW		176.17	ft
2102231106Y	pH		7.45	NA
2102231106Y	Temperature		20.9	ºC
2102231106Y	Turbidity		2.92	NTU

Well ID 200-F-370 **Event Date** 2/22/2021

Sample	Parameter	Result	Units
2102220945Y	Atmospheric Pressure	12.60	psia
2102220945Y	Conductivity	1492	µS/cm
2102220945Y	DTW	175.72	ft
2102220945Y	Formation Pressure	104.91	psia
2102220945Y	pH	7.36	NA
2102220945Y	Temperature	20.4	ºC
2102220945Y	Turbidity	2.08	NTU
2102221031Y	Atmospheric Pressure	12.58	psia
2102221031Y	Conductivity	1475	µS/cm
2102221031Y	DTW	175.87	ft
2102221031Y	pH	7.27	NA
2102221031Y	Temperature	20.7	ºC
2102221031Y	Turbidity	1.51	NTU

Well ID 200-F-420 **Event Date** 2/22/2021

Sample	Parameter	Result	Units
2102221505Y	Atmospheric Pressure	12.53	psia
2102221505Y	Conductivity	1593	µS/cm
2102221505Y	DTW	175.87	ft
2102221505Y	Formation Pressure	126.92	psia
2102221505Y	pH	7.51	NA
2102221505Y	Temperature	22.3	ºC
2102221505Y	Turbidity	7.22	NTU
2102230845Y	Atmospheric Pressure	12.57	psia
2102230845Y	Conductivity	1605	µS/cm
2102230845Y	DTW	176.06	ft
2102230845Y	pH	7.37	NA
2102230845Y	Temperature	21.7	ºC
2102230845Y	Turbidity	4.41	NTU

Well ID	200-KV-150	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103101430C	Conductivity		1175	µS/cm
2103101430C	DO		1.03	mg/L
2103101430C	DTW		159.50	ft
2103101430C	ORP		49	mV
2103101430C	pH		7.68	NA
2103101430C	Temperature		22.34	ºC
2103101430C	Turbidity		5.79	NTU
2103101431C	Conductivity		1170	µS/cm
2103101431C	DO		1.01	mg/L
2103101431C	DTW		159.60	ft
2103101431C	ORP		43	mV
2103101431C	pH		7.74	NA
2103101431C	Temperature		22.35	ºC
2103101431C	Turbidity		5.08	NTU
2103101432C	Conductivity		1155	µS/cm
2103101432C	DO		1.04	mg/L
2103101432C	DTW		159.60	ft
2103101432C	ORP		37	mV
2103101432C	pH		7.79	NA
2103101432C	Temperature		22.30	ºC
2103101432C	Turbidity		5.02	NTU

Well ID	300-A-170	Event Date	2/18/2021	
Sample	**Parameter**		**Result**	**Units**
2102181015B	Conductivity		974	µS/cm
2102181015B	DO		4.27	mg/L
2102181015B	ORP		96	mV
2102181015B	pH		7.67	NA
2102181015B	Temperature		20.94	ºC
2102181015B	Turbidity		4.71	NTU
2102181016B	Conductivity		981	µS/cm
2102181016B	DO		4.24	mg/L
2102181016B	ORP		96	mV
2102181016B	pH		7.62	NA
2102181016B	Temperature		21.03	ºC
2102181016B	Turbidity		4.77	NTU
2102181017B	Conductivity		978	µS/cm
2102181017B	DO		4.13	mg/L
2102181017B	ORP		96	mV
2102181017B	pH		7.62	NA
2102181017B	Temperature		20.99	ºC
2102181017B	Turbidity		4.83	NTU

Well ID	300-B-166	Event Date	2/3/2021	
Sample	**Parameter**		**Result**	**Units**
2102031450C	Conductivity		850	µS/cm
2102031450C	DO		4.78	mg/L
2102031450C	DTW		163.55	ft
2102031450C	ORP		171	mV
2102031450C	pH		7.43	NA
2102031450C	Temperature		20.67	ºC
2102031450C	Turbidity		1.25	NTU
2102031451C	Conductivity		849	µS/cm
2102031451C	DO		4.55	mg/L
2102031451C	DTW		163.60	ft
2102031451C	ORP		175	mV
2102031451C	pH		7.44	NA
2102031451C	Temperature		20.71	ºC
2102031451C	Turbidity		1.29	NTU
2102031452C	Conductivity		836	µS/cm
2102031452C	DO		4.62	mg/L
2102031452C	DTW		163.60	ft
2102031452C	ORP		174	mV
2102031452C	pH		7.40	NA
2102031452C	Temperature		20.69	ºC
2102031452C	Turbidity		1.39	NTU

Well ID	300-E-138	Event Date	2/23/2021	
Sample	**Parameter**		**Result**	**Units**
2102231435Y	Atmospheric Pressure		12.40	psia
2102231435Y	Conductivity		1489	µS/cm
2102231435Y	DTW		138.30	ft
2102231435Y	Formation Pressure		22.49	psia
2102231435Y	pH		8.04	NA
2102231435Y	Temperature		20.7	ºC
2102231435Y	Turbidity		1.71	NTU
2102240840Y	Atmospheric Pressure		12.49	psia
2102240840Y	Conductivity		1506	µS/cm
2102240840Y	DTW		138.36	ft
2102240840Y	pH		7.86	NA
2102240840Y	Temperature		20.3	ºC
2102240840Y	Turbidity		1.12	NTU

Well ID 300-E-183 **Event Date** 2/24/2021

Sample	Parameter	Result	Units
2102241000Y	Atmospheric Pressure	12.47	psia
2102241000Y	Conductivity	1067	µS/cm
2102241000Y	DTW	138.36	ft
2102241000Y	Formation Pressure	42.03	psia
2102241000Y	pH	7.94	NA
2102241000Y	Temperature	19.4	ºC
2102241000Y	Turbidity	1.44	NTU
2102241041Y	Atmospheric Pressure	12.49	psia
2102241041Y	Conductivity	1036	µS/cm
2102241041Y	DTW	138.52	ft
2102241041Y	pH	8.01	NA
2102241041Y	Temperature	19.9	ºC
2102241041Y	Turbidity	1.07	NTU

Well ID 400-EV-131 **Event Date** 2/1/2021

Sample	Parameter	Result	Units
2102011455C	Conductivity	1460	µS/cm
2102011455C	DO	4.66	mg/L
2102011455C	DTW	142.70	ft
2102011455C	ORP	56	mV
2102011455C	pH	8.02	NA
2102011455C	Temperature	19.88	ºC
2102011455C	Turbidity	5.63	NTU
2102011456C	Conductivity	1470	µS/cm
2102011456C	DO	4.79	mg/L
2102011456C	DTW	142.70	ft
2102011456C	ORP	56	mV
2102011456C	pH	8.02	NA
2102011456C	Temperature	19.87	ºC
2102011456C	Turbidity	5.76	NTU
2102011457C	Conductivity	1460	µS/cm
2102011457C	DO	4.63	mg/L
2102011457C	DTW	172.70	ft
2102011457C	ORP	56	mV
2102011457C	pH	8.02	NA
2102011457C	Temperature	19.87	ºC
2102011457C	Turbidity	5.83	NTU

Well ID 400-FV-131 **Event Date** 4/21/2021

Sample	Parameter	Result	Units
2104210925C	Conductivity	1510	µS/cm
2104210925C	DO	3.13	mg/L
2104210925C	DTW	130.00	ft
2104210925C	ORP	113	mV
2104210925C	pH	8.46	NA
2104210925C	Temperature	18.95	ºC
2104210925C	Turbidity	2.15	NTU
2104210928C	Conductivity	1500	µS/cm
2104210928C	DO	2.81	mg/L
2104210928C	DTW	130.55	ft
2104210928C	ORP	109	mV
2104210928C	pH	8.50	NA
2104210928C	Temperature	19.07	ºC
2104210928C	Turbidity	1.92	NTU
2104210931C	Conductivity	1530	µS/cm
2104210931C	DO	2.57	mg/L
2104210931C	DTW	130.61	ft
2104210931C	ORP	107	mV
2104210931C	pH	8.53	NA
2104210931C	Temperature	19.21	ºC
2104210931C	Turbidity	1.78	NTU

Well ID 400-GV-125 **Event Date** 2/1/2021

Sample	Parameter	Result	Units
2102011015C	Conductivity	1500	µS/cm
2102011015C	DO	4.53	mg/L
2102011015C	ORP	71	mV
2102011015C	pH	7.67	NA
2102011015C	Temperature	18.80	ºC
2102011015C	Turbidity	0.71	NTU
2102011016C	Conductivity	1500	µS/cm
2102011016C	DO	4.01	mg/L
2102011016C	ORP	71	mV
2102011016C	pH	7.71	NA
2102011016C	Temperature	18.79	ºC
2102011016C	Turbidity	0.68	NTU
2102011017C	Conductivity	1490	µS/cm
2102011017C	DO	4.16	mg/L
2102011017C	ORP	71	mV
2102011017C	pH	7.71	NA
2102011017C	Temperature	18.81	ºC
2102011017C	Turbidity	0.73	NTU

Well ID 400-HV-147 **Event Date** 4/21/2021

Sample	Parameter	Result	Units
2104211400C	Conductivity	1960	µS/cm
2104211400C	DO	2.07	mg/L
2104211400C	DTW	139.84	ft
2104211400C	ORP	-7	mV
2104211400C	pH	9.05	NA
2104211400C	Temperature	21.95	ºC
2104211400C	Turbidity	0.90	NTU
2104211403C	Conductivity	1980	µS/cm
2104211403C	DO	1.98	mg/L
2104211403C	DTW	140.43	ft
2104211403C	ORP	-4	mV
2104211403C	pH	9.05	NA
2104211403C	Temperature	22.02	ºC
2104211403C	Turbidity	0.84	NTU
2104211406C	Conductivity	1980	µS/cm
2104211406C	DO	1.92	mg/L
2104211406C	DTW	140.49	ft
2104211406C	ORP	-3	mV
2104211406C	pH	9.08	NA
2104211406C	Temperature	22.09	ºC
2104211406C	Turbidity	0.72	NTU

Well ID 400-JV-150 **Event Date** 2/2/2021

Sample	Parameter	Result	Units
2102020950C	Conductivity	2070	µS/cm
2102020950C	DO	2.55	mg/L
2102020950C	ORP	4	mV
2102020950C	pH	8.08	NA
2102020950C	Temperature	20.66	ºC
2102020950C	Turbidity	1.03	NTU
2102020951C	Conductivity	2060	µS/cm
2102020951C	DO	2.47	mg/L
2102020951C	ORP	3	mV
2102020951C	pH	8.09	NA
2102020951C	Temperature	20.69	ºC
2102020951C	Turbidity	0.71	NTU
2102020952C	Conductivity	2070	µS/cm
2102020952C	DO	2.38	mg/L
2102020952C	ORP	3	mV
2102020952C	pH	8.10	NA
2102020952C	Temperature	20.71	ºC
2102020952C	Turbidity	0.69	NTU

Well ID 600-E-280 **Event Date** 2/4/2021

Sample	Parameter	Result	Units
2102041250Y	Atmospheric Pressure	12.45	psia
2102041250Y	Conductivity	1688	µS/cm
2102041250Y	DTW	261.09	ft
2102041250Y	Formation Pressure	52.85	psia
2102041250Y	pH	8.62	NA
2102041250Y	Temperature	22.2	ºC
2102041250Y	Turbidity	1.67	NTU
2102041331Y	Atmospheric Pressure	12.47	psia
2102041331Y	Conductivity	1694	µS/cm
2102041331Y	DTW	261.25	ft
2102041331Y	pH	8.40	NA
2102041331Y	Temperature	22.5	ºC
2102041331Y	Turbidity	1.34	NTU

Well ID 600-G-138 **Event Date** 4/27/2021

Sample	Parameter	Result	Units
2104270810B	Conductivity	2420	µS/cm
2104270810B	DTW	145.00	ft
2104270810B	pH	7.76	NA
2104270810B	Temperature	20.1	ºC
2104270810B	Turbidity	17.6	NTU
2104270840B	Conductivity	2440	µS/cm
2104270840B	DTW	145.61	ft
2104270840B	pH	7.68	NA
2104270840B	Temperature	19.8	ºC
2104270840B	Turbidity	8.75	NTU

Well ID	700-A-253	Event Date	3/22/2021	
Sample	**Parameter**		**Result**	**Units**
2103221000B	Conductivity		1111	µS/cm
2103221000B	DO		2.24	mg/L
2103221000B	DTW		195.85	ft
2103221000B	ORP		8	mV
2103221000B	pH		7.88	NA
2103221000B	Temperature		21.07	ºC
2103221000B	Turbidity		0.34	NTU
2103221005B	Conductivity		1110	µS/cm
2103221005B	DO		2.21	mg/L
2103221005B	DTW		195.85	ft
2103221005B	ORP		10	mV
2103221005B	pH		7.92	NA
2103221005B	Temperature		21.10	ºC
2103221005B	Turbidity		0.36	NTU
2103221010B	Conductivity		1111	µS/cm
2103221010B	DO		2.23	mg/L
2103221010B	DTW		195.85	ft
2103221010B	ORP		12	mV
2103221010B	pH		7.94	NA
2103221010B	Temperature		21.08	ºC
2103221010B	Turbidity		0.38	NTU

Well ID	700-D-186	Event Date	3/23/2021	
Sample	**Parameter**		**Result**	**Units**
2103230915B	Conductivity		1384	µS/cm
2103230915B	DO		3.61	mg/L
2103230915B	DTW		178.74	ft
2103230915B	ORP		25	mV
2103230915B	pH		8.84	NA
2103230915B	Temperature		20.23	ºC
2103230915B	Turbidity		0.17	NTU
2103230916B	Conductivity		1381	µS/cm
2103230916B	DO		3.74	mg/L
2103230916B	DTW		179.34	ft
2103230916B	ORP		25	mV
2103230916B	pH		8.73	NA
2103230916B	Temperature		20.11	ºC
2103230916B	Turbidity		0.20	NTU
2103230917B	Conductivity		1388	µS/cm
2103230917B	DO		3.69	mg/L
2103230917B	DTW		179.34	ft
2103230917B	ORP		25	mV
2103230917B	pH		8.74	NA
2103230917B	Temperature		20.22	ºC
2103230917B	Turbidity		0.35	NTU

Well ID	700-H-350	Event Date	3/23/2021	
Sample	**Parameter**		**Result**	**Units**
2103231440Y	Atmospheric Pressure		12.27	psia
2103231440Y	Conductivity		858	µS/cm
2103231440Y	DTW		255.44	ft
2103231440Y	Formation Pressure		64.56	psia
2103231440Y	pH		8.85	NA
2103231440Y	Temperature		21.3	ºC
2103231440Y	Turbidity		0.73	NTU
2103241315Y	Atmospheric Pressure		12.31	psia
2103241315Y	Conductivity		874	µS/cm
2103241315Y	DTW		255.63	ft
2103241315Y	pH		8.67	NA
2103241315Y	Temperature		20.8	ºC
2103241315Y	Turbidity		0.60	NTU

Well ID 700-H-535 **Event Date** 3/22/2021

Sample	Parameter	Result	Units
2103221355Y	Atmospheric Pressure	12.32	psia
2103221355Y	Conductivity	638	µS/cm
2103221355Y	DTW	255.27	ft
2103221355Y	Formation Pressure	144.35	psia
2103221355Y	pH	8.81	NA
2103221355Y	Temperature	20.9	ºC
2103221355Y	Turbidity	3.16	NTU
2103231035Y	Atmospheric Pressure	12.30	psia
2103231035Y	Conductivity	657	µS/cm
2103231035Y	DTW	255.44	ft
2103231035Y	pH	8.70	NA
2103231035Y	Temperature	19.5	ºC
2103231035Y	Turbidity	2.26	NTU

Well ID 700-H-670 **Event Date** 3/22/2021

Sample	Parameter	Result	Units
2103220950Y	Atmospheric Pressure	12.33	psia
2103220950Y	Conductivity	714	µS/cm
2103220950Y	DTW	255.10	ft
2103220950Y	Formation Pressure	202.55	psia
2103220950Y	pH	8.67	NA
2103220950Y	Temperature	19.5	ºC
2103220950Y	Turbidity	2.67	NTU
2103221110Y	Atmospheric Pressure	12.31	psia
2103221110Y	Conductivity	730	µS/cm
2103221110Y	DTW	255.27	ft
2103221110Y	pH	8.51	NA
2103221110Y	Temperature	19.8	ºC
2103221110Y	Turbidity	1.80	NTU

Well ID	700-J-200	Event Date	3/22/2021	
Sample	**Parameter**		**Result**	**Units**
2103220840B	Conductivity		1275	µS/cm
2103220840B	DO		4.94	mg/L
2103220840B	DTW		121.84	ft
2103220840B	ORP		40	mV
2103220840B	pH		7.77	NA
2103220840B	Temperature		20.83	ºC
2103220840B	Turbidity		0.57	NTU
2103220845B	Conductivity		1278	µS/cm
2103220845B	DO		4.92	mg/L
2103220845B	DTW		121.84	ft
2103220845B	ORP		38	mV
2103220845B	pH		7.74	NA
2103220845B	Temperature		20.76	ºC
2103220845B	Turbidity		0.64	NTU
2103220850B	Conductivity		1274	µS/cm
2103220850B	DO		4.91	mg/L
2103220850B	DTW		121.84	ft
2103220850B	ORP		39	mV
2103220850B	pH		7.76	NA
2103220850B	Temperature		20.80	ºC
2103220850B	Turbidity		0.48	NTU

Well ID	BLM-10-517	Event Date	4/1/2021	
Sample	**Parameter**		**Result**	**Units**
2104011340B	Conductivity		1119	µS/cm
2104011340B	DO		4.82	mg/L
2104011340B	DTW		494.90	ft
2104011340B	ORP		170	mV
2104011340B	pH		6.97	NA
2104011340B	Temperature		20.12	ºC
2104011340B	Turbidity		2.17	NTU
2104011342B	Conductivity		1123	µS/cm
2104011342B	DO		4.78	mg/L
2104011342B	DTW		494.92	ft
2104011342B	ORP		173	mV
2104011342B	pH		6.95	NA
2104011342B	Temperature		20.19	ºC
2104011342B	Turbidity		0.68	NTU
2104011344B	Conductivity		1119	µS/cm
2104011344B	DO		4.82	mg/L
2104011344B	DTW		494.92	ft
2104011344B	ORP		170	mV
2104011344B	pH		6.98	NA
2104011344B	Temperature		20.14	ºC
2104011344B	Turbidity		1.27	NTU

Well ID	BLM-13-300	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040900C	Conductivity		1283	µS/cm
2103040900C	DO		5.74	mg/L
2103040900C	DTW		247.89	ft
2103040900C	ORP		-32	mV
2103040900C	pH		8.10	NA
2103040900C	Temperature		20.12	ºC
2103040900C	Turbidity		0.24	NTU
2103040902C	Conductivity		1280	µS/cm
2103040902C	DO		5.76	mg/L
2103040902C	DTW		248.39	ft
2103040902C	ORP		-31	mV
2103040902C	pH		8.09	NA
2103040902C	Temperature		20.15	ºC
2103040902C	Turbidity		0.27	NTU
2103040904C	Conductivity		1281	µS/cm
2103040904C	DO		5.75	mg/L
2103040904C	DTW		248.42	ft
2103040904C	ORP		-31	mV
2103040904C	pH		8.11	NA
2103040904C	Temperature		20.11	ºC
2103040904C	Turbidity		0.26	NTU

Well ID	BLM-14-327	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103151500C	Conductivity		1328	µS/cm
2103151500C	DO		6.25	mg/L
2103151500C	DTW		277.95	ft
2103151500C	ORP		-25	mV
2103151500C	pH		8.85	NA
2103151500C	Temperature		20.31	ºC
2103151500C	Turbidity		3.03	NTU
2103151501C	Conductivity		1330	µS/cm
2103151501C	DO		5.80	mg/L
2103151501C	DTW		277.95	ft
2103151501C	ORP		-25	mV
2103151501C	pH		8.85	NA
2103151501C	Temperature		20.27	ºC
2103151501C	Turbidity		2.95	NTU
2103151502C	Conductivity		1337	µS/cm
2103151502C	DO		5.72	mg/L
2103151502C	DTW		277.95	ft
2103151502C	ORP		-25	mV
2103151502C	pH		8.87	NA
2103151502C	Temperature		20.38	ºC
2103151502C	Turbidity		2.87	NTU

Well ID	BLM-21-400	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102080900C	Conductivity		1120	µS/cm
2102080900C	DTW		336.74	ft
2102080900C	pH		7.85	NA
2102080900C	Temperature		17.5	ºC
2102080900C	Turbidity		1.39	NTU
2102080902C	Conductivity		1116	µS/cm
2102080902C	DTW		336.89	ft
2102080902C	pH		7.92	NA
2102080902C	Temperature		17.7	ºC
2102080902C	Turbidity		1.14	NTU
2102080904C	Conductivity		1110	µS/cm
2102080904C	DTW		336.89	ft
2102080904C	pH		7.96	NA
2102080904C	Temperature		18.0	ºC
2102080904C	Turbidity		1.12	NTU

Well ID	BLM-23-431	Event Date	2/4/2021	
Sample	**Parameter**		**Result**	**Units**
2102041301C	Conductivity		1384	µS/cm
2102041301C	DTW		330.90	ft
2102041301C	pH		7.35	NA
2102041301C	Temperature		20.0	ºC
2102041301C	Turbidity		1.09	NTU
2102041320C	Conductivity		1383	µS/cm
2102041320C	DTW		330.95	ft
2102041320C	pH		7.37	NA
2102041320C	Temperature		21.6	ºC
2102041320C	Turbidity		0.99	NTU

Well ID	BLM-32-543	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102020945A	Conductivity		1009	µS/cm
2102020945A	pH		8.20	NA
2102020945A	Temperature		17.9	ºC
2102020945A	Turbidity		1.43	NTU
2102021440A	Conductivity		1017	µS/cm
2102021440A	pH		7.80	NA
2102021440A	Temperature		20.5	ºC
2102021440A	Turbidity		0.37	NTU

Well ID	BLM-32-571	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021000A	Conductivity		970	µS/cm
2102021000A	pH		8.40	NA
2102021000A	Temperature		18.7	ºC
2102021000A	Turbidity		0.39	NTU
2102021045A	Conductivity		1008	µS/cm
2102021045A	pH		8.01	NA
2102021045A	Temperature		19.4	ºC
2102021045A	Turbidity		0.22	NTU

Well ID	BLM-32-632	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021009A	Conductivity		965	µS/cm
2102021009A	pH		8.56	NA
2102021009A	Temperature		18.0	ºC
2102021009A	Turbidity		0.69	NTU
2102021018A	Conductivity		967	µS/cm
2102021018A	pH		8.03	NA
2102021018A	Temperature		19.3	ºC
2102021018A	Turbidity		0.40	NTU

Well ID **BLM-39-385** **Event Date** **4/7/2021**

Sample	Parameter	Result	Units
2104071405Y	Atmospheric Pressure	12.24	psia
2104071405Y	Conductivity	1139	µS/cm
2104071405Y	DTW	368.25	ft
2104071405Y	Formation Pressure	25.06	psia
2104071405Y	pH	8.33	NA
2104071405Y	Temperature	23.4	ºC
2104071405Y	Turbidity	4.68	NTU
2104071501Y	Atmospheric Pressure	12.21	psia
2104071501Y	Conductivity	1127	µS/cm
2104071501Y	DTW	368.33	ft
2104071501Y	pH	8.39	NA
2104071501Y	Temperature	23.7	ºC
2104071501Y	Turbidity	3.31	NTU

Well ID **BLM-39-560** **Event Date** **4/7/2021**

Sample	Parameter	Result	Units
2104070945Y	Atmospheric Pressure	12.20	psia
2104070945Y	Conductivity	694	µS/cm
2104070945Y	DTW	368.10	ft
2104070945Y	Formation Pressure	97.35	psia
2104070945Y	pH	8.23	NA
2104070945Y	Temperature	21.3	ºC
2104070945Y	Turbidity	2.06	NTU
2104071050Y	Atmospheric Pressure	12.21	psia
2104071050Y	Conductivity	680	µS/cm
2104071050Y	DTW	368.25	ft
2104071050Y	pH	8.12	NA
2104071050Y	Temperature	21.5	ºC
2104071050Y	Turbidity	1.60	NTU

Well ID	BLM-40-517	Event Date	4/1/2021	
Sample	**Parameter**		**Result**	**Units**
2104011020C	Conductivity		957	µS/cm
2104011020C	DTW		523.69	ft
2104011020C	pH		8.71	NA
2104011020C	Temperature		10.5	ºC
2104011020C	Turbidity		0.80	NTU
2104011025C	Conductivity		957	µS/cm
2104011025C	DTW		523.69	ft
2104011025C	pH		8.63	NA
2104011025C	Temperature		10.8	ºC
2104011025C	Turbidity		0.92	NTU
2104011030C	Conductivity		958	µS/cm
2104011030C	DTW		523.69	ft
2104011030C	pH		8.50	NA
2104011030C	Temperature		10.9	ºC
2104011030C	Turbidity		0.84	NTU

Well ID	BLM-40-595	Event Date	4/12/2021	
Sample	**Parameter**		**Result**	**Units**
2104121400C	Conductivity		619	µS/cm
2104121400C	DO		4.80	mg/L
2104121400C	DTW		521.73	ft
2104121400C	ORP		33	mV
2104121400C	pH		7.96	NA
2104121400C	Temperature		20.95	ºC
2104121400C	Turbidity		0.61	NTU
2104121403C	Conductivity		617	µS/cm
2104121403C	DO		4.50	mg/L
2104121403C	DTW		522.73	ft
2104121403C	ORP		33	mV
2104121403C	pH		7.99	NA
2104121403C	Temperature		20.85	ºC
2104121403C	Turbidity		0.63	NTU
2104121406C	Conductivity		613	µS/cm
2104121406C	DO		4.34	mg/L
2104121406C	DTW		522.73	ft
2104121406C	ORP		34	mV
2104121406C	pH		8.01	NA
2104121406C	Temperature		20.89	ºC
2104121406C	Turbidity		0.50	NTU

Well ID	BLM-40-688	Event Date	4/14/2021	
Sample	**Parameter**		**Result**	**Units**
2104141055C	Conductivity		800	µS/cm
2104141055C	DO		3.98	mg/L
2104141055C	DTW		509.96	ft
2104141055C	ORP		1	mV
2104141055C	pH		8.21	NA
2104141055C	Temperature		20.80	ºC
2104141055C	Turbidity		0.81	NTU
2104141058C	Conductivity		794	µS/cm
2104141058C	DO		3.80	mg/L
2104141058C	DTW		510.21	ft
2104141058C	ORP		0	mV
2104141058C	pH		8.17	NA
2104141058C	Temperature		20.86	ºC
2104141058C	Turbidity		0.78	NTU
2104141101C	Conductivity		788	µS/cm
2104141101C	DO		3.64	mg/L
2104141101C	DTW		510.21	ft
2104141101C	ORP		-2	mV
2104141101C	pH		8.15	NA
2104141101C	Temperature		20.93	ºC
2104141101C	Turbidity		0.72	NTU

Well ID	BLM-41-420	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201410C	Conductivity		1119	µS/cm
2104201410C	DO		3.56	mg/L
2104201410C	DTW		353.04	ft
2104201410C	ORP		68	mV
2104201410C	pH		8.92	NA
2104201410C	Temperature		21.83	ºC
2104201410C	Turbidity		1.59	NTU
2104201413C	Conductivity		1108	µS/cm
2104201413C	DO		3.38	mg/L
2104201413C	DTW		353.90	ft
2104201413C	ORP		67	mV
2104201413C	pH		8.95	NA
2104201413C	Temperature		21.91	ºC
2104201413C	Turbidity		1.28	NTU
2104201416C	Conductivity		1102	µS/cm
2104201416C	DO		3.22	mg/L
2104201416C	DTW		353.90	ft
2104201416C	ORP		64	mV
2104201416C	pH		8.96	NA
2104201416C	Temperature		22.03	ºC
2104201416C	Turbidity		1.23	NTU

Well ID	BLM-41-670	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104200915C	Conductivity		1056	µS/cm
2104200915C	DO		2.29	mg/L
2104200915C	DTW		392.31	ft
2104200915C	ORP		-398	mV
2104200915C	pH		8.44	NA
2104200915C	Temperature		20.81	ºC
2104200915C	Turbidity		4.46	NTU
2104200918C	Conductivity		1051	µS/cm
2104200918C	DO		2.11	mg/L
2104200918C	DTW		392.66	ft
2104200918C	ORP		-400	mV
2104200918C	pH		8.49	NA
2104200918C	Temperature		20.87	ºC
2104200918C	Turbidity		3.82	NTU
2104200921C	Conductivity		1043	µS/cm
2104200921C	DO		2.00	mg/L
2104200921C	DTW		392.66	ft
2104200921C	ORP		-403	mV
2104200921C	pH		8.53	NA
2104200921C	Temperature		20.94	ºC
2104200921C	Turbidity		3.18	NTU

Well ID	BLM-42-569	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103100850B	Conductivity		649	µS/cm
2103100850B	DO		3.71	mg/L
2103100850B	ORP		62	mV
2103100850B	pH		8.04	NA
2103100850B	Temperature		20.38	ºC
2103100850B	Turbidity		0.51	NTU
2103100855B	Conductivity		645	µS/cm
2103100855B	DO		3.63	mg/L
2103100855B	ORP		61	mV
2103100855B	pH		8.01	NA
2103100855B	Temperature		20.47	ºC
2103100855B	Turbidity		0.53	NTU
2103100859B	Conductivity		638	µS/cm
2103100859B	DO		3.50	mg/L
2103100859B	ORP		62	mV
2103100859B	pH		7.96	NA
2103100859B	Temperature		20.55	ºC
2103100859B	Turbidity		0.44	NTU

Well ID	BLM-42-709	Event Date	3/10/2021	
Sample	**Parameter**		**Result**	**Units**
2103101020B	Conductivity		655	µS/cm
2103101020B	DO		3.36	mg/L
2103101020B	ORP		34	mV
2103101020B	pH		8.34	NA
2103101020B	Temperature		20.90	ºC
2103101020B	Turbidity		0.30	NTU
2103101024B	Conductivity		659	µS/cm
2103101024B	DO		3.30	mg/L
2103101024B	ORP		34	mV
2103101024B	pH		8.32	NA
2103101024B	Temperature		21.06	ºC
2103101024B	Turbidity		0.26	NTU
2103101028B	Conductivity		664	µS/cm
2103101028B	DO		3.20	mg/L
2103101028B	ORP		32	mV
2103101028B	pH		8.31	NA
2103101028B	Temperature		21.13	ºC
2103101028B	Turbidity		0.32	NTU

Well ID	BLM-5-527	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103151335B	Conductivity		1061	µS/cm
2103151335B	DTW		509.05	ft
2103151335B	pH		7.84	NA
2103151335B	Temperature		20.6	ºC
2103151335B	Turbidity		0.64	NTU
2103151338B	Conductivity		1053	µS/cm
2103151338B	DTW		509.05	ft
2103151338B	pH		7.81	NA
2103151338B	Temperature		20.7	ºC
2103151338B	Turbidity		0.60	NTU
2103151341B	Conductivity		1050	µS/cm
2103151341B	DTW		509.05	ft
2103151341B	pH		7.79	NA
2103151341B	Temperature		20.7	ºC
2103151341B	Turbidity		0.56	NTU

Well ID	BLM-6-488	Event Date	4/14/2021	
Sample	**Parameter**		**Result**	**Units**
2104141415C	Conductivity		1520	µS/cm
2104141415C	DO		3.19	mg/L
2104141415C	DTW		360.04	ft
2104141415C	ORP		-30	mV
2104141415C	pH		8.42	NA
2104141415C	Temperature		21.01	ºC
2104141415C	Turbidity		1.68	NTU
2104141418C	Conductivity		1530	µS/cm
2104141418C	DO		3.03	mg/L
2104141418C	DTW		360.10	ft
2104141418C	ORP		-34	mV
2104141418C	pH		8.41	NA
2104141418C	Temperature		21.13	ºC
2104141418C	Turbidity		1.58	NTU
2104141421C	Conductivity		1580	µS/cm
2104141421C	DO		2.89	mg/L
2104141421C	DTW		360.10	ft
2104141421C	ORP		-39	mV
2104141421C	pH		8.38	NA
2104141421C	Temperature		21.19	ºC
2104141421C	Turbidity		1.47	NTU

Well ID	BLM-7-509	Event Date	3/1/2021	
Sample	**Parameter**		**Result**	**Units**
2103010930C	Conductivity		1144	µS/cm
2103010930C	DO		3.89	mg/L
2103010930C	DTW		495.57	ft
2103010930C	ORP		34	mV
2103010930C	pH		8.46	NA
2103010930C	Temperature		29.52	ºC
2103010930C	Turbidity		0.68	NTU
2103010932C	Conductivity		1141	µS/cm
2103010932C	DO		3.86	mg/L
2103010932C	DTW		495.71	ft
2103010932C	ORP		33	mV
2103010932C	pH		8.41	NA
2103010932C	Temperature		20.51	ºC
2103010932C	Turbidity		0.63	NTU
2103010934C	Conductivity		1143	µS/cm
2103010934C	DO		3.88	mg/L
2103010934C	DTW		495.71	ft
2103010934C	ORP		33	mV
2103010934C	pH		8.40	NA
2103010934C	Temperature		20.52	ºC
2103010934C	Turbidity		0.62	NTU

Well ID	BLM-9-419	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021310C	Conductivity		998	µS/cm
2103021310C	DO		5.20	mg/L
2103021310C	DTW		378.18	ft
2103021310C	ORP		-58	mV
2103021310C	pH		8.69	NA
2103021310C	Temperature		20.10	ºC
2103021310C	Turbidity		2.82	NTU
2103021315C	Conductivity		993	µS/cm
2103021315C	DO		5.31	mg/L
2103021315C	DTW		378.39	ft
2103021315C	ORP		-59	mV
2103021315C	pH		8.76	NA
2103021315C	Temperature		19.76	ºC
2103021315C	Turbidity		2.76	NTU
2103021320C	Conductivity		999	µS/cm
2103021320C	DO		5.01	mg/L
2103021320C	DTW		378.39	ft
2103021320C	ORP		-60	mV
2103021320C	pH		8.90	NA
2103021320C	Temperature		19.80	ºC
2103021320C	Turbidity		2.42	NTU

Well ID	BW-1-268	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103091310B	Conductivity		1389	µS/cm
2103091310B	DO		5.31	mg/L
2103091310B	DTW		168.70	ft
2103091310B	ORP		122	mV
2103091310B	pH		6.93	NA
2103091310B	Temperature		21.89	ºC
2103091310B	Turbidity		6.06	NTU
2103091312B	Conductivity		1382	µS/cm
2103091312B	DO		5.12	mg/L
2103091312B	DTW		168.85	ft
2103091312B	ORP		121	mV
2103091312B	pH		6.98	NA
2103091312B	Temperature		22.02	ºC
2103091312B	Turbidity		5.13	NTU
2103091314B	Conductivity		1370	µS/cm
2103091314B	DO		4.94	mg/L
2103091314B	DTW		168.93	ft
2103091314B	ORP		120	mV
2103091314B	pH		7.04	NA
2103091314B	Temperature		22.08	ºC
2103091314B	Turbidity		4.60	NTU

Well ID	BW-3-180	Event Date	4/19/2021	
Sample	**Parameter**		**Result**	**Units**
2104190940C	Conductivity		2370	µS/cm
2104190940C	DO		2.44	mg/L
2104190940C	DTW		172.50	ft
2104190940C	ORP		0	mV
2104190940C	pH		8.36	NA
2104190940C	Temperature		20.65	ºC
2104190940C	Turbidity		46.2	NTU
2104190943C	Conductivity		2420	µS/cm
2104190943C	DO		2.31	mg/L
2104190943C	DTW		173.68	ft
2104190943C	ORP		-3	mV
2104190943C	pH		8.39	NA
2104190943C	Temperature		20.71	ºC
2104190943C	Turbidity		41.8	NTU
2104190946C	Conductivity		2440	µS/cm
2104190946C	DO		2.23	mg/L
2104190946C	DTW		173.76	ft
2104190946C	ORP		-5	mV
2104190946C	pH		8.41	NA
2104190946C	Temperature		20.74	ºC
2104190946C	Turbidity		35.0	NTU

Well ID	BW-6-355	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111025B	Conductivity		1022	µS/cm
2103111025B	DTW		245.30	ft
2103111025B	pH		8.30	NA
2103111025B	Temperature		19.1	ºC
2103111025B	Turbidity		0.76	NTU
2103111028B	Conductivity		1029	µS/cm
2103111028B	DTW		246.12	ft
2103111028B	pH		8.26	NA
2103111028B	Temperature		19.1	ºC
2103111028B	Turbidity		0.72	NTU
2103111031B	Conductivity		1033	µS/cm
2103111031B	DTW		246.12	ft
2103111031B	pH		8.24	NA
2103111031B	Temperature		19.3	ºC
2103111031B	Turbidity		0.63	NTU

Well ID	JER-1-483	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080830A	Conductivity		1310	µS/cm
2104080830A	pH		8.45	NA
2104080830A	Temperature		19.2	ºC
2104080830A	Turbidity		0.44	NTU
2104080845A	Conductivity		1310	µS/cm
2104080845A	pH		8.47	NA
2104080845A	Temperature		19.3	ºC
2104080845A	Turbidity		0.49	NTU

Well ID	JER-1-563	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080850A	Conductivity		1382	µS/cm
2104080850A	pH		8.38	NA
2104080850A	Temperature		20.0	ºC
2104080850A	Turbidity		0.29	NTU
2104080905A	Conductivity		1379	µS/cm
2104080905A	pH		8.41	NA
2104080905A	Temperature		20.1	ºC
2104080905A	Turbidity		0.21	NTU

Well ID	JER-1-683	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104080910A	Conductivity		1381	µS/cm
2104080910A	pH		8.31	NA
2104080910A	Temperature		19.7	ºC
2104080910A	Turbidity		0.34	NTU
2104080917A	Conductivity		1383	µS/cm
2104080917A	pH		8.38	NA
2104080917A	Temperature		19.9	ºC
2104080917A	Turbidity		0.43	NTU

Well ID	JER-2-504	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104200950A	Conductivity		1032	µS/cm
2104200950A	pH		7.87	NA
2104200950A	Temperature		20.9	ºC
2104200950A	Turbidity		0.84	NTU
2104201010A	Conductivity		1034	µS/cm
2104201010A	pH		7.81	NA
2104201010A	Temperature		20.8	ºC
2104201010A	Turbidity		0.78	NTU

Well ID	JER-2-584	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201015A	Conductivity		1020	µS/cm
2104201015A	pH		7.83	NA
2104201015A	Temperature		21.4	ºC
2104201015A	Turbidity		0.86	NTU
2104201025A	Conductivity		1017	µS/cm
2104201025A	pH		7.78	NA
2104201025A	Temperature		21.6	ºC
2104201025A	Turbidity		0.84	NTU

Well ID	JER-2-684	Event Date	4/20/2021	
Sample	**Parameter**		**Result**	**Units**
2104201030A	Conductivity		1058	µS/cm
2104201030A	pH		7.79	NA
2104201030A	Temperature		21.2	ºC
2104201030A	Turbidity		0.72	NTU
2104201045A	Conductivity		1061	µS/cm
2104201045A	pH		7.75	NA
2104201045A	Temperature		21.2	ºC
2104201045A	Turbidity		0.76	NTU

Well ID	JP-1-424	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104131350C	Conductivity		1097	µS/cm
2104131350C	DO		5.40	mg/L
2104131350C	DTW		411.70	ft
2104131350C	ORP		-4	mV
2104131350C	pH		8.50	NA
2104131350C	Temperature		21.38	ºC
2104131350C	Turbidity		0.51	NTU
2104131353C	Conductivity		1083	µS/cm
2104131353C	DO		5.25	mg/L
2104131353C	DTW		411.82	ft
2104131353C	ORP		-3	mV
2104131353C	pH		8.48	NA
2104131353C	Temperature		21.45	ºC
2104131353C	Turbidity		0.42	NTU
2104131356C	Conductivity		1078	µS/cm
2104131356C	DO		5.09	mg/L
2104131356C	DTW		411.82	ft
2104131356C	ORP		-3	mV
2104131356C	pH		8.48	NA
2104131356C	Temperature		21.42	ºC
2104131356C	Turbidity		0.33	NTU

Well ID	JP-2-447	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130950C	Conductivity		1143	µS/cm
2104130950C	DO		5.55	mg/L
2104130950C	DTW		412.77	ft
2104130950C	ORP		49	mV
2104130950C	pH		7.84	NA
2104130950C	Temperature		20.06	ºC
2104130950C	Turbidity		0.44	NTU
2104130953C	Conductivity		1138	µS/cm
2104130953C	DO		5.16	mg/L
2104130953C	DTW		412.82	ft
2104130953C	ORP		49	mV
2104130953C	pH		7.85	NA
2104130953C	Temperature		20.14	ºC
2104130953C	Turbidity		0.40	NTU
2104130956C	Conductivity		1129	µS/cm
2104130956C	DO		4.90	mg/L
2104130956C	DTW		412.82	ft
2104130956C	ORP		49	mV
2104130956C	pH		7.85	NA
2104130956C	Temperature		20.21	ºC
2104130956C	Turbidity		0.26	NTU

Well ID	JP-3-509	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150855C	Conductivity		1096	µS/cm
2104150855C	DO		5.01	mg/L
2104150855C	ORP		61	mV
2104150855C	pH		8.43	NA
2104150855C	Temperature		20.02	ºC
2104150855C	Turbidity		0.31	NTU
2104150858C	Conductivity		1101	µS/cm
2104150858C	DO		4.91	mg/L
2104150858C	ORP		61	mV
2104150858C	pH		8.40	NA
2104150858C	Temperature		20.14	ºC
2104150858C	Turbidity		0.29	NTU
2104150901C	Conductivity		1098	µS/cm
2104150901C	DO		4.63	mg/L
2104150901C	ORP		60	mV
2104150901C	pH		8.40	NA
2104150901C	Temperature		20.22	ºC
2104150901C	Turbidity		0.26	NTU

Well ID	JP-3-689	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151025C	Conductivity		678	µS/cm
2104151025C	DO		5.97	mg/L
2104151025C	ORP		23	mV
2104151025C	pH		8.75	NA
2104151025C	Temperature		20.42	ºC
2104151025C	Turbidity		0.62	NTU
2104151028C	Conductivity		689	µS/cm
2104151028C	DO		5.43	mg/L
2104151028C	ORP		24	mV
2104151028C	pH		8.71	NA
2104151028C	Temperature		20.54	ºC
2104151028C	Turbidity		0.55	NTU
2104151031C	Conductivity		693	µS/cm
2104151031C	DO		5.12	mg/L
2104151031C	ORP		24	mV
2104151031C	pH		8.68	NA
2104151031C	Temperature		20.62	ºC
2104151031C	Turbidity		0.47	NTU

Well ID	NASA 3	Event Date	3/17/2021	
Sample	**Parameter**		**Result**	**Units**
2103170855B	Conductivity		999	µS/cm
2103170855B	DO		4.10	mg/L
2103170855B	DTW		125.65	ft
2103170855B	ORP		8	mV
2103170855B	pH		7.92	NA
2103170855B	Temperature		17.42	ºC
2103170855B	Turbidity		0.86	NTU
2103170857B	Conductivity		1000	µS/cm
2103170857B	DO		4.05	mg/L
2103170857B	ORP		7	mV
2103170857B	pH		7.93	NA
2103170857B	Temperature		17.45	ºC
2103170857B	Turbidity		0.49	NTU
2103170859B	Conductivity		1009	µS/cm
2103170859B	DO		4.12	mg/L
2103170859B	DTW		125.80	ft
2103170859B	ORP		7	mV
2103170859B	pH		7.90	NA
2103170859B	Temperature		17.37	ºC
2103170859B	Turbidity		0.58	NTU

Well ID **PL-10-484** **Event Date** **4/6/2021**

Sample	Parameter	Result	Units
2104060920Y	Atmospheric Pressure	12.44	psia
2104060920Y	Conductivity	1102	µS/cm
2104060920Y	DTW	463.61	ft
2104060920Y	Formation Pressure	22.19	psia
2104060920Y	pH	8.49	NA
2104060920Y	Temperature	22.1	ºC
2104060920Y	Turbidity	0.88	NTU
2104061037Y	Atmospheric Pressure	12.42	psia
2104061037Y	Conductivity	1085	µS/cm
2104061037Y	DTW	463.69	ft
2104061037Y	pH	8.43	NA
2104061037Y	Temperature	22.5	ºC
2104061037Y	Turbidity	0.80	NTU

Well ID **PL-10-592** **Event Date** **4/5/2021**

Sample	Parameter	Result	Units
2104051430Y	Atmospheric Pressure	12.48	psia
2104051430Y	Conductivity	1107	µS/cm
2104051430Y	DTW	463.48	ft
2104051430Y	Formation Pressure	69.02	psia
2104051430Y	pH	8.25	NA
2104051430Y	Temperature	25.1	ºC
2104051430Y	Turbidity	1.41	NTU
2104051524Y	Atmospheric Pressure	12.49	psia
2104051524Y	Conductivity	1117	µS/cm
2104051524Y	DTW	463.61	ft
2104051524Y	pH	8.36	NA
2104051524Y	Temperature	24.8	ºC
2104051524Y	Turbidity	1.04	NTU

Well ID PL-10-813 **Event Date** 4/1/2021

Sample	Parameter	Result	Units
2104011450Y	Atmospheric Pressure	12.42	psia
2104011450Y	Conductivity	1011	µS/cm
2104011450Y	DTW	462.95	ft
2104011450Y	Formation Pressure	167.65	psia
2104011450Y	pH	8.47	NA
2104011450Y	Temperature	22.8	ºC
2104011450Y	Turbidity	3.75	NTU
2104050900Y	Atmospheric Pressure	12.45	psia
2104050900Y	Conductivity	1027	µS/cm
2104050900Y	DTW	463.26	ft
2104050900Y	pH	8.53	NA
2104050900Y	Temperature	21.6	ºC
2104050900Y	Turbidity	2.83	NTU

Well ID PL-10-962 **Event Date** 4/5/2021

Sample	Parameter	Result	Units
2104051025Y	Atmospheric Pressure	12.42	psia
2104051025Y	Conductivity	1014	µS/cm
2104051025Y	DTW	463.26	ft
2104051025Y	Formation Pressure	239.09	psia
2104051025Y	pH	8.77	NA
2104051025Y	Temperature	24.4	ºC
2104051025Y	Turbidity	1.40	NTU
2104051310Y	Atmospheric Pressure	12.40	psia
2104051310Y	Conductivity	1030	µS/cm
2104051310Y	DTW	463.48	ft
2104051310Y	pH	8.67	NA
2104051310Y	Temperature	24.4	ºC
2104051310Y	Turbidity	1.17	NTU

Well ID PL-11-470 **Event Date** 3/2/2021

Sample	Parameter	Result	Units
2103021015A	Conductivity	1137	µS/cm
2103021015A	pH	8.13	NA
2103021015A	Temperature	15.0	ºC
2103021015A	Turbidity	0.24	NTU
2103021301A	Conductivity	1158	µS/cm
2103021301A	pH	7.27	NA
2103021301A	Temperature	19.8	ºC
2103021301A	Turbidity	0.58	NTU

Well ID	PL-11-530	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021030A	Conductivity		1133	µS/cm
2103021030A	pH		8.17	NA
2103021030A	Temperature		16.7	ºC
2103021030A	Turbidity		0.84	NTU
2103021313A	Conductivity		1136	µS/cm
2103021313A	pH		7.15	NA
2103021313A	Temperature		18.0	ºC
2103021313A	Turbidity		0.66	NTU

Well ID	PL-11-710	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021045A	Conductivity		1141	µS/cm
2103021045A	pH		7.88	NA
2103021045A	Temperature		16.4	ºC
2103021045A	Turbidity		0.44	NTU
2103021331A	Conductivity		1168	µS/cm
2103021331A	pH		7.27	NA
2103021331A	Temperature		19.8	ºC
2103021331A	Turbidity		0.38	NTU

Well ID	PL-11-820	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040845A	Conductivity		1049	µS/cm
2103040845A	pH		7.39	NA
2103040845A	Temperature		17.3	ºC
2103040845A	Turbidity		0.48	NTU
2103040926A	Conductivity		1046	µS/cm
2103040926A	pH		7.43	NA
2103040926A	Temperature		17.4	ºC
2103040926A	Turbidity		0.37	NTU

Well ID	PL-11-980	Event Date	3/4/2021	
Sample	**Parameter**		**Result**	**Units**
2103040900A	Conductivity		977	µS/cm
2103040900A	pH		8.21	NA
2103040900A	Temperature		17.5	ºC
2103040900A	Turbidity		0.30	NTU
2103040905A	Conductivity		977	µS/cm
2103040905A	pH		8.23	NA
2103040905A	Temperature		17.6	ºC
2103040905A	Turbidity		0.32	NTU

Well ID	PL-12-570	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102081500B	Conductivity		1088	µS/cm
2102081500B	DO		3.65	mg/L
2102081500B	DTW		482.52	ft
2102081500B	ORP		64	mV
2102081500B	pH		7.80	NA
2102081500B	Temperature		20.38	ºC
2102081500B	Turbidity		0.51	NTU
2102081502B	Conductivity		1092	µS/cm
2102081502B	DO		3.71	mg/L
2102081502B	DTW		482.55	ft
2102081502B	ORP		63	mV
2102081502B	pH		7.76	NA
2102081502B	Temperature		20.47	ºC
2102081502B	Turbidity		0.69	NTU
2102081504B	Conductivity		1084	µS/cm
2102081504B	DO		3.75	mg/L
2102081504B	DTW		482.55	ft
2102081504B	ORP		63	mV
2102081504B	pH		7.73	NA
2102081504B	Temperature		20.50	ºC
2102081504B	Turbidity		0.44	NTU

Well ID	PL-12-800	Event Date	2/8/2021	
Sample	**Parameter**		**Result**	**Units**
2102080940B	Conductivity		1096	µS/cm
2102080940B	DO		5.00	mg/L
2102080940B	DTW		482.50	ft
2102080940B	ORP		132	mV
2102080940B	pH		7.60	NA
2102080940B	Temperature		19.26	ºC
2102080940B	Turbidity		3.07	NTU
2102080942B	Conductivity		1101	µS/cm
2102080942B	DO		4.87	mg/L
2102080942B	DTW		482.52	ft
2102080942B	ORP		135	mV
2102080942B	pH		7.54	NA
2102080942B	Temperature		19.33	ºC
2102080942B	Turbidity		0.39	NTU
2102080944B	Conductivity		1102	µS/cm
2102080944B	DO		5.03	mg/L
2102080944B	DTW		482.52	ft
2102080944B	ORP		138	mV
2102080944B	pH		7.46	NA
2102080944B	Temperature		19.31	ºC
2102080944B	Turbidity		1.85	NTU

Well ID	PL-1-486	Event Date	4/19/2021	
Sample	**Parameter**		**Result**	**Units**
2104191445C	Conductivity		1024	µS/cm
2104191445C	DO		6.19	mg/L
2104191445C	DTW		486.14	ft
2104191445C	ORP		8	mV
2104191445C	pH		8.87	NA
2104191445C	Temperature		21.67	ºC
2104191445C	Turbidity		1.13	NTU
2104191448C	Conductivity		1016	µS/cm
2104191448C	DO		5.95	mg/L
2104191448C	DTW		486.20	ft
2104191448C	ORP		10	mV
2104191448C	pH		8.84	NA
2104191448C	Temperature		21.78	ºC
2104191448C	Turbidity		0.95	NTU
2104191451C	Conductivity		1012	µS/cm
2104191451C	DO		5.70	mg/L
2104191451C	DTW		486.20	ft
2104191451C	ORP		13	mV
2104191451C	pH		8.80	NA
2104191451C	Temperature		21.90	ºC
2104191451C	Turbidity		0.91	NTU

Well ID	PL-2-504	Event Date	3/15/2021	
Sample	**Parameter**		**Result**	**Units**
2103150945B	Conductivity		1011	µS/cm
2103150945B	DTW		477.17	ft
2103150945B	pH		8.54	NA
2103150945B	Temperature		17.2	ºC
2103150945B	Turbidity		2.09	NTU
2103150948B	Conductivity		1006	µS/cm
2103150948B	DTW		477.26	ft
2103150948B	pH		8.52	NA
2103150948B	Temperature		17.3	ºC
2103150948B	Turbidity		1.99	NTU
2103150951B	Conductivity		1009	µS/cm
2103150951B	DTW		477.26	ft
2103150951B	pH		8.51	NA
2103150951B	Temperature		17.3	ºC
2103150951B	Turbidity		1.75	NTU

Well ID	PL-4-464	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103110935C	Conductivity		1103	µS/cm
2103110935C	DO		5.70	mg/L
2103110935C	DTW		447.82	ft
2103110935C	ORP		24	mV
2103110935C	pH		8.63	NA
2103110935C	Temperature		18.69	ºC
2103110935C	Turbidity		0.35	NTU
2103110937C	Conductivity		1112	µS/cm
2103110937C	DO		5.68	mg/L
2103110937C	DTW		447.90	ft
2103110937C	ORP		21	mV
2103110937C	pH		8.64	NA
2103110937C	Temperature		18.61	ºC
2103110937C	Turbidity		0.36	NTU
2103110939C	Conductivity		1110	µS/cm
2103110939C	DO		5.59	mg/L
2103110939C	DTW		447.90	ft
2103110939C	ORP		22	mV
2103110939C	pH		8.64	NA
2103110939C	Temperature		18.64	ºC
2103110939C	Turbidity		0.42	NTU

Well ID	PL-6-545	Event Date	4/8/2021	
Sample	**Parameter**		**Result**	**Units**
2104081407Y	Atmospheric Pressure		12.36	psia
2104081407Y	Conductivity		998	µS/cm
2104081407Y	DTW		468.34	ft
2104081407Y	Formation Pressure		56.15	psia
2104081407Y	pH		8.43	NA
2104081407Y	Temperature		24.8	ºC
2104081407Y	Turbidity		1.30	NTU
2104081525Y	Atmospheric Pressure		12.38	psia
2104081525Y	Conductivity		1009	µS/cm
2104081525Y	DTW		468.45	ft
2104081525Y	pH		8.34	NA
2104081525Y	Temperature		24.5	ºC
2104081525Y	Turbidity		0.88	NTU

Well ID PL-6-725 **Event Date** 4/8/2021

Sample	Parameter	Result	Units
2104081000Y	Atmospheric Pressure	12.28	psia
2104081000Y	Conductivity	965	µS/cm
2104081000Y	DTW	468.15	ft
2104081000Y	Formation Pressure	135.05	psia
2104081000Y	pH	8.21	NA
2104081000Y	Temperature	23.5	ºC
2104081000Y	Turbidity	1.51	NTU
2104081116Y	Atmospheric Pressure	12.25	psia
2104081116Y	Conductivity	958	µS/cm
2104081116Y	DTW	468.34	ft
2104081116Y	pH	8.15	NA
2104081116Y	Temperature	23.3	ºC
2104081116Y	Turbidity	1.17	NTU

Well ID PL-7-480 **Event Date** 2/3/2021

Sample	Parameter	Result	Units
2102030935Y	Atmospheric Pressure	12.70	psia
2102030935Y	Conductivity	1189	µS/cm
2102030935Y	DTW	477.50	ft
2102030935Y	Formation Pressure	13.70	psia
2102030935Y	pH	8.36	NA
2102030935Y	Temperature	21.3	ºC
2102030935Y	Turbidity	0.47	NTU
2102031510Y	Atmospheric Pressure	12.68	psia
2102031510Y	Conductivity	1170	µS/cm
2102031510Y	DTW	477.55	ft
2102031510Y	pH	8.26	NA
2102031510Y	Temperature	21.8	ºC
2102031510Y	Turbidity	0.48	NTU

Well ID **PL-7-560** **Event Date** **2/2/2021**

Sample	Parameter	Result	Units
2102021430Y	Atmospheric Pressure	12.67	psia
2102021430Y	Conductivity	1202	µS/cm
2102021430Y	DTW	477.35	ft
2102021430Y	Formation Pressure	47.86	psia
2102021430Y	pH	8.04	NA
2102021430Y	Temperature	23.7	ºC
2102021430Y	Turbidity	0.38	NTU
2102021515Y	Atmospheric Pressure	12.68	psia
2102021515Y	Conductivity	1191	µS/cm
2102021515Y	DTW	477.50	ft
2102021515Y	pH	7.94	NA
2102021515Y	Temperature	23.4	ºC
2102021515Y	Turbidity	0.34	NTU

Well ID **PL-7-630** **Event Date** **2/2/2021**

Sample	Parameter	Result	Units
2102020945Y	Atmospheric Pressure	12.70	psia
2102020945Y	Conductivity	1208	µS/cm
2102020945Y	DTW	477.13	ft
2102020945Y	Formation Pressure	78.93	psia
2102020945Y	pH	8.30	NA
2102020945Y	Temperature	22.5	ºC
2102020945Y	Turbidity	5.16	NTU
2102021305Y	Atmospheric Pressure	12.66	psia
2102021305Y	Conductivity	1185	µS/cm
2102021305Y	DTW	477.35	ft
2102021305Y	pH	8.43	NA
2102021305Y	Temperature	22.3	ºC
2102021305Y	Turbidity	3.38	NTU

Well ID **PL-8-455** **Event Date** **3/4/2021**

Sample	Parameter	Result	Units
2103040955Y	Atmospheric Pressure	12.62	psia
2103040955Y	Conductivity	874	µS/cm
2103040955Y	DTW	436.02	ft
2103040955Y	Formation Pressure	23.37	psia
2103040955Y	pH	8.50	NA
2103040955Y	Temperature	21.0	ºC
2103040955Y	Turbidity	0.82	NTU
2103041131Y	Atmospheric Pressure	12.61	psia
2103041131Y	Conductivity	890	µS/cm
2103041131Y	DTW	436.12	ft
2103041131Y	pH	8.38	NA
2103041131Y	Temperature	20.8	ºC
2103041131Y	Turbidity	0.76	NTU

Well ID **PL-8-605** **Event Date** **3/3/2021**

Sample	Parameter	Result	Units
2103031010Y	Atmospheric Pressure	12.67	psia
2103031010Y	Conductivity	1062	µS/cm
2103031010Y	DTW	435.65	ft
2103031010Y	Formation Pressure	88.25	psia
2103031010Y	pH	8.42	NA
2103031010Y	Temperature	22.2	ºC
2103031010Y	Turbidity	1.39	NTU
2103031113Y	Atmospheric Pressure	12.69	psia
2103031113Y	Conductivity	1071	µS/cm
2103031113Y	DTW	435.79	ft
2103031113Y	pH	8.38	NA
2103031113Y	Temperature	22.0	ºC
2103031113Y	Turbidity	1.14	NTU

Well ID	PL-8-780	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103080955Y	Atmospheric Pressure		12.73	psia
2103080955Y	Conductivity		920	µS/cm
2103080955Y	DTW		436.12	ft
2103080955Y	Formation Pressure		164.26	psia
2103080955Y	pH		8.25	NA
2103080955Y	Temperature		23.4	ºC
2103080955Y	Turbidity		2.16	NTU
2103081314Y	Atmospheric Pressure		12.69	psia
2103081314Y	Conductivity		937	µS/cm
2103081314Y	DTW		436.30	ft
2103081314Y	pH		8.31	NA
2103081314Y	Temperature		23.0	ºC
2103081314Y	Turbidity		1.40	NTU

Well ID	PL-8-965	Event Date	3/3/2021	
Sample	**Parameter**		**Result**	**Units**
2103031420Y	Atmospheric Pressure		12.63	psia
2103031420Y	Conductivity		848	µS/cm
2103031420Y	DTW		435.79	ft
2103031420Y	Formation Pressure		244.51	psia
2103031420Y	pH		8.57	NA
2103031420Y	Temperature		25.0	ºC
2103031420Y	Turbidity		2.87	NTU
2103031522Y	Atmospheric Pressure		12.61	psia
2103031522Y	Conductivity		842	µS/cm
2103031522Y	DTW		436.02	ft
2103031522Y	pH		8.40	NA
2103031522Y	Temperature		24.6	ºC
2103031522Y	Turbidity		1.90	NTU

Well ID	ST-1-473	Event Date	4/12/2021	
Sample	**Parameter**		**Result**	**Units**
2104120920C	Conductivity		1138	µS/cm
2104120920C	DO		5.13	mg/L
2104120920C	DTW		470.60	ft
2104120920C	ORP		36	mV
2104120920C	pH		7.82	NA
2104120920C	Temperature		20.22	ºC
2104120920C	Turbidity		0.81	NTU
2104120923C	Conductivity		1150	µS/cm
2104120923C	DO		4.98	mg/L
2104120923C	DTW		470.63	ft
2104120923C	ORP		36	mV
2104120923C	pH		7.83	NA
2104120923C	Temperature		20.34	ºC
2104120923C	Turbidity		0.70	NTU
2104120926C	Conductivity		1156	µS/cm
2104120926C	DO		4.72	mg/L
2104120926C	DTW		470.63	ft
2104120926C	ORP		35	mV
2104120926C	pH		7.82	NA
2104120926C	Temperature		20.39	ºC
2104120926C	Turbidity		0.66	NTU

Well ID	ST-2-466	Event Date	2/2/2021	
Sample	**Parameter**		**Result**	**Units**
2102021450C	Conductivity		1093	µS/cm
2102021450C	DO		4.20	mg/L
2102021450C	DTW		434.50	ft
2102021450C	ORP		21	mV
2102021450C	pH		8.54	NA
2102021450C	Temperature		20.78	ºC
2102021450C	Turbidity		1.16	NTU
2102021452C	Conductivity		1095	µS/cm
2102021452C	DO		4.46	mg/L
2102021452C	DTW		434.62	ft
2102021452C	ORP		21	mV
2102021452C	pH		8.50	NA
2102021452C	Temperature		20.77	ºC
2102021452C	Turbidity		0.98	NTU
2102021454C	Conductivity		1092	µS/cm
2102021454C	DO		5.05	mg/L
2102021454C	DTW		434.62	ft
2102021454C	ORP		21	mV
2102021454C	pH		8.53	NA
2102021454C	Temperature		20.70	ºC
2102021454C	Turbidity		1.04	NTU

Well ID	ST-4-481	Event Date	3/3/2021	
Sample	**Parameter**		**Result**	**Units**
2103030948C	Conductivity		1071	µS/cm
2103030948C	DO		6.31	mg/L
2103030948C	DTW		456.80	ft
2103030948C	ORP		-15	mV
2103030948C	pH		9.23	NA
2103030948C	Temperature		20.28	ºC
2103030948C	Turbidity		0.46	NTU
2103030950C	Conductivity		1074	µS/cm
2103030950C	DO		6.35	mg/L
2103030950C	DTW		456.96	ft
2103030950C	ORP		-16	mV
2103030950C	pH		9.18	NA
2103030950C	Temperature		20.25	ºC
2103030950C	Turbidity		0.48	NTU
2103030952C	Conductivity		1070	µS/cm
2103030952C	DO		6.30	mg/L
2103030952C	DTW		456.96	ft
2103030952C	ORP		-16	mV
2103030952C	pH		9.21	NA
2103030952C	Temperature		20.27	ºC
2103030952C	Turbidity		0.47	NTU

Well ID	ST-4-589	Event Date	2/4/2021	
Sample	**Parameter**		**Result**	**Units**
2102040955C	Conductivity		822	µS/cm
2102040955C	DTW		455.45	ft
2102040955C	pH		7.88	NA
2102040955C	Temperature		19.2	ºC
2102040955C	Turbidity		0.88	NTU
2102041010C	Conductivity		841	µS/cm
2102041010C	DTW		455.45	ft
2102041010C	pH		7.93	NA
2102041010C	Temperature		19.2	ºC
2102041010C	Turbidity		0.77	NTU

Well ID	ST-4-690	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103021450C	Conductivity		853	µS/cm
2103021450C	DO		4.91	mg/L
2103021450C	DTW		455.66	ft
2103021450C	ORP		-36	mV
2103021450C	pH		9.10	NA
2103021450C	Temperature		20.05	ºC
2103021450C	Turbidity		1.74	NTU
2103021455C	Conductivity		847	µS/cm
2103021455C	DO		4.60	mg/L
2103021455C	DTW		455.70	ft
2103021455C	ORP		-36	mV
2103021455C	pH		9.11	NA
2103021455C	Temperature		20.01	ºC
2103021455C	Turbidity		1.59	NTU
2103021500C	Conductivity		851	µS/cm
2103021500C	DO		4.69	mg/L
2103021500C	DTW		455.70	ft
2103021500C	ORP		-36	mV
2103021500C	pH		9.19	NA
2103021500C	Temperature		19.92	ºC
2103021500C	Turbidity		1.62	NTU

Well ID	ST-5-481	Event Date	2/17/2021	
Sample	**Parameter**		**Result**	**Units**
2102171355B	Conductivity		1081	µS/cm
2102171355B	DO		4.93	mg/L
2102171355B	DTW		422.19	ft
2102171355B	ORP		68	mV
2102171355B	pH		7.59	NA
2102171355B	Temperature		18.94	ºC
2102171355B	Turbidity		0.88	NTU
2102171356B	Conductivity		1082	µS/cm
2102171356B	DO		4.71	mg/L
2102171356B	DTW		422.19	ft
2102171356B	ORP		68	mV
2102171356B	pH		7.59	NA
2102171356B	Temperature		18.94	ºC
2102171356B	Turbidity		0.94	NTU
2102171357B	Conductivity		1082	µS/cm
2102171357B	DO		4.84	mg/L
2102171357B	DTW		422.19	ft
2102171357B	ORP		68	mV
2102171357B	pH		7.59	NA
2102171357B	Temperature		18.91	ºC
2102171357B	Turbidity		0.91	NTU

Well ID	ST-5-485	Event Date	2/1/2021	
Sample	**Parameter**		**Result**	**Units**
2102011350Y	Atmospheric Pressure		12.74	psia
2102011350Y	Conductivity		1214	µS/cm
2102011350Y	DTW		472.00	ft
2102011350Y	Formation Pressure		41.46	psia
2102011350Y	pH		8.27	NA
2102011350Y	Temperature		21.3	ºC
2102011350Y	Turbidity		0.89	NTU
2102011536Y	Atmospheric Pressure		12.71	psia
2102011536Y	Conductivity		1203	µS/cm
2102011536Y	DTW		472.08	ft
2102011536Y	pH		8.21	NA
2102011536Y	Temperature		21.4	ºC
2102011536Y	Turbidity		0.74	NTU

Well ID	ST-5-655	Event Date	2/1/2021	
Sample	**Parameter**		**Result**	**Units**
2102010940Y	Atmospheric Pressure		12.78	psia
2102010940Y	Conductivity		1018	µS/cm
2102010940Y	DTW		471.86	ft
2102010940Y	Formation Pressure		115.06	psia
2102010940Y	pH		8.84	NA
2102010940Y	Temperature		20.4	ºC
2102010940Y	Turbidity		3.54	NTU
2102011105Y	Atmospheric Pressure		12.76	psia
2102011105Y	Conductivity		1007	µS/cm
2102011105Y	DTW		472.00	ft
2102011105Y	pH		8.65	NA
2102011105Y	Temperature		20.7	ºC
2102011105Y	Turbidity		1.87	NTU

Well ID	ST-6-528	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090955A	Conductivity		1347	µS/cm
2103090955A	pH		8.04	NA
2103090955A	Temperature		18.0	ºC
2103090955A	Turbidity		0.96	NTU
2103091031A	Conductivity		1343	µS/cm
2103091031A	pH		8.03	NA
2103091031A	Temperature		19.7	ºC
2103091031A	Turbidity		0.77	NTU

Well ID	ST-6-568	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090925A	Conductivity		1251	µS/cm
2103090925A	pH		8.05	NA
2103090925A	Temperature		19.4	ºC
2103090925A	Turbidity		0.87	NTU
2103091008A	Conductivity		1255	µS/cm
2103091008A	pH		8.03	NA
2103091008A	Temperature		19.8	ºC
2103091008A	Turbidity		0.78	NTU

Well ID	ST-6-678	Event Date	3/9/2021	
Sample	**Parameter**		**Result**	**Units**
2103090944A	Conductivity		1251	µS/cm
2103090944A	pH		8.03	NA
2103090944A	Temperature		19.4	ºC
2103090944A	Turbidity		0.77	NTU
2103091046A	Conductivity		1255	µS/cm
2103091046A	pH		8.08	NA
2103091046A	Temperature		21.9	ºC
2103091046A	Turbidity		0.73	NTU

Well ID	ST-6-824	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103110940A	Conductivity		1127	µS/cm
2103110940A	pH		8.56	NA
2103110940A	Temperature		18.5	ºC
2103110940A	Turbidity		0.38	NTU
2103111015A	Conductivity		1125	µS/cm
2103111015A	pH		8.58	NA
2103111015A	Temperature		18.7	ºC
2103111015A	Turbidity		0.43	NTU

Well ID	ST-6-970	Event Date	3/11/2021	
Sample	**Parameter**		**Result**	**Units**
2103111000A	Conductivity		1063	µS/cm
2103111000A	pH		8.64	NA
2103111000A	Temperature		17.7	ºC
2103111000A	Turbidity		3.08	NTU
2103111030A	Conductivity		1048	µS/cm
2103111030A	pH		8.68	NA
2103111030A	Temperature		18.1	ºC
2103111030A	Turbidity		2.73	NTU

Well ID	ST-7-453	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060915A	Conductivity		1304	µS/cm
2104060915A	pH		8.67	NA
2104060915A	Temperature		18.8	ºC
2104060915A	Turbidity		0.58	NTU
2104060930A	Conductivity		1301	µS/cm
2104060930A	pH		8.65	NA
2104060930A	Temperature		18.7	ºC
2104060930A	Turbidity		0.65	NTU

Well ID	ST-7-544	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060855A	Conductivity		1286	µS/cm
2104060855A	pH		8.62	NA
2104060855A	Temperature		18.0	ºC
2104060855A	Turbidity		1.02	NTU
2104060940A	Conductivity		1288	µS/cm
2104060940A	pH		8.63	NA
2104060940A	Temperature		18.4	ºC
2104060940A	Turbidity		0.96	NTU

Well ID	ST-7-779	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060905A	Conductivity		1143	µS/cm
2104060905A	pH		8.85	NA
2104060905A	Temperature		18.9	ºC
2104060905A	Turbidity		1.27	NTU
2104060955A	Conductivity		1140	µS/cm
2104060955A	pH		8.86	NA
2104060955A	Temperature		18.8	ºC
2104060955A	Turbidity		1.33	NTU

Well ID	ST-7-970	Event Date	4/6/2021	
Sample	**Parameter**		**Result**	**Units**
2104060911A	Conductivity		1033	µS/cm
2104060911A	pH		8.76	NA
2104060911A	Temperature		17.4	ºC
2104060911A	Turbidity		0.73	NTU
2104061008A	Conductivity		1035	µS/cm
2104061008A	pH		8.77	NA
2104061008A	Temperature		17.8	ºC
2104061008A	Turbidity		0.65	NTU

Well ID	WW-1-452	Event Date	3/1/2021	
Sample	**Parameter**		**Result**	**Units**
2103011400C	Conductivity		1091	µS/cm
2103011400C	DO		4.75	mg/L
2103011400C	DTW		420.92	ft
2103011400C	ORP		-23	mV
2103011400C	pH		9.16	NA
2103011400C	Temperature		20.91	ºC
2103011400C	Turbidity		0.21	NTU
2103011402C	Conductivity		1089	µS/cm
2103011402C	DO		4.71	mg/L
2103011402C	DTW		421.11	ft
2103011402C	ORP		-22	mV
2103011402C	pH		9.10	NA
2103011402C	Temperature		20.90	ºC
2103011402C	Turbidity		0.23	NTU
2103011404C	Conductivity		1087	µS/cm
2103011404C	DO		4.72	mg/L
2103011404C	DTW		421.11	ft
2103011404C	ORP		-23	mV
2103011404C	pH		9.13	NA
2103011404C	Temperature		20.90	ºC
2103011404C	Turbidity		0.22	NTU

Well ID	WW-2-489	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103080950C	Conductivity		1001	µS/cm
2103080950C	DO		3.04	mg/L
2103080950C	ORP		118	mV
2103080950C	pH		7.28	NA
2103080950C	Temperature		20.09	ºC
2103080950C	Turbidity		2.27	NTU
2103080952C	Conductivity		1113	µS/cm
2103080952C	DO		3.51	mg/L
2103080952C	ORP		120	mV
2103080952C	pH		7.11	NA
2103080952C	Temperature		20.19	ºC
2103080952C	Turbidity		3.21	NTU
2103080954C	Conductivity		1031	µS/cm
2103080954C	DO		3.68	mg/L
2103080954C	ORP		122	mV
2103080954C	pH		7.23	NA
2103080954C	Temperature		20.21	ºC
2103080954C	Turbidity		3.34	NTU

Well ID	WW-2-664	Event Date	3/8/2021	
Sample	**Parameter**		**Result**	**Units**
2103081510C	Conductivity		963	µS/cm
2103081510C	DO		3.07	mg/L
2103081510C	ORP		100	mV
2103081510C	pH		8.03	NA
2103081510C	Temperature		21.10	ºC
2103081510C	Turbidity		2.76	NTU
2103081512C	Conductivity		969	µS/cm
2103081512C	DO		2.89	mg/L
2103081512C	ORP		102	mV
2103081512C	pH		7.97	NA
2103081512C	Temperature		21.05	ºC
2103081512C	Turbidity		1.97	NTU
2103081514C	Conductivity		974	µS/cm
2103081514C	DO		2.95	mg/L
2103081514C	ORP		99	mV
2103081514C	pH		8.04	NA
2103081514C	Temperature		21.40	ºC
2103081514C	Turbidity		1.78	NTU

Well ID	WW-3-469	Event Date	3/2/2021	
Sample	**Parameter**		**Result**	**Units**
2103020950Y	Atmospheric Pressure		12.40	psia
2103020950Y	Conductivity		1118	µS/cm
2103020950Y	DTW		407.94	ft
2103020950Y	Formation Pressure		39.59	psia
2103020950Y	pH		7.85	NA
2103020950Y	Temperature		20.6	ºC
2103020950Y	Turbidity		0.95	NTU
2103021111Y	Atmospheric Pressure		12.38	psia
2103021111Y	Conductivity		1127	µS/cm
2103021111Y	DTW		408.13	ft
2103021111Y	pH		7.95	NA
2103021111Y	Temperature		21.0	ºC
2103021111Y	Turbidity		0.83	NTU

Well ID **WW-3-569** **Event Date** **3/1/2021**

Sample	Parameter	Result	Units
2103011000Y	Atmospheric Pressure	12.40	psia
2103011000Y	Conductivity	1100	µS/cm
2103011000Y	DTW	407.64	ft
2103011000Y	Formation Pressure	82.92	psia
2103011000Y	pH	8.09	NA
2103011000Y	Temperature	20.8	ºC
2103011000Y	Turbidity	0.80	NTU
2103011056Y	Atmospheric Pressure	12.41	psia
2103011056Y	Conductivity	1093	µS/cm
2103011056Y	DTW	407.79	ft
2103011056Y	pH	8.14	NA
2103011056Y	Temperature	21.1	ºC
2103011056Y	Turbidity	0.74	NTU

Well ID **WW-3-710** **Event Date** **3/1/2021**

Sample	Parameter	Result	Units
2103011340Y	Atmospheric Pressure	12.37	psia
2103011340Y	Conductivity	1019	µS/cm
2103011340Y	DTW	407.79	ft
2103011340Y	Formation Pressure	143.74	psia
2103011340Y	pH	8.18	NA
2103011340Y	Temperature	22.7	ºC
2103011340Y	Turbidity	2.47	NTU
2103011441Y	Atmospheric Pressure	12.39	psia
2103011441Y	Conductivity	1012	µS/cm
2103011441Y	DTW	407.94	ft
2103011441Y	pH	8.03	NA
2103011441Y	Temperature	22.5	ºC
2103011441Y	Turbidity	1.64	NTU

Well ID **WW-3-978** **Event Date** **3/2/2021**

Sample	Parameter	Result	Units
2103021405Y	Atmospheric Pressure	12.30	psia
2103021405Y	Conductivity	1068	µS/cm
2103021405Y	DTW	408.13	ft
2103021405Y	Formation Pressure	261.11	psia
2103021405Y	pH	8.34	NA
2103021405Y	Temperature	23.5	ºC
2103021405Y	Turbidity	3.54	NTU
2103021515Y	Atmospheric Pressure	12.28	psia
2103021515Y	Conductivity	1045	µS/cm
2103021515Y	DTW	408.30	ft
2103021515Y	pH	8.16	NA
2103021515Y	Temperature	23.1	ºC
2103021515Y	Turbidity	2.27	NTU

Well ID **WW-5-459** **Event Date** **4/13/2021**

Sample	Parameter	Result	Units
2104130855A	Conductivity	1149	µS/cm
2104130855A	pH	8.84	NA
2104130855A	Temperature	18.9	ºC
2104130855A	Turbidity	0.95	NTU
2104130913A	Conductivity	1150	µS/cm
2104130913A	pH	8.89	NA
2104130913A	Temperature	18.9	ºC
2104130913A	Turbidity	0.97	NTU

Well ID **WW-5-579** **Event Date** **4/13/2021**

Sample	Parameter	Result	Units
2104130914A	Conductivity	1034	µS/cm
2104130914A	pH	8.03	NA
2104130914A	Temperature	19.0	ºC
2104130914A	Turbidity	0.95	NTU
2104130923A	Conductivity	1039	µS/cm
2104130923A	pH	8.04	NA
2104130923A	Temperature	19.1	ºC
2104130923A	Turbidity	0.89	NTU

Well ID	WW-5-809	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130925A	Conductivity		974	µS/cm
2104130925A	pH		8.27	NA
2104130925A	Temperature		18.9	ºC
2104130925A	Turbidity		0.56	NTU
2104130933A	Conductivity		969	µS/cm
2104130933A	pH		8.28	NA
2104130933A	Temperature		18.7	ºC
2104130933A	Turbidity		0.47	NTU

Well ID	WW-5-909	Event Date	4/13/2021	
Sample	**Parameter**		**Result**	**Units**
2104130935A	Conductivity		1102	µS/cm
2104130935A	pH		7.98	NA
2104130935A	Temperature		19.0	ºC
2104130935A	Turbidity		1.62	NTU
2104130950A	Conductivity		1121	µS/cm
2104130950A	pH		7.99	NA
2104130950A	Temperature		18.9	ºC
2104130950A	Turbidity		1.80	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
2/3/2021	8260	2102031000C	Trichlorofluoromethane (CFC 11)	1.9	ug/L	1	0.24		
2/3/2021	8260	2102031000C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
2/3/2021	8270	2102031005C	Unknown	82	ug/L	NA	NA		TIC RB
2/3/2021	METALS	2102031007C	Sodium, Total	35.2	mg/L	1	0.2		
2/3/2021	METALS	2102031007C	Zinc, Total	0.022	mg/L	0.02	0.01		
2/3/2021	METALS	2102031007C	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
2/3/2021	METALS	2102031007C	Strontium, Total	3.47	mg/L	0.1	0.002		
2/3/2021	METALS	2102031007C	Potassium, Total	2.6	mg/L	2	0.2		
2/3/2021	METALS	2102031007C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/3/2021	METALS	2102031007C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
2/3/2021	METALS	2102031007C	Calcium, Total	142	mg/L	1	0.3		
2/3/2021	METALS	2102031007C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
2/3/2021	METALS	2102031007C	Boron, Total	0.07	mg/L	0.2	0.02		J
2/3/2021	METALS	2102031007C	Barium, Total	0.028	mg/L	0.02	0.003		
2/3/2021	METALS	2102031007C	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/3/2021	METALS	2102031007C	Magnesium, Total	70.1	mg/L	1	0.03		
2/3/2021	METALS	2102031007C	Thallium, Total	0.00007	mg/L	0.001	0.00004		J

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
2/22/2021	8260_LL	2102220945B	2-Propanol	5.2	ug/L	40	3.4		J
2/22/2021	8270	2102220949B	Unknown	9.5	ug/L	NA	NA		TIC
2/22/2021	8270	2102220949B	Benzenamine, 2,6-bis(1-methylethyl	10	ug/L	NA	NA		TIC
2/22/2021	8270	2102220949B	2,5-Cyclohexadiene-1,4-dione, 2,6-	5	ug/L	NA	NA		TIC
2/22/2021	METALS	2102220950B	Molybdenum, Total	0.027	mg/L	0.025	0.003		
2/22/2021	METALS	2102220950B	Barium, Total	0.016	mg/L	0.02	0.003		J
2/22/2021	METALS	2102220950B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/22/2021	METALS	2102220950B	Strontium, Total	2.35	mg/L	0.1	0.002		
2/22/2021	METALS	2102220950B	Sodium, Total	109	mg/L	1	0.2		
2/22/2021	METALS	2102220950B	Potassium, Total	1.6	mg/L	2	0.2		J
2/22/2021	METALS	2102220950B	Chromium, Total	0.023	mg/L	0.01	0.0006		
2/22/2021	METALS	2102220950B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102220950B	Boron, Total	0.17	mg/L	0.2	0.02		J
2/22/2021	METALS	2102220950B	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102220950B	Magnesium, Total	8.7	mg/L	1	0.03		
2/22/2021	METALS	2102220950B	Calcium, Total	51.6	mg/L	1	0.3		
2/22/2021	METALS	2102220951B	Boron, Total	0.18	mg/L	0.2	0.02		J
2/22/2021	METALS	2102220951B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/22/2021	METALS	2102220951B	Strontium, Total	2.4	mg/L	0.1	0.002		
2/22/2021	METALS	2102220951B	Sodium, Total	109	mg/L	1	0.2		
2/22/2021	METALS	2102220951B	Selenium, Total	0.008	mg/L	0.01	0.007		J
2/22/2021	METALS	2102220951B	Potassium, Total	1.6	mg/L	2	0.2		J
2/22/2021	METALS	2102220951B	Molybdenum, Total	0.028	mg/L	0.025	0.003		
2/22/2021	METALS	2102220951B	Magnesium, Total	8.8	mg/L	1	0.03		
2/22/2021	METALS	2102220951B	Calcium, Total	52.5	mg/L	1	0.3		
2/22/2021	METALS	2102220951B	Barium, Total	0.017	mg/L	0.02	0.003		J
2/22/2021	METALS	2102220951B	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102220951B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102220951B	Chromium, Total	0.023	mg/L	0.01	0.0006		
2/22/2021	ANIONS	2102220952B	Chloride	16.6	mg/L	2	0.5		
2/22/2021	ANIONS	2102220952B	Fluoride, undistilled	0.55	mg/L	0.1	0.01		
2/22/2021	ANIONS	2102220952B	Alkalinity, Total as CaCO3	29.7	mg/L	2	1.8		
2/22/2021	ANIONS	2102220952B	Sulfate	347	mg/L	8	1.6		
2/22/2021	SM2540C	2102220953B	Total Dissolved Solids (TDS)	564	mg/L	10	9		
2/22/2021	8015	2102220954B	Diesel Range Organics (DRO) as C10-C28 Alkanes	120	ug/L	100	75		
2/22/2021	353.2	2102220956B	Nitrate+Nitrite as Nitrogen	0.146	mg/L	0.05	0.002		

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
3/11/2021	8260	2103111425B	Sulfur Dioxide	27	ug/L	NA	NA		TIC RB
3/11/2021	8260	2103111425B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.2	ug/L	1	0.2		
3/11/2021	8260	2103111425B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.36	ug/L	1	0.2		J
3/11/2021	8260	2103111426B	Sulfur Dioxide	22	ug/L	NA	NA		TIC RB
3/11/2021	8260	2103111426B	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.8	ug/L	1	0.2		
3/11/2021	8260	2103111426B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.36	ug/L	1	0.2		J
3/11/2021	METALS	2103111430B	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/11/2021	METALS	2103111430B	Strontium, Total	3.65	mg/L	0.1	0.002		
3/11/2021	METALS	2103111430B	Sodium, Total	38.4	mg/L	1	0.2		
3/11/2021	METALS	2103111430B	Potassium, Total	2.9	mg/L	2	0.2		
3/11/2021	METALS	2103111430B	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
3/11/2021	METALS	2103111430B	Nickel, Total	0.005	mg/L	0.04	0.003		J
3/11/2021	METALS	2103111430B	Magnesium, Total	61	mg/L	1	0.03		
3/11/2021	METALS	2103111430B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/11/2021	METALS	2103111430B	Calcium, Total	117	mg/L	1	0.3		
3/11/2021	METALS	2103111430B	Barium, Total	0.039	mg/L	0.02	0.003		
3/11/2021	METALS	2103111430B	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/11/2021	METALS	2103111430B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J RB
3/11/2021	METALS	2103111430B	Boron, Total	0.06	mg/L	0.2	0.02		J
3/11/2021	ANIONS	2103111432B	Sulfate	319	mg/L	8	1.6		
3/11/2021	ANIONS	2103111432B	Fluoride, undistilled	0.85	mg/L	0.1	0.01		
3/11/2021	ANIONS	2103111432B	Chloride	52	mg/L	2	0.5		
3/11/2021	ANIONS	2103111432B	Alkalinity, Total as CaCO3	204	mg/L	2	1.8		
3/11/2021	SM2540C	2103111433B	Total Dissolved Solids (TDS)	816	mg/L	10	9		
3/11/2021	6850	2103111434B	Perchlorate	0.14	ug/L	0.2	0.06		J
3/11/2021	353.2	2103111435B	Nitrate+Nitrite as Nitrogen	0.319	mg/L	0.05	0.002		

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
3/15/2021	8260	2103151003C	trans-1,2-Dichloroethene	0.34	ug/L	1	0.2		J
3/15/2021	8260	2103151003C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.7	ug/L	1	0.2		
3/15/2021	8260	2103151003C	cis-1,2-Dichloroethene	0.76	ug/L	1	0.23		J
3/15/2021	8260	2103151003C	Trichlorofluoromethane (CFC 11)	92	ug/L	1	0.24		
3/15/2021	8260	2103151003C	Trichloroethene (TCE)	61	ug/L	1	0.2		
3/15/2021	8260	2103151003C	Tetrachloroethene (PCE)	2.9	ug/L	1	0.21		
3/15/2021	8260	2103151003C	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1	0.2		
3/15/2021	607	2103151005C	N-Nitrodimethylamine	0.24	µg/L	0.0097	0.0049	96	
3/15/2021	607	2103151005C	Bromacil	1.5	µg/L	0.0097	0.0049	99	
3/15/2021	607	2103151005C	N-Nitrosodimethylamine	0.14	µg/L	0.0097	0.0049	38	
3/15/2021	8270	2103151006C	Trichloroethene (TCE)	7	ug/L	NA	NA		TIC
3/15/2021	METALS	2103151012C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/15/2021	METALS	2103151012C	Zinc, Total	0.012	mg/L	0.02	0.01		J
3/15/2021	METALS	2103151012C	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
3/15/2021	METALS	2103151012C	Strontium, Total	2.08	mg/L	0.1	0.002		
3/15/2021	METALS	2103151012C	Magnesium, Total	65.7	mg/L	1	0.03		
3/15/2021	METALS	2103151012C	Potassium, Total	4.2	mg/L	2	0.2		
3/15/2021	METALS	2103151012C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
3/15/2021	METALS	2103151012C	Calcium, Total	123	mg/L	1	0.3		
3/15/2021	METALS	2103151012C	Boron, Total	0.13	mg/L	0.2	0.02		J
3/15/2021	METALS	2103151012C	Barium, Total	0.033	mg/L	0.02	0.003		
3/15/2021	METALS	2103151012C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
3/15/2021	METALS	2103151012C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J RB
3/15/2021	METALS	2103151012C	Sodium, Total	50.6	mg/L	1	0.2		

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
2/18/2021	8260	2102181520Y	Dichlorofluoromethane (CFC 21)	3	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Unknown	6	ug/L	NA	NA		TIC
2/18/2021	8260	2102181520Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.1	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Trichlorofluoromethane (CFC 11)	9.7	ug/L	1	0.24		
2/18/2021	8260	2102181520Y	Tetrahydrofuran (THF)	9	ug/L	5	1.3		
2/18/2021	8260	2102181520Y	Chloromethane	0.59	ug/L	2	0.28		J EB
2/18/2021	8260	2102181520Y	2-Propanol	7.4	ug/L	50	3.4		J
2/18/2021	8260	2102181520Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	24	ug/L	1	0.2		
2/18/2021	8260	2102181520Y	Trichloroethene (TCE)	1.5	ug/L	1	0.2		
2/18/2021	607	2102181521Y	Bromacil	0.12	µg/L	0.0098	0.0049	90	
2/18/2021	METALS	2102181540Y	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181540Y	Potassium, Total	2.6	mg/L	2	0.2		
2/18/2021	METALS	2102181540Y	Zinc, Total	0.086	mg/L	0.02	0.01		
2/18/2021	METALS	2102181540Y	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181540Y	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
2/18/2021	METALS	2102181540Y	Sodium, Total	44	mg/L	1	0.2		
2/18/2021	METALS	2102181540Y	Magnesium, Total	68.2	mg/L	1	0.03		
2/18/2021	METALS	2102181540Y	Strontium, Total	2.65	mg/L	0.1	0.002		
2/18/2021	METALS	2102181540Y	Calcium, Total	131	mg/L	1	0.3		
2/18/2021	METALS	2102181540Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181540Y	Barium, Total	0.033	mg/L	0.02	0.003		
2/18/2021	METALS	2102181540Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
2/18/2021	METALS	2102181540Y	Antimony, Total	0.0006	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181540Y	Manganese, Total	0.007	mg/L	0.01	0.004		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
2/18/2021	8260	2102181245Y	Chloromethane	0.53	ug/L	2	0.28		J
2/18/2021	8260	2102181245Y	Trichloroethene (TCE)	2.5	ug/L	1	0.2		
2/18/2021	8260	2102181245Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	ug/L	1	0.2		
2/18/2021	8260	2102181245Y	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/18/2021	607	2102181246Y	Bromacil	0.21	µg/L	0.0095	0.0048	90	
2/18/2021	METALS	2102181315Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181315Y	Potassium, Total	3.5	mg/L	2	0.2		
2/18/2021	METALS	2102181315Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/18/2021	METALS	2102181315Y	Vanadium, Total	0.0007	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181315Y	Strontium, Total	2.23	mg/L	0.1	0.002		
2/18/2021	METALS	2102181315Y	Sodium, Total	47	mg/L	1	0.2		
2/18/2021	METALS	2102181315Y	Selenium, Total	0.007	mg/L	0.01	0.007		J
2/18/2021	METALS	2102181315Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181315Y	Magnesium, Total	66.8	mg/L	1	0.03		
2/18/2021	METALS	2102181315Y	Calcium, Total	134	mg/L	1	0.3		
2/18/2021	METALS	2102181315Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181315Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
2/18/2021	METALS	2102181315Y	Zinc, Total	0.018	mg/L	0.02	0.01		J
2/18/2021	METALS	2102181315Y	Barium, Total	0.029	mg/L	0.02	0.003		
2/18/2021	ANIONS	2102181316Y	Sulfate	351	mg/L	8	1.6		
2/18/2021	ANIONS	2102181316Y	Fluoride, undistilled	1.1	mg/L	0.1	0.01		
2/18/2021	ANIONS	2102181316Y	Alkalinity, Total as CaCO3	270	mg/L	2	1.8		
2/18/2021	ANIONS	2102181316Y	Chloride	63.8	mg/L	2	0.5		
2/18/2021	SM2540C	2102181317Y	Total Dissolved Solids (TDS)	895	mg/L	10	9		
2/18/2021	6850	2102181345Y	Perchlorate	0.57	ug/L	0.2	0.06		
2/18/2021	353.2	2102181346Y	Nitrate+Nitrite as Nitrogen	2.67	mg/L	0.25	0.008		

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
2/17/2021	8260	2102180840Y	Trichloroethene (TCE)	2.6	ug/L	1	0.2		
2/17/2021	8260	2102180840Y	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
2/17/2021	8260	2102180840Y	Chloromethane	0.41	ug/L	2	0.28		J
2/17/2021	8260	2102180840Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	16	ug/L	1	0.2		
2/17/2021	607	2102180841Y	Bromacil	0.22	µg/L	0.0094	0.0047	90	
2/17/2021	METALS	2102180915Y	Barium, Total	0.028	mg/L	0.02	0.003		
2/17/2021	METALS	2102180915Y	Potassium, Total	3.8	mg/L	2	0.2		
2/17/2021	METALS	2102180915Y	Zinc, Total	0.017	mg/L	0.02	0.01		J
2/17/2021	METALS	2102180915Y	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
2/17/2021	METALS	2102180915Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/17/2021	METALS	2102180915Y	Strontium, Total	2.31	mg/L	0.1	0.002		
2/17/2021	METALS	2102180915Y	Sodium, Total	48.2	mg/L	1	0.2		
2/17/2021	METALS	2102180915Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
2/17/2021	METALS	2102180915Y	Magnesium, Total	68.6	mg/L	1	0.03		
2/17/2021	METALS	2102180915Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/17/2021	METALS	2102180915Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
2/17/2021	METALS	2102180915Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/17/2021	METALS	2102180915Y	Calcium, Total	137	mg/L	1	0.3		

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
3/16/2021	8260	2103161015C	1,1,2-Trichloro-1,2,2-Trifluoroethane	200	ug/L	2	0.4		
3/16/2021	8260	2103161015C	Trichlorofluoromethane (CFC 11)	54	ug/L	1	0.24		
3/16/2021	8260	2103161015C	Trichloroethene (TCE)	14	ug/L	1	0.2		
3/16/2021	8260	2103161015C	Tetrachloroethene (PCE)	0.31	ug/L	1	0.21		J
3/16/2021	8260	2103161015C	Chloroform	0.25	ug/L	1	0.24		J
3/16/2021	607	2103161017C	N-Nitrodimethylamine	0.0076	µg/L	0.0095	0.0048	96	J
3/16/2021	607	2103161017C	Bromacil	0.55	µg/L	0.0095	0.0048	99	
3/16/2021	METALS	2103161018C	Magnesium, Total	68.3	mg/L	1	0.03		
3/16/2021	METALS	2103161018C	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
3/16/2021	METALS	2103161018C	Strontium, Total	2.21	mg/L	0.1	0.002		
3/16/2021	METALS	2103161018C	Sodium, Total	58	mg/L	1	0.2		
3/16/2021	METALS	2103161018C	Potassium, Total	3.6	mg/L	2	0.2		
3/16/2021	METALS	2103161018C	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/16/2021	METALS	2103161018C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/16/2021	METALS	2103161018C	Calcium, Total	130	mg/L	1	0.3		
3/16/2021	METALS	2103161018C	Boron, Total	0.11	mg/L	0.2	0.02		J
3/16/2021	METALS	2103161018C	Barium, Total	0.034	mg/L	0.02	0.003		
3/16/2021	METALS	2103161018C	Arsenic, Total	0.001	mg/L	0.001	0.0004		
3/16/2021	METALS	2103161018C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/16/2021	METALS	2103161018C	Nickel, Total	0.045	mg/L	0.04	0.003		
3/16/2021	ANIONS	2103161019C	Alkalinity, Total as CaCO3	264	mg/L	2	1.8		
3/16/2021	ANIONS	2103161019C	Chloride	75.6	mg/L	2	0.5		
3/16/2021	ANIONS	2103161019C	Fluoride, undistilled	1.01	mg/L	0.1	0.01		
3/16/2021	ANIONS	2103161019C	Sulfate	320	mg/L	8	1.6		
3/16/2021	SM2540C	2103161020C	Total Dissolved Solids (TDS)	937	mg/L	10	9		
3/16/2021	6850	2103161021C	Perchlorate	0.57	ug/L	0.2	0.06		
3/16/2021	353.2	2103161022C	Nitrate+Nitrite as Nitrogen	3.17	mg/L	0.25	0.008		

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
2/23/2021	8260	2102231040Y	Trichlorofluoromethane (CFC 11)	5.5	ug/L	1	0.24		
2/23/2021	8260	2102231040Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	5.9	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Tetrahydrofuran (THF)	38	ug/L	5	1.3		
2/23/2021	8260	2102231040Y	Tetrachloroethene (PCE)	0.45	ug/L	1	0.21		J
2/23/2021	8260	2102231040Y	Dichlorofluoromethane (CFC 21)	15	ug/L	1	0.2		
2/23/2021	8260	2102231040Y	Benzene	0.76	ug/L	1	0.2		J
2/23/2021	8260	2102231040Y	Acrylonitrile	2.5	ug/L	5	0.9		J
2/23/2021	8260	2102231040Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	12	ug/L	1	0.2		
2/23/2021	607	2102231041Y	N-Nitrodimethylamine	0.011	µg/L	0.0094	0.0047	5.8	A
2/23/2021	607	2102231041Y	Bromacil	0.4	µg/L	0.0094	0.0047	101	
2/23/2021	607	2102231041Y	N-Nitrosodimethylamine	0.0057	µg/L	0.0094	0.0047	1.4	J A
2/23/2021	METALS	2102231105Y	Chromium, Total	0.0006	mg/L	0.01	0.0006		J
2/23/2021	METALS	2102231105Y	Manganese, Total	0.009	mg/L	0.01	0.004		J
2/23/2021	METALS	2102231105Y	Zinc, Total	0.013	mg/L	0.02	0.01		J
2/23/2021	METALS	2102231105Y	Strontium, Total	2.3	mg/L	0.1	0.002		
2/23/2021	METALS	2102231105Y	Sodium, Total	29.3	mg/L	1	0.2		
2/23/2021	METALS	2102231105Y	Potassium, Total	3.6	mg/L	2	0.2		
2/23/2021	METALS	2102231105Y	Molybdenum, Total	0.004	mg/L	0.025	0.003		J
2/23/2021	METALS	2102231105Y	Iron, Total	0.21	mg/L	0.1	0.07		
2/23/2021	METALS	2102231105Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/23/2021	METALS	2102231105Y	Calcium, Total	129	mg/L	1	0.3		
2/23/2021	METALS	2102231105Y	Boron, Total	0.11	mg/L	0.2	0.02		J
2/23/2021	METALS	2102231105Y	Barium, Total	0.039	mg/L	0.02	0.003		
2/23/2021	METALS	2102231105Y	Magnesium, Total	72.6	mg/L	1	0.03		

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
2/22/2021	8260	2102221010Y	Dichlorofluoromethane (CFC 21)	4.6	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.1	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	Tetrahydrofuran (THF)	28	ug/L	5	1.3		
2/22/2021	8260	2102221010Y	Acrylonitrile	1.3	ug/L	5	0.9		J
2/22/2021	8260	2102221010Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1	0.2		
2/22/2021	8260	2102221010Y	Trichloroethene (TCE)	0.87	ug/L	1	0.2		J
2/22/2021	METALS	2102221030Y	Magnesium, Total	83.3	mg/L	1	0.03		
2/22/2021	METALS	2102221030Y	Sodium, Total	20.8	mg/L	1	0.2		
2/22/2021	METALS	2102221030Y	Strontium, Total	12.7	mg/L	1	0.02		
2/22/2021	METALS	2102221030Y	Potassium, Total	2.9	mg/L	2	0.2		
2/22/2021	METALS	2102221030Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/22/2021	METALS	2102221030Y	Manganese, Total	0.007	mg/L	0.01	0.004		J
2/22/2021	METALS	2102221030Y	Zinc, Total	0.033	mg/L	0.02	0.01		
2/22/2021	METALS	2102221030Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/22/2021	METALS	2102221030Y	Calcium, Total	154	mg/L	1	0.3		
2/22/2021	METALS	2102221030Y	Boron, Total	0.09	mg/L	0.2	0.02		J
2/22/2021	METALS	2102221030Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/22/2021	METALS	2102221030Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
2/22/2021	METALS	2102221030Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
2/22/2021	METALS	2102221030Y	Iron, Total	0.55	mg/L	0.1	0.07		

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
2/22/2021	8260	2102221535Y	Unknown	5.8	ug/L	NA	NA		TIC
2/22/2021	8260	2102221535Y	Acrylonitrile	1.2	ug/L	5	0.9		J
2/22/2021	8260	2102221535Y	Tetrahydrofuran (THF)	35	ug/L	5	1.3		
2/22/2021	METALS	2102230840Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/22/2021	METALS	2102230840Y	Zinc, Total	0.038	mg/L	0.02	0.01		
2/22/2021	METALS	2102230840Y	Strontium, Total	17.8	mg/L	1	0.02		
2/22/2021	METALS	2102230840Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J EB
2/22/2021	METALS	2102230840Y	Sodium, Total	23.7	mg/L	1	0.2		
2/22/2021	METALS	2102230840Y	Potassium, Total	3	mg/L	2	0.2		
2/22/2021	METALS	2102230840Y	Manganese, Total	0.012	mg/L	0.01	0.004		
2/22/2021	METALS	2102230840Y	Magnesium, Total	84	mg/L	1	0.03		
2/22/2021	METALS	2102230840Y	Iron, Total	0.55	mg/L	0.1	0.07		
2/22/2021	METALS	2102230840Y	Calcium, Total	168	mg/L	1	0.3		
2/22/2021	METALS	2102230840Y	Barium, Total	0.031	mg/L	0.02	0.003		
2/22/2021	METALS	2102230840Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/22/2021	ANIONS	2102230841Y	Fluoride, undistilled	1.7	mg/L	0.1	0.01		
2/22/2021	ANIONS	2102230841Y	Sulfate	501	mg/L	20	4		
2/22/2021	ANIONS	2102230841Y	Alkalinity, Total as CaCO3	272	mg/L	2	1.8		
2/22/2021	ANIONS	2102230841Y	Chloride	36.3	mg/L	2	0.5		
2/22/2021	SM2540C	2102230842Y	Total Dissolved Solids (TDS)	1040	mg/L	10	9		

Analytical Results for Sampling Events at 200-KV-150

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2021	8260	2103101435C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
3/10/2021	8260	2103101435C	Chloroform	0.26	ug/L	1	0.24		J
3/10/2021	8260	2103101435C	Dichlorofluoromethane (CFC 21)	0.37	ug/L	1	0.2		J
3/10/2021	8260	2103101435C	Trichloroethene (TCE)	14	ug/L	1	0.2		
3/10/2021	8260	2103101435C	Trichlorofluoromethane (CFC 11)	51	ug/L	1	0.24		
3/10/2021	8260	2103101435C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.32	ug/L	1	0.2		J
3/10/2021	8260	2103101435C	Sulfur Dioxide	35	ug/L	NA	NA		TIC RB FB
3/10/2021	8260	2103101435C	Silane, methoxytrimethyl-	5.3	ug/L	NA	NA		TIC FB
3/10/2021	8260	2103101436C	Chloroform	0.27	ug/L	1	0.24		J
3/10/2021	8260	2103101436C	Sulfur Dioxide	32	ug/L	NA	NA		TIC RB FB
3/10/2021	8260	2103101436C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.35	ug/L	1	0.2		J
3/10/2021	8260	2103101436C	Trichlorofluoromethane (CFC 11)	49	ug/L	1	0.24		
3/10/2021	8260	2103101436C	Dichlorofluoromethane (CFC 21)	0.39	ug/L	1	0.2		J
3/10/2021	8260	2103101436C	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1	0.2		
3/10/2021	8260	2103101436C	Trichloroethene (TCE)	13	ug/L	1	0.2		
3/10/2021	607	2103101438C	Bromacil	1.2	µg/L	0.0095	0.0048	102	
3/10/2021	METALS	2103101440C	Iron, Total	0.11	mg/L	0.1	0.07		
3/10/2021	METALS	2103101440C	Thallium, Total	0.0002	mg/L	0.001	0.00004		J
3/10/2021	METALS	2103101440C	Strontium, Total	1.47	mg/L	0.1	0.002		
3/10/2021	METALS	2103101440C	Sodium, Total	35.2	mg/L	1	0.2		
3/10/2021	METALS	2103101440C	Potassium, Total	9.7	mg/L	2	0.2		
3/10/2021	METALS	2103101440C	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
3/10/2021	METALS	2103101440C	Manganese, Total	0.018	mg/L	0.01	0.004		
3/10/2021	METALS	2103101440C	Magnesium, Total	51	mg/L	1	0.03		
3/10/2021	METALS	2103101440C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/10/2021	METALS	2103101440C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103101440C	Calcium, Total	114	mg/L	1	0.3		
3/10/2021	METALS	2103101440C	Boron, Total	0.12	mg/L	0.2	0.02		J
3/10/2021	METALS	2103101440C	Barium, Total	0.06	mg/L	0.02	0.003		
3/10/2021	METALS	2103101440C	Arsenic, Total	0.0015	mg/L	0.001	0.0004		
3/10/2021	METALS	2103101440C	Antimony, Total	0.0066	mg/L	0.001	0.0002		
3/10/2021	METALS	2103101440C	Aluminum, Total	0.08	mg/L	0.1	0.03		J
3/10/2021	METALS	2103101440C	Copper, Total	0.008	mg/L	0.02	0.004		J
3/10/2021	ANIONS	2103101441C	Sulfate	222	mg/L	8	1.6		
3/10/2021	ANIONS	2103101441C	Fluoride, undistilled	0.8	mg/L	0.1	0.01		
3/10/2021	ANIONS	2103101441C	Alkalinity, Total as CaCO3	204	mg/L	2	1.8		
3/10/2021	ANIONS	2103101441C	Chloride	83.7	mg/L	2	0.5		
3/10/2021	SM2540C	2103101442C	Total Dissolved Solids (TDS)	727	mg/L	10	9		

Analytical Results for Sampling Events at 200-KV-150

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/10/2021	6850	2103101443C	Perchlorate	0.56	ug/L	0.2	0.06		
3/10/2021	353.2	2103101444C	Nitrate+Nitrite as Nitrogen	3.18	mg/L	0.25	0.008		

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
2/18/2021	8260	2102181020B	Trichloroethene (TCE)	1.1	ug/L	1	0.2		
2/18/2021	8260	2102181020B	Trichlorofluoromethane (CFC 11)	320	ug/L	2.5	0.6		
2/18/2021	8260	2102181020B	Dichlorofluoromethane (CFC 21)	0.56	ug/L	1	0.2		J
2/18/2021	8260	2102181020B	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1	0.2		
2/18/2021	8260	2102181020B	Chloromethane	0.51	ug/L	2	0.28		J FB
2/18/2021	607	2102181022B	N-Nitrosodimethylamine	1.5	µg/L	0.0094	0.0047	39	
2/18/2021	607	2102181022B	N-Nitrodimethylamine	4.4	µg/L	0.0094	0.0047	94	
2/18/2021	607	2102181022B	Bromacil	2.2	µg/L	0.0094	0.0047	90	
2/18/2021	METALS	2102181023B	Manganese, Total	0.009	mg/L	0.01	0.004		J
2/18/2021	METALS	2102181023B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/18/2021	METALS	2102181023B	Strontium, Total	2.06	mg/L	0.1	0.002		
2/18/2021	METALS	2102181023B	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/18/2021	METALS	2102181023B	Sodium, Total	55.2	mg/L	1	0.2		
2/18/2021	METALS	2102181023B	Potassium, Total	2.4	mg/L	2	0.2		
2/18/2021	METALS	2102181023B	Nickel, Total	0.078	mg/L	0.04	0.003		
2/18/2021	METALS	2102181023B	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
2/18/2021	METALS	2102181023B	Iron, Total	0.54	mg/L	0.1	0.07		
2/18/2021	METALS	2102181023B	Chromium, Total	0.05	mg/L	0.01	0.0006		
2/18/2021	METALS	2102181023B	Calcium, Total	81.8	mg/L	1	0.3		
2/18/2021	METALS	2102181023B	Boron, Total	0.14	mg/L	0.2	0.02		J
2/18/2021	METALS	2102181023B	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/18/2021	METALS	2102181023B	Barium, Total	0.04	mg/L	0.02	0.003		
2/18/2021	METALS	2102181023B	Magnesium, Total	54.3	mg/L	1	0.03		
2/18/2021	353.2	2102181024B	Nitrate+Nitrite as Nitrogen	5.34	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
2/3/2021	8260	2102031455C	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
2/3/2021	8260	2102031455C	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1	0.2		
2/3/2021	8260	2102031455C	Trichlorofluoromethane (CFC 11)	190	ug/L	1	0.24		
2/3/2021	607	2102031457C	N-Nitrosodimethylamine	2.8	µg/L	0.0094	0.0047	36	
2/3/2021	607	2102031457C	N-Nitrodimethylamine	3	µg/L	0.0094	0.0047	92	
2/3/2021	607	2102031457C	Bromacil	0.34	µg/L	0.0094	0.0047	98	
2/3/2021	METALS	2102031458C	Magnesium, Total	48.5	mg/L	1	0.03		
2/3/2021	METALS	2102031458C	Sodium, Total	37.4	mg/L	1	0.2		
2/3/2021	METALS	2102031458C	Potassium, Total	1.9	mg/L	2	0.2		J
2/3/2021	METALS	2102031458C	Strontium, Total	1.64	mg/L	0.1	0.002		
2/3/2021	METALS	2102031458C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/3/2021	METALS	2102031458C	Calcium, Total	66.5	mg/L	1	0.3		
2/3/2021	METALS	2102031458C	Boron, Total	0.1	mg/L	0.2	0.02		J
2/3/2021	METALS	2102031458C	Barium, Total	0.04	mg/L	0.02	0.003		
2/3/2021	METALS	2102031458C	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
2/3/2021	METALS	2102031458C	Antimony, Total	0.0006	mg/L	0.001	0.0002		J
2/3/2021	METALS	2102031458C	Nickel, Total	0.016	mg/L	0.04	0.003		J
2/3/2021	METALS	2102031458C	Chromium, Total	0.018	mg/L	0.01	0.0006		
2/3/2021	ANIONS	2102031459C	Alkalinity, Total as CaCO3	220	mg/L	2	1.8		
2/3/2021	ANIONS	2102031459C	Chloride	37.1	mg/L	2	0.5		
2/3/2021	ANIONS	2102031459C	Fluoride, undistilled	0.77	mg/L	0.1	0.01		
2/3/2021	ANIONS	2102031459C	Sulfate	154	mg/L	8	1.6		
2/3/2021	SM2540C	2102031500C	Total Dissolved Solids (TDS)	521	mg/L	10	9		
2/3/2021	6850	2102031501C	Perchlorate	0.54	ug/L	0.2	0.06		
2/3/2021	353.2	2102031502C	Nitrate+Nitrite as Nitrogen	3.25	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
2/23/2021	8260	2102231500Y	Tetrahydrofuran (THF)	3.1	ug/L	5	1.3		J
2/23/2021	8260	2102231500Y	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/23/2021	8260	2102231500Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1	ug/L	1	0.2		
2/23/2021	607	2102231501Y	N-Nitrosodimethylamine	0.69	µg/L	0.0094	0.0047	1.4	A
2/23/2021	607	2102231501Y	N-Nitrodimethylamine	2.6	µg/L	0.0094	0.0047	5.8	A
2/23/2021	607	2102231501Y	Bromacil	0.25	µg/L	0.0094	0.0047	101	
2/23/2021	METALS	2102240815Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
2/23/2021	METALS	2102240815Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/23/2021	METALS	2102240815Y	Thallium, Total	0.00008	mg/L	0.001	0.00004		J
2/23/2021	METALS	2102240815Y	Strontium, Total	2.59	mg/L	0.1	0.002		
2/23/2021	METALS	2102240815Y	Sodium, Total	125	mg/L	1	0.2		
2/23/2021	METALS	2102240815Y	Zinc, Total	0.034	mg/L	0.02	0.01		
2/23/2021	METALS	2102240815Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
2/23/2021	METALS	2102240815Y	Calcium, Total	137	mg/L	1	0.3		
2/23/2021	METALS	2102240815Y	Boron, Total	0.28	mg/L	0.2	0.02		
2/23/2021	METALS	2102240815Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/23/2021	METALS	2102240815Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/23/2021	METALS	2102240815Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/23/2021	METALS	2102240815Y	Magnesium, Total	89.2	mg/L	1	0.03		
2/23/2021	METALS	2102240815Y	Potassium, Total	2.9	mg/L	2	0.2		
2/23/2021	ANIONS	2102240816Y	Chloride	136	mg/L	8	1.7		
2/23/2021	ANIONS	2102240816Y	Alkalinity, Total as CaCO3	257	mg/L	2	1.8		
2/23/2021	ANIONS	2102240816Y	Fluoride, undistilled	0.81	mg/L	0.1	0.01		
2/23/2021	ANIONS	2102240816Y	Sulfate	501	mg/L	20	4		
2/23/2021	SM2540C	2102240817Y	Total Dissolved Solids (TDS)	1230	mg/L	11	10		
2/23/2021	6850	2102240818Y	Perchlorate	1	ug/L	0.2	0.06		
2/23/2021	353.2	2102240819Y	Nitrate+Nitrite as Nitrogen	9.95	mg/L	0.5	0.02		

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
2/24/2021	8260	2102241020Y	Trichlorofluoromethane (CFC 11)	9	ug/L	1	0.24		
2/24/2021	8260	2102241020Y	Trichloroethene (TCE)	1.4	ug/L	1	0.2		
2/24/2021	8260	2102241020Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.9	ug/L	1	0.2		
2/24/2021	8260	2102241020Y	Tetrahydrofuran (THF)	2.7	ug/L	5	1.3		J
2/24/2021	607	2102241021Y	N-Nitrodimethylamine	0.0057	µg/L	0.0095	0.0048	5.8	J A
2/24/2021	607	2102241021Y	Bromacil	1.3	µg/L	0.0095	0.0048	101	
2/24/2021	METALS	2102241040Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
2/24/2021	METALS	2102241040Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
2/24/2021	METALS	2102241040Y	Vanadium, Total	0.0009	mg/L	0.05	0.0007		J
2/24/2021	METALS	2102241040Y	Thallium, Total	0.0001	mg/L	0.001	0.00004		J
2/24/2021	METALS	2102241040Y	Barium, Total	0.026	mg/L	0.02	0.003		
2/24/2021	METALS	2102241040Y	Strontium, Total	1.94	mg/L	0.1	0.002		
2/24/2021	METALS	2102241040Y	Sodium, Total	44	mg/L	1	0.2		
2/24/2021	METALS	2102241040Y	Potassium, Total	3.7	mg/L	2	0.2		
2/24/2021	METALS	2102241040Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
2/24/2021	METALS	2102241040Y	Iron, Total	0.09	mg/L	0.1	0.07		J
2/24/2021	METALS	2102241040Y	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
2/24/2021	METALS	2102241040Y	Calcium, Total	115	mg/L	1	0.3		
2/24/2021	METALS	2102241040Y	Boron, Total	0.12	mg/L	0.2	0.02		J
2/24/2021	METALS	2102241040Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/24/2021	METALS	2102241040Y	Magnesium, Total	59.8	mg/L	1	0.03		

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
2/1/2021	8260	2102011500C	Unknown	25	ug/L	NA	NA		TIC RB
2/1/2021	8260	2102011500C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.21	ug/L	1	0.2		J
2/1/2021	8260	2102011500C	Trichlorofluoromethane (CFC 11)	420	ug/L	5	1.2		
2/1/2021	8260	2102011500C	Trichloroethene (TCE)	1.8	ug/L	1	0.2		
2/1/2021	8260	2102011500C	1,1,2-Trichloro-1,2,2-Trifluoroethane	130	ug/L	1	0.2		
2/1/2021	8260	2102011500C	Dichlorofluoromethane (CFC 21)	0.65	ug/L	1	0.2		J

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
4/21/2021	8260	2104210935C	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
4/21/2021	8260	2104210935C	Dichlorofluoromethane (CFC 21)	6.3	ug/L	1	0.2		
4/21/2021	8260	2104210935C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.3	ug/L	1	0.2		
4/21/2021	8260	2104210935C	1,1,2-Trichloro-1,2,2-Trifluoroethane	58	ug/L	1	0.2		
4/21/2021	8260	2104210935C	Trichlorofluoromethane (CFC 11)	190	ug/L	2.5	0.6		

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
2/1/2021	8260	2102011020C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	4.8	ug/L	1	0.2		
2/1/2021	8260	2102011020C	1,1,2-Trichloro-1,2,2-Trifluoroethane	90	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Dichlorofluoromethane (CFC 21)	5.5	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Trichloroethene (TCE)	1.8	ug/L	1	0.2		
2/1/2021	8260	2102011020C	Trichlorofluoromethane (CFC 11)	250	ug/L	2.5	0.6		

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
4/21/2021	8260	2104211410C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.9	ug/L	1	0.2		J
4/21/2021	8260	2104211410C	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
4/21/2021	8260	2104211410C	Trichloroethene (TCE)	0.59	ug/L	1	0.2		J
4/21/2021	8260	2104211410C	Dichlorofluoromethane (CFC 21)	2.7	ug/L	1	0.2		
4/21/2021	8260	2104211410C	Chloroform	0.65	ug/L	1	0.24		J
4/21/2021	8260	2104211410C	1,1,2-Trichloro-1,2,2-Trifluoroethane	72	ug/L	1	0.2		
4/21/2021	8260	2104211410C	2-Propanol	4.4	ug/L	50	3.4		J

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
2/2/2021	8260	2102020955C	Trichloroethene (TCE)	0.96	ug/L	1	0.2		J
2/2/2021	8260	2102020955C	Dichlorofluoromethane (CFC 21)	1.2	ug/L	1	0.2		
2/2/2021	8260	2102020955C	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	10	2		
2/2/2021	8260	2102020955C	Trichlorofluoromethane (CFC 11)	650	ug/L	10	2.4		
2/2/2021	8260	2102020955C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.82	ug/L	1	0.2		J
2/2/2021	8260	2102020955C	Chloroform	0.53	ug/L	1	0.24		J

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
2/4/2021	8260	2102041310Y	Trichloroethene (TCE)	0.46	ug/L	1	0.2		J
2/4/2021	8260	2102041310Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.9	ug/L	1	0.2		
2/4/2021	8260	2102041311Y	Trichloroethene (TCE)	0.61	ug/L	1	0.2		J
2/4/2021	8260	2102041311Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	3.1	ug/L	1	0.2		
2/4/2021	607	2102041312Y	Bromacil	0.048	µg/L	0.0095	0.0048	74	EB
2/4/2021	METALS	2102041330Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/4/2021	METALS	2102041330Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/4/2021	METALS	2102041330Y	Strontium, Total	5.33	mg/L	0.1	0.002		
2/4/2021	METALS	2102041330Y	Potassium, Total	3.1	mg/L	2	0.2		
2/4/2021	METALS	2102041330Y	Manganese, Total	0.018	mg/L	0.01	0.004		
2/4/2021	METALS	2102041330Y	Magnesium, Total	26.8	mg/L	1	0.03		
2/4/2021	METALS	2102041330Y	Boron, Total	0.21	mg/L	0.2	0.02		
2/4/2021	METALS	2102041330Y	Sodium, Total	121	mg/L	1	0.2		
2/4/2021	METALS	2102041330Y	Barium, Total	0.052	mg/L	0.02	0.003		
2/4/2021	METALS	2102041330Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
2/4/2021	METALS	2102041330Y	Aluminum, Total	0.03	mg/L	0.1	0.03		J
2/4/2021	METALS	2102041330Y	Calcium, Total	107	mg/L	1	0.3		

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
4/27/2021	8260	2104270815B	Trichloroethene (TCE)	40	ug/L	1	0.2		Q
4/27/2021	8260	2104270815B	Trichlorofluoromethane (CFC 11)	0.48	ug/L	1	0.24		J Q
4/27/2021	8260	2104270815B	Chloroform	0.51	ug/L	1	0.24		J
4/27/2021	8260	2104270815B	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	ug/L	1	0.2		Q
4/27/2021	8260	2104270815B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.51	ug/L	1	0.2		J
4/27/2021	607	2104270817B	Bromacil	18	µg/L	0.2	0.1	80	D
4/27/2021	300.0	2104270819B	Chloride	205	mg/L	6	1.3		
4/27/2021	353.2	2104270820B	Nitrate+Nitrite as Nitrogen	11.5	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
3/22/2021	8260	2103221320B	Trichloroethene (TCE)	0.99	ug/L	1.0	0.200		J RB FB
3/22/2021	8260	2103221320B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.21	ug/L	1.0	0.200		J
3/22/2021	ANIONS	2103221323B	Chloride	46.1	mg/L	2.0	0.500		
3/22/2021	ANIONS	2103221323B	Alkalinity, Total as CaCO3	245	mg/L	2.0	1.80		
3/22/2021	ANIONS	2103221323B	Sulfate	271	mg/L	8.0	1.60		
3/22/2021	ANIONS	2103221323B	Fluoride, undistilled	0.68	mg/L	0.10	0.01		
3/22/2021	6850	2103221324B	Perchlorate	0.27	ug/L	0.20	0.060		

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
3/23/2021	8260	2103230920B	1,1,2-Trichloro-1,2,2-Trifluoroethane	22	ug/L	1.0	0.200		
3/23/2021	8260	2103230920B	Trichlorofluoromethane (CFC 11)	0.49	ug/L	1.0	0.240		J
3/23/2021	8260	2103230920B	Trichloroethene (TCE)	1.3	ug/L	1.0	0.200		RB FB
3/23/2021	607	2103230922B	Bromacil	0.01	µg/L	0.0095	0.0048	91	
3/23/2021	ANIONS	2103230923B	Alkalinity, Total as CaCO3	260	mg/L	2.0	1.80		
3/23/2021	ANIONS	2103230923B	Chloride	61.3	mg/L	2.0	0.500		
3/23/2021	ANIONS	2103230923B	Fluoride, undistilled	0.73	mg/L	0.10	0.01		
3/23/2021	ANIONS	2103230923B	Sulfate	378	mg/L	8.0	1.60		
3/23/2021	6850	2103230924B	Perchlorate	0.51	ug/L	0.20	0.060		

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
3/23/2021	8260	2103231505Y	Tetrachloroethene (PCE)	0.23	ug/L	1.0	0.210		J RB
3/23/2021	8260	2103231505Y	Trichloroethene (TCE)	0.79	ug/L	1.0	0.200		J RB EB
3/23/2021	ANIONS	2103231535Y	Fluoride, undistilled	0.29	mg/L	0.10	0.01		
3/23/2021	ANIONS	2103231535Y	Sulfate	247	mg/L	8.0	1.60		
3/23/2021	ANIONS	2103231535Y	Chloride	48.8	mg/L	2.0	0.500		
3/23/2021	ANIONS	2103231535Y	Alkalinity, Total as CaCO3	130	mg/L	2.0	1.80		
3/23/2021	6850	2103231536Y	Perchlorate	0.58	ug/L	0.20	0.060		

Analytical Results for Sampling Events at 700-H-535

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/22/2021	8260	2103221415Y	Tetrachloroethene (PCE)	0.23	ug/L	1.0	0.210		J RB
3/22/2021	8260	2103221415Y	Trichloroethene (TCE)	1.2	ug/L	1.0	0.200		RB EB

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
3/22/2021	8260	2103221015Y	Trichloroethene (TCE)	1.9	ug/L	1.0	0.200		RB TB EB
3/22/2021	8260	2103221015Y	Styrene	0.6	ug/L	1.0	0.200		J
3/22/2021	8260	2103221015Y	Tetrachloroethene (PCE)	0.31	ug/L	1.0	0.210		J RB TB EB
3/22/2021	607	2103221016Y	Bromacil	0.0086	µg/L	0.0095	0.0048	91	J EB

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
3/22/2021	8260	2103220900B	Tetrachloroethene (PCE)	0.36	ug/L	1.0	0.210		J RB FB
3/22/2021	8260	2103220900B	Trichloroethene (TCE)	1.8	ug/L	1.0	0.200		RB FB
3/22/2021	8260	2103220900B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.54	ug/L	1.0	0.200		J
3/22/2021	ANIONS	2103220903B	Sulfate	372	mg/L	8.0	1.60		
3/22/2021	ANIONS	2103220903B	Alkalinity, Total as CaCO3	260	mg/L	2.0	1.80		
3/22/2021	ANIONS	2103220903B	Chloride	56.4	mg/L	2.0	0.500		
3/22/2021	ANIONS	2103220903B	Fluoride, undistilled	1.1	mg/L	0.10	0.01		
3/22/2021	6850	2103220904B	Perchlorate	0.15	ug/L	0.20	0.060		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
4/1/2021	8260	2104011350B	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.35	ug/L	1	0.2		J
4/1/2021	NDMA_LL	2104011352B	N-Nitrosodimethylamine	0.38	ng/L	0.47	0.33		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
3/4/2021	8260	2103040910C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.38	ug/L	1	0.2		J
3/4/2021	607	2103040912C	Bromacil	0.016	µg/L	0.0095	0.0048	107	
3/4/2021	METALS	2103040916C	Sodium, Total	42.2	mg/L	1	0.2		
3/4/2021	METALS	2103040916C	Zinc, Total	0.052	mg/L	0.02	0.01		
3/4/2021	METALS	2103040916C	Strontium, Total	3.28	mg/L	0.1	0.002		
3/4/2021	METALS	2103040916C	Potassium, Total	9.4	mg/L	2	0.2		
3/4/2021	METALS	2103040916C	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
3/4/2021	METALS	2103040916C	Magnesium, Total	73.7	mg/L	1	0.03		
3/4/2021	METALS	2103040916C	Calcium, Total	129	mg/L	1	0.3		
3/4/2021	METALS	2103040916C	Boron, Total	0.05	mg/L	0.2	0.02		J
3/4/2021	METALS	2103040916C	Barium, Total	0.03	mg/L	0.02	0.003		
3/4/2021	METALS	2103040916C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/4/2021	METALS	2103040916C	Antimony, Total	0.0012	mg/L	0.001	0.0002		
3/4/2021	METALS	2103040916C	Chromium, Total	0.026	mg/L	0.01	0.0006		
3/4/2021	METALS	2103040916C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/4/2021	METALS	2103040917C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/4/2021	METALS	2103040917C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/4/2021	METALS	2103040917C	Sodium, Total	41.8	mg/L	1	0.2		
3/4/2021	METALS	2103040917C	Potassium, Total	9.3	mg/L	2	0.2		
3/4/2021	METALS	2103040917C	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/4/2021	METALS	2103040917C	Magnesium, Total	73.1	mg/L	1	0.03		
3/4/2021	METALS	2103040917C	Chromium, Total	0.026	mg/L	0.01	0.0006		
3/4/2021	METALS	2103040917C	Calcium, Total	128	mg/L	1	0.3		
3/4/2021	METALS	2103040917C	Barium, Total	0.03	mg/L	0.02	0.003		
3/4/2021	METALS	2103040917C	Antimony, Total	0.0012	mg/L	0.001	0.0002		
3/4/2021	METALS	2103040917C	Strontium, Total	3.24	mg/L	0.1	0.002		
3/4/2021	METALS	2103040917C	Boron, Total	0.05	mg/L	0.2	0.02		J
3/4/2021	METALS	2103040917C	Zinc, Total	0.05	mg/L	0.02	0.01		
3/4/2021	ANIONS	2103040918C	Chloride	74	mg/L	2	0.5		
3/4/2021	ANIONS	2103040918C	Fluoride	1.06	mg/L	0.1	0.01		
3/4/2021	ANIONS	2103040918C	Sulfate	360	mg/L	8	1.6		
3/4/2021	ANIONS	2103040918C	Alkalinity, Total as CaCO3	233	mg/L	2	1.8		
3/4/2021	SM2540C	2103040919C	Total Dissolved Solids (TDS)	924	mg/L	10	9		
3/4/2021	6850	2103040922C	Perchlorate	0.42	ug/L	0.2	0.06		
3/4/2021	353.2	2103040923C	Nitrate+Nitrite as Nitrogen	5.7	mg/L	0.5	0.02		

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
3/15/2021	8260	2103151503C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.94	ug/L	1	0.2		J
3/15/2021	8260	2103151503C	cis-1,2-Dichloroethene	0.34	ug/L	1	0.23		J
3/15/2021	8260	2103151503C	Trichlorofluoromethane (CFC 11)	79	ug/L	1	0.24		
3/15/2021	8260	2103151503C	Trichloroethene (TCE)	63	ug/L	1	0.2		
3/15/2021	8260	2103151503C	Tetrachloroethene (PCE)	2.9	ug/L	1	0.21		
3/15/2021	8260	2103151503C	1,1,2-Trichloro-1,2,2-Trifluoroethane	290	ug/L	2.5	0.5		
3/15/2021	8260	2103151503C	Dichlorofluoromethane (CFC 21)	0.26	ug/L	1	0.2		J
3/15/2021	607	2103151505C	N-Nitrosodimethylamine	0.23	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151505C	N-Nitrodimethylamine	0.3	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151505C	Bromacil	0.73	µg/L	0.0094	0.0047	99	
3/15/2021	METALS	2103151506C	Calcium, Total	138	mg/L	1	0.3		
3/15/2021	METALS	2103151506C	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
3/15/2021	METALS	2103151506C	Strontium, Total	3.38	mg/L	0.1	0.002		
3/15/2021	METALS	2103151506C	Sodium, Total	48.8	mg/L	1	0.2		
3/15/2021	METALS	2103151506C	Potassium, Total	2.9	mg/L	2	0.2		
3/15/2021	METALS	2103151506C	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/15/2021	METALS	2103151506C	Magnesium, Total	71.2	mg/L	1	0.03		
3/15/2021	METALS	2103151506C	Chromium, Total	0.018	mg/L	0.01	0.0006		
3/15/2021	METALS	2103151506C	Boron, Total	0.11	mg/L	0.2	0.02		J
3/15/2021	METALS	2103151506C	Barium, Total	0.025	mg/L	0.02	0.003		
3/15/2021	METALS	2103151506C	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
3/15/2021	METALS	2103151506C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
3/15/2021	METALS	2103151506C	Aluminum, Total	0.44	mg/L	0.1	0.03		
3/15/2021	METALS	2103151506C	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
3/15/2021	METALS	2103151506C	Iron, Total	0.18	mg/L	0.1	0.07		

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
2/8/2021	8260	2102080906C	Tetrachloroethene (PCE)	0.41	ug/L	1	0.21		J Q
2/8/2021	8260	2102080906C	Trichloroethene (TCE)	9.2	ug/L	1	0.2		Q
2/8/2021	8260	2102080906C	Trichlorofluoromethane (CFC 11)	25	ug/L	1	0.24		Q
2/8/2021	8260	2102080906C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
2/8/2021	8260	2102080906C	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		Q
2/8/2021	8260	2102080906C	Dichlorofluoromethane (CFC 21)	0.36	ug/L	1	0.2		J
2/8/2021	607	2102080908C	N-Nitrosodimethylamine	0.37	µg/L	0.0095	0.0048	34	
2/8/2021	607	2102080908C	N-Nitrodimethylamine	0.4	µg/L	0.0095	0.0048	88	
2/8/2021	607	2102080908C	Bromacil	0.54	µg/L	0.0095	0.0048	74	
2/8/2021	METALS	2102080909C	Magnesium, Total	61.4	mg/L	1	0.03		
2/8/2021	METALS	2102080909C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102080909C	Strontium, Total	3.02	mg/L	0.1	0.002		
2/8/2021	METALS	2102080909C	Sodium, Total	60.3	mg/L	1	0.2		
2/8/2021	METALS	2102080909C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/8/2021	METALS	2102080909C	Calcium, Total	103	mg/L	1	0.3		
2/8/2021	METALS	2102080909C	Boron, Total	0.1	mg/L	0.2	0.02		J
2/8/2021	METALS	2102080909C	Barium, Total	0.031	mg/L	0.02	0.003		
2/8/2021	METALS	2102080909C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
2/8/2021	METALS	2102080909C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102080909C	Chromium, Total	0.005	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102080909C	Potassium, Total	3.8	mg/L	2	0.2		

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
2/4/2021	8260	2102041305C	Dichlorofluoromethane (CFC 21)	7	ug/L	1	0.2		
2/4/2021	8260	2102041305C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	9.2	ug/L	1	0.2		
2/4/2021	8260	2102041305C	Trichlorofluoromethane (CFC 11)	43	ug/L	1	0.24		
2/4/2021	8260	2102041305C	Tetrachloroethene (PCE)	1.3	ug/L	1	0.21		
2/4/2021	8260	2102041305C	1,1,2-Trichloro-1,2,2-Trifluoroethane	96	ug/L	1	0.2		
2/4/2021	8260	2102041305C	Trichloroethene (TCE)	48	ug/L	1	0.2		
2/4/2021	607	2102041307C	Bromacil	0.49	µg/L	0.0096	0.0048	74	
2/4/2021	607	2102041307C	N-Nitrosodimethylamine	0.2	µg/L	0.0096	0.0048	34	
2/4/2021	607	2102041307C	N-Nitrodimethylamine	0.25	µg/L	0.0096	0.0048	88	
2/4/2021	607	2102041308C	N-Nitrosodimethylamine	0.2	µg/L	0.0094	0.0047	34	
2/4/2021	607	2102041308C	Bromacil	0.49	µg/L	0.0094	0.0047	74	
2/4/2021	607	2102041308C	N-Nitrodimethylamine	0.24	µg/L	0.0094	0.0047	88	
2/4/2021	ANIONS	2102041310C	Chloride	86.8	mg/L	2	0.5		
2/4/2021	ANIONS	2102041310C	Fluoride, undistilled	1.13	mg/L	0.1	0.01		
2/4/2021	ANIONS	2102041310C	Sulfate	389	mg/L	8	1.6		
2/4/2021	ANIONS	2102041310C	Alkalinity, Total as CaCO3	244	mg/L	2	1.8		
2/4/2021	SM2540C	2102041311C	Total Dissolved Solids (TDS)	960	mg/L	10	9		
2/4/2021	6850	2102041312C	Perchlorate	0.51	ug/L	0.2	0.06		
2/4/2021	353.2	2102041313C	Nitrate+Nitrite as Nitrogen	2.21	mg/L	0.25	0.008		

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
2/2/2021	8260	2102020947A	Hexanoic acid, 2-ethyl-	11	ug/L	NA	NA		TIC FB
2/2/2021	8260	2102020947A	Tetrahydrofuran (THF)	2.1	ug/L	5	1.3		J
2/2/2021	8260	2102020947A	Toluene	0.27	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021027A	N-Nitrosodimethylamine	2.7	ng/L	0.48	0.33		FB
2/2/2021	NDMA_LL	2102021027A	N-Nitrodimethylamine	0.3	ng/L	0.48	0.2		J
2/2/2021	8270	2102021310A	Benzenesulfonamide, N-butyl-	7.2	ug/L	NA	NA		TIC
2/2/2021	8270	2102021310A	Butane, 2-methoxy-2-methyl-	85	ug/L	NA	NA		TIC RB
2/2/2021	8270	2102021310A	1,4-Dioxane, 2,5-dimethyl-	10	ug/L	NA	NA		TIC
2/2/2021	8270	2102021310A	Unknown	6.9	ug/L	NA	NA		TIC
2/2/2021	METALS	2102021428A	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021428A	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021428A	Barium, Total	0.051	mg/L	0.02	0.003		
2/2/2021	METALS	2102021428A	Boron, Total	0.09	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021428A	Calcium, Total	83.5	mg/L	1	0.3		
2/2/2021	METALS	2102021428A	Copper, Total	0.013	mg/L	0.02	0.004		J
2/2/2021	METALS	2102021428A	Magnesium, Total	61.5	mg/L	1	0.03		
2/2/2021	METALS	2102021428A	Manganese, Total	0.091	mg/L	0.01	0.004		
2/2/2021	METALS	2102021428A	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021428A	Potassium, Total	3.1	mg/L	2	0.2		
2/2/2021	METALS	2102021428A	Sodium, Total	39.3	mg/L	1	0.2		
2/2/2021	METALS	2102021428A	Strontium, Total	2.06	mg/L	0.1	0.002		
2/2/2021	METALS	2102021428A	Zinc, Total	0.149	mg/L	0.02	0.01		
2/2/2021	METALS	2102021428A	Antimony, Total	0.0008	mg/L	0.001	0.0002		J
2/2/2021	ANIONS	2102021429A	Fluoride, undistilled	0.75	mg/L	0.1	0.01		
2/2/2021	ANIONS	2102021429A	Sulfate	279	mg/L	8	1.6		
2/2/2021	ANIONS	2102021429A	Alkalinity, Total as CaCO3	188	mg/L	2	1.8		
2/2/2021	ANIONS	2102021429A	Chloride	48.3	mg/L	2	0.5		
2/2/2021	SM2540C	2102021430A	Total Dissolved Solids (TDS)	687	mg/L	10	9		
2/2/2021	6850	2102021431A	Perchlorate	0.51	ug/L	0.2	0.06		
2/2/2021	353.2	2102021432A	Nitrate+Nitrite as Nitrogen	1.2	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
2/2/2021	8260	2102021002A	Hexanoic acid, 2-ethyl-	6.1	ug/L	NA	NA		TIC
2/2/2021	8260	2102021002A	Toluene	0.26	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021004A	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		
2/2/2021	NDMA_LL	2102021038A	N-Nitrosodimethylamine	0.74	ng/L	0.47	0.33		

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
2/2/2021	8260	2102021010A	Toluene	0.24	ug/L	1	0.2		J
2/2/2021	NDMA_LL	2102021012A	N-Nitrosodimethylamine	0.83	ng/L	0.48	0.33		

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
4/7/2021	8260	2104071430Y	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	110	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	Tetrachloroethene (PCE)	6.1	ug/L	1	0.21		
4/7/2021	8260	2104071430Y	Trichlorofluoromethane (CFC 11)	92	ug/L	1	0.24		
4/7/2021	8260	2104071430Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1	ug/L	1	0.2		
4/7/2021	8260	2104071430Y	Trichloroethene (TCE)	150	ug/L	1	0.2		
4/7/2021	607	2104071431Y	N-Nitrodimethylamine	1.4	µg/L	0.0095	0.0048	112	
4/7/2021	607	2104071431Y	Bromacil	0.37	µg/L	0.0095	0.0048	114	
4/7/2021	607	2104071431Y	N-Nitrosodimethylamine	2.3	µg/L	0.0095	0.0048	46	
4/7/2021	METALS	2104071500Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/7/2021	METALS	2104071500Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
4/7/2021	METALS	2104071500Y	Boron, Total	0.11	mg/L	0.2	0.02		J
4/7/2021	METALS	2104071500Y	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
4/7/2021	METALS	2104071500Y	Manganese, Total	0.006	mg/L	0.01	0.004		J
4/7/2021	METALS	2104071500Y	Barium, Total	0.031	mg/L	0.02	0.003		
4/7/2021	METALS	2104071500Y	Potassium, Total	3.1	mg/L	2	0.2		
4/7/2021	METALS	2104071500Y	Sodium, Total	44.1	mg/L	1	0.2		
4/7/2021	METALS	2104071500Y	Strontium, Total	2.98	mg/L	0.1	0.002		
4/7/2021	METALS	2104071500Y	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
4/7/2021	METALS	2104071500Y	Vanadium, Total	0.0008	mg/L	0.05	0.0007		J
4/7/2021	METALS	2104071500Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/7/2021	METALS	2104071500Y	Magnesium, Total	69.4	mg/L	1	0.03		
4/7/2021	METALS	2104071500Y	Calcium, Total	132	mg/L	1	0.3		

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
4/7/2021	8260	2104071015Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.5	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Dichlorofluoromethane (CFC 21)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Tetrachloroethene (PCE)	0.45	ug/L	1	0.21		J
4/7/2021	8260	2104071015Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
4/7/2021	8260	2104071015Y	Trichlorofluoromethane (CFC 11)	3	ug/L	1	0.24		
4/7/2021	8260	2104071015Y	Vinyl Chloride	0.21	ug/L	1	0.2		J
4/7/2021	8260	2104071015Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Tetrachloroethene (PCE)	0.34	ug/L	1	0.21		J
4/7/2021	8260	2104071016Y	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	6.9	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Vinyl Chloride	0.2	ug/L	1	0.2		J
4/7/2021	8260	2104071016Y	Trichloroethene (TCE)	11	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Dichlorofluoromethane (CFC 21)	7	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	1,1,2-Trichloro-1,2,2-Trifluoroethane	8.4	ug/L	1	0.2		
4/7/2021	8260	2104071016Y	Trichlorofluoromethane (CFC 11)	3.1	ug/L	1	0.24		
4/7/2021	607	2104071017Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	46	
4/7/2021	METALS	2104071045Y	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
4/7/2021	METALS	2104071045Y	Sodium, Total	45.3	mg/L	1	0.2		
4/7/2021	METALS	2104071045Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
4/7/2021	METALS	2104071045Y	Barium, Total	0.038	mg/L	0.02	0.003		
4/7/2021	METALS	2104071045Y	Boron, Total	0.12	mg/L	0.2	0.02		J
4/7/2021	METALS	2104071045Y	Calcium, Total	68.2	mg/L	1	0.3		
4/7/2021	METALS	2104071045Y	Manganese, Total	0.13	mg/L	0.01	0.004		
4/7/2021	METALS	2104071045Y	Potassium, Total	7.9	mg/L	2	0.2		
4/7/2021	METALS	2104071045Y	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
4/7/2021	METALS	2104071045Y	Magnesium, Total	31.6	mg/L	1	0.03		
4/7/2021	METALS	2104071045Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/7/2021	METALS	2104071045Y	Strontium, Total	1.61	mg/L	0.1	0.002		
4/7/2021	METALS	2104071045Y	Zinc, Total	0.027	mg/L	0.02	0.01		
4/7/2021	ANIONS	2104071046Y	Sulfate	110	mg/L	8	1.6		
4/7/2021	ANIONS	2104071046Y	Alkalinity, Total as CaCO3	282	mg/L	2	1.8		
4/7/2021	ANIONS	2104071046Y	Chloride	7.6	mg/L	2	0.5		
4/7/2021	ANIONS	2104071046Y	Fluoride, undistilled	0.67	mg/L	0.1	0.01		
4/7/2021	SM2540C	2104071047Y	Total Dissolved Solids (TDS)	461	mg/L	10	9		
4/7/2021	6850	2104071048Y	Perchlorate	0.1	ug/L	0.2	0.06		J

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
4/1/2021	8260_LL	2104011031C	2-Propanol	9.7	ug/L	40	3.4		J
4/1/2021	607	2104011033C	Bromacil	0.01	µg/L	0.0095	0.0048	115	
4/1/2021	METALS	2104011036C	Antimony, Total	0.0007	mg/L	0.001	0.0002		J
4/1/2021	METALS	2104011036C	Molybdenum, Total	0.021	mg/L	0.025	0.003		J
4/1/2021	METALS	2104011036C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/1/2021	METALS	2104011036C	Sodium, Total	49.2	mg/L	1	0.2		
4/1/2021	METALS	2104011036C	Strontium, Total	2.67	mg/L	0.1	0.002		
4/1/2021	METALS	2104011036C	Potassium, Total	4.7	mg/L	2	0.2		
4/1/2021	METALS	2104011036C	Nickel, Total	0.007	mg/L	0.04	0.003		J
4/1/2021	METALS	2104011036C	Magnesium, Total	46.9	mg/L	1	0.03		
4/1/2021	METALS	2104011036C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/1/2021	METALS	2104011036C	Calcium, Total	80.4	mg/L	1	0.3		
4/1/2021	METALS	2104011036C	Boron, Total	0.09	mg/L	0.2	0.02		J
4/1/2021	METALS	2104011036C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/1/2021	METALS	2104011036C	Barium, Total	0.035	mg/L	0.02	0.003		
4/1/2021	ANIONS	2104011037C	Fluoride, undistilled	0.91	mg/L	0.1	0.01		
4/1/2021	ANIONS	2104011037C	Alkalinity, Total as CaCO3	161	mg/L	2	1.8		
4/1/2021	ANIONS	2104011037C	Chloride	48.2	mg/L	2	0.5		
4/1/2021	ANIONS	2104011037C	Sulfate	252	mg/L	8	1.6		
4/1/2021	SM2540C	2104011038C	Total Dissolved Solids (TDS)	630	mg/L	10	9		
4/1/2021	6850	2104011039C	Perchlorate	0.28	ug/L	0.2	0.06		
4/1/2021	353.2	2104011040C	Nitrate+Nitrite as Nitrogen	0.947	mg/L	0.05	0.002		

Analytical Results for Sampling Events at BLM-40-595

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	ANIONS	2104121414C	Alkalinity, Total as CaCO3	127	mg/L	2	1.8		
4/12/2021	ANIONS	2104121414C	Chloride	10.4	mg/L	2	0.5		
4/12/2021	ANIONS	2104121414C	Fluoride, undistilled	0.25	mg/L	0.1	0.01		
4/12/2021	ANIONS	2104121414C	Sulfate	167	mg/L	8	1.6		
4/12/2021	SM2540C	2104121415C	Total Dissolved Solids (TDS)	405	mg/L	10	9		
4/12/2021	6850	2104121416C	Perchlorate	0.21	ug/L	0.2	0.06		
4/12/2021	353.2	2104121417C	Nitrate+Nitrite as Nitrogen	0.228	mg/L	0.05	0.002		

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
4/14/2021	8260_LL	2104141105C	1,2-Dichloroethane	1.1	ug/L	0.5	0.2		
4/14/2021	ANIONS	2104141108C	Alkalinity, Total as CaCO3	148	mg/L	2	1.8		
4/14/2021	ANIONS	2104141108C	Chloride	17.2	mg/L	2	0.5		
4/14/2021	ANIONS	2104141108C	Fluoride, undistilled	0.41	mg/L	0.1	0.01		
4/14/2021	ANIONS	2104141108C	Sulfate	225	mg/L	8	1.6		
4/14/2021	SM2540C	2104141109C	Total Dissolved Solids (TDS)	532	mg/L	10	9		
4/14/2021	353.2	2104141111C	Nitrate+Nitrite as Nitrogen	0.005	mg/L	0.05	0.002		J

Analytical Results for Sampling Events at BLM-41-420

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/20/2021	NDMA_LL	2104201422C	N-Nitrosodimethylamine	0.5	ng/L	0.48	0.33		RB FB
4/20/2021	NDMA_LL	2104201423C	N-Nitrosodimethylamine	0.53	ng/L	0.47	0.33		RB FB
4/20/2021	ANIONS	2104201425C	Alkalinity, Total as CaCO3	228	mg/L	2	1.8		
4/20/2021	ANIONS	2104201425C	Chloride	55.1	mg/L	2	0.5		
4/20/2021	ANIONS	2104201425C	Fluoride, undistilled	0.73	mg/L	0.1	0.01		
4/20/2021	ANIONS	2104201425C	Sulfate	319	mg/L	8	1.6		
4/20/2021	SM2540C	2104201426C	Total Dissolved Solids (TDS)	769	mg/L	10	9		
4/20/2021	6850	2104201427C	Perchlorate	0.15	ug/L	0.2	0.06		J
4/20/2021	353.2	2104201428C	Nitrate+Nitrite as Nitrogen	0.352	mg/L	0.05	0.002		

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
4/20/2021	8260_LL	2104200925C	1,2-Dichloroethane	1.3	ug/L	0.5	0.2		
4/20/2021	NDMA_LL	2104200927C	N-Nitrosodimethylamine	1.4	ng/L	0.48	0.33		RB Q
4/20/2021	NDMA_LL	2104200928C	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		RB * Q
4/20/2021	ANIONS	2104200930C	Sulfate	260	mg/L	8	1.6		
4/20/2021	ANIONS	2104200930C	Chloride	49.1	mg/L	2	0.5		
4/20/2021	ANIONS	2104200930C	Alkalinity, Total as CaCO3	249	mg/L	2	1.8		
4/20/2021	ANIONS	2104200930C	Fluoride, undistilled	0.58	mg/L	0.1	0.01		
4/20/2021	SM2540C	2104200931C	Total Dissolved Solids (TDS)	712	mg/L	10	9		

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
3/10/2021	8260_LL	2103100900B	Sulfur Dioxide	82	ug/L	NA	NA		TIC RB TB FB
3/10/2021	607	2103100901B	Bromacil	0.0058	µg/L	0.0096	0.0048	102	J
3/10/2021	NDMA_LL	2103100902B	N-Nitrosodimethylamine	0.43	ng/L	0.48	0.33		J *
3/10/2021	8270	2103100903B	Bis(2-ethylhexyl) Phthalate	9.8	ug/L	4.7	3.9		
3/10/2021	METALS	2103100904B	Sodium, Total	42.8	mg/L	1	0.2		
3/10/2021	METALS	2103100904B	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
3/10/2021	METALS	2103100904B	Arsenic, Total	0.0017	mg/L	0.001	0.0004		
3/10/2021	METALS	2103100904B	Barium, Total	0.032	mg/L	0.02	0.003		
3/10/2021	METALS	2103100904B	Boron, Total	0.09	mg/L	0.2	0.02		J
3/10/2021	METALS	2103100904B	Calcium, Total	42.6	mg/L	1	0.3		
3/10/2021	METALS	2103100904B	Chromium, Total	0.004	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103100904B	Magnesium, Total	28	mg/L	1	0.03		
3/10/2021	METALS	2103100904B	Potassium, Total	5.2	mg/L	2	0.2		
3/10/2021	METALS	2103100904B	Strontium, Total	1.58	mg/L	0.1	0.002		
3/10/2021	METALS	2103100904B	Vanadium, Total	0.016	mg/L	0.05	0.0007		J
3/10/2021	METALS	2103100904B	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
3/10/2021	ANIONS	2103100905B	Sulfate	95.3	mg/L	8	1.6		
3/10/2021	ANIONS	2103100905B	Alkalinity, Total as CaCO3	187	mg/L	2	1.8		
3/10/2021	ANIONS	2103100905B	Chloride	17.2	mg/L	2	0.5		
3/10/2021	ANIONS	2103100905B	Fluoride, undistilled	0.61	mg/L	0.1	0.01		
3/10/2021	SM2540C	2103100906B	Total Dissolved Solids (TDS)	389	mg/L	10	9		
3/10/2021	6850	2103100907B	Perchlorate	0.28	ug/L	0.2	0.06		
3/10/2021	353.2	2103100908B	Nitrate+Nitrite as Nitrogen	1.17	mg/L	0.05	0.002		

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
3/10/2021	8260_LL	2103101030B	Sulfur Dioxide	100	ug/L	NA	NA		TIC RB FB
3/10/2021	NDMA_LL	2103101033B	N-Nitrosodimethylamine	0.41	ng/L	0.47	0.33		J *
3/10/2021	METALS	2103101036B	Sodium, Total	43.4	mg/L	1	0.2		
3/10/2021	METALS	2103101036B	Strontium, Total	1.57	mg/L	0.1	0.002		
3/10/2021	METALS	2103101036B	Potassium, Total	5.2	mg/L	2	0.2		
3/10/2021	METALS	2103101036B	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
3/10/2021	METALS	2103101036B	Magnesium, Total	27.9	mg/L	1	0.03		
3/10/2021	METALS	2103101036B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/10/2021	METALS	2103101036B	Calcium, Total	42.3	mg/L	1	0.3		
3/10/2021	METALS	2103101036B	Boron, Total	0.09	mg/L	0.2	0.02		J
3/10/2021	METALS	2103101036B	Barium, Total	0.032	mg/L	0.02	0.003		
3/10/2021	METALS	2103101036B	Arsenic, Total	0.0015	mg/L	0.001	0.0004		
3/10/2021	METALS	2103101036B	Vanadium, Total	0.016	mg/L	0.05	0.0007		J
3/10/2021	ANIONS	2103101037B	Sulfate	94.8	mg/L	8	1.6		
3/10/2021	ANIONS	2103101037B	Chloride	17.1	mg/L	2	0.5		
3/10/2021	ANIONS	2103101037B	Fluoride, undistilled	0.57	mg/L	0.1	0.01		
3/10/2021	ANIONS	2103101037B	Alkalinity, Total as CaCO3	188	mg/L	2	1.8		
3/10/2021	SM2540C	2103101038B	Total Dissolved Solids (TDS)	391	mg/L	10	9		
3/10/2021	6850	2103101039B	Perchlorate	0.23	ug/L	0.2	0.06		
3/10/2021	353.2	2103101040B	Nitrate+Nitrite as Nitrogen	1.19	mg/L	0.05	0.002		

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
3/15/2021	8260	2103151345B	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
3/15/2021	8260	2103151345B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.1	ug/L	1	0.2		
3/15/2021	8260	2103151345B	Dichlorofluoromethane (CFC 21)	0.27	ug/L	1	0.2		J
3/15/2021	8260	2103151345B	Tetrachloroethene (PCE)	0.47	ug/L	1	0.21		J
3/15/2021	8260	2103151345B	Trichloroethene (TCE)	24	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Trichlorofluoromethane (CFC 11)	17	ug/L	1	0.24		
3/15/2021	8260	2103151346B	Trichloroethene (TCE)	25	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Tetrachloroethene (PCE)	0.57	ug/L	1	0.21		J
3/15/2021	8260	2103151346B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.8	ug/L	1	0.2		
3/15/2021	8260	2103151346B	Dichlorofluoromethane (CFC 21)	0.25	ug/L	1	0.2		J
3/15/2021	607	2103151348B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151348B	N-Nitrodimethylamine	0.058	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151348B	Bromacil	0.013	µg/L	0.0094	0.0047	99	
3/15/2021	607	2103151349B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
3/15/2021	607	2103151349B	N-Nitrodimethylamine	0.058	µg/L	0.0094	0.0047	96	
3/15/2021	607	2103151349B	Bromacil	0.0066	µg/L	0.0094	0.0047	99	J
3/15/2021	ANIONS	2103151350B	Fluoride, undistilled	0.83	mg/L	0.1	0.01		
3/15/2021	ANIONS	2103151350B	Chloride	40.3	mg/L	2	0.5		
3/15/2021	ANIONS	2103151350B	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
3/15/2021	ANIONS	2103151350B	Sulfate	282	mg/L	8	1.6		
3/15/2021	SM2540C	2103151351B	Total Dissolved Solids (TDS)	777	mg/L	10	9		
3/15/2021	6850	2103151352B	Perchlorate	0.44	ug/L	0.2	0.06		
3/15/2021	353.2	2103151353B	Nitrate+Nitrite as Nitrogen	1.33	mg/L	0.05	0.002		

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
4/14/2021	8260	2104141425C	Trichloroethene (TCE)	2	ug/L	1	0.2		
4/14/2021	8260	2104141425C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.21	ug/L	1	0.2		J
4/14/2021	8260	2104141425C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.96	ug/L	1	0.2		J
4/14/2021	NDMA_LL	2104141427C	N-Nitrosodimethylamine	0.76	ng/L	0.48	0.33		*

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
3/1/2021	METALS	2103010945C	Barium, Total	0.02	mg/L	0.02	0.003		J
3/1/2021	METALS	2103010945C	Magnesium, Total	67.6	mg/L	1	0.03		
3/1/2021	METALS	2103010945C	Strontium, Total	2.2	mg/L	0.1	0.002		
3/1/2021	METALS	2103010945C	Sodium, Total	43.6	mg/L	1	0.2		
3/1/2021	METALS	2103010945C	Potassium, Total	4.1	mg/L	2	0.2		
3/1/2021	METALS	2103010945C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/1/2021	METALS	2103010945C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103010945C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/1/2021	METALS	2103010945C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/1/2021	METALS	2103010945C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103010945C	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103010945C	Calcium, Total	108	mg/L	1	0.3		
3/1/2021	ANIONS	2103010946C	Alkalinity, Total as CaCO3	220	mg/L	2	1.8		
3/1/2021	ANIONS	2103010946C	Chloride	44.2	mg/L	2	0.5		
3/1/2021	ANIONS	2103010946C	Fluoride, undistilled	0.82	mg/L	0.1	0.01		
3/1/2021	ANIONS	2103010946C	Sulfate	334	mg/L	8	1.6		
3/1/2021	SM2540C	2103010947C	Total Dissolved Solids (TDS)	795	mg/L	10	9		
3/1/2021	6850	2103010948C	Perchlorate	0.28	ug/L	0.2	0.06		
3/1/2021	353.2	2103010949C	Nitrate+Nitrite as Nitrogen	1.01	mg/L	0.05	0.002		

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
3/2/2021	8260	2103021330C	1,1,2-Trichloro-1,2,2-Trifluoroethane	13	ug/L	1	0.2		
3/2/2021	8260	2103021330C	Trichlorofluoromethane (CFC 11)	5.6	ug/L	1	0.24		
3/2/2021	8260	2103021330C	Trichloroethene (TCE)	3	ug/L	1	0.2		
3/2/2021	607	2103021335C	N-Nitrosodimethylamine	0.0076	µg/L	0.0095	0.0048	36	J
3/2/2021	607	2103021335C	N-Nitrodimethylamine	0.0067	µg/L	0.0095	0.0048	94	J
3/2/2021	607	2103021336C	N-Nitrodimethylamine	0.0057	µg/L	0.0094	0.0047	94	J
3/2/2021	607	2103021336C	N-Nitrosodimethylamine	0.0075	µg/L	0.0094	0.0047	36	J
3/2/2021	ANIONS	2103021337C	Chloride	36	mg/L	2	0.5		
3/2/2021	ANIONS	2103021337C	Fluoride, undistilled	0.52	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021337C	Sulfate	251	mg/L	8	1.6		
3/2/2021	ANIONS	2103021337C	Alkalinity, Total as CaCO3	268	mg/L	2	1.8		
3/2/2021	SM2540C	2103021338C	Total Dissolved Solids (TDS)	746	mg/L	10	9		
3/2/2021	6850	2103021339C	Perchlorate	0.32	ug/L	0.2	0.06		
3/2/2021	353.2	2103021340C	Nitrate+Nitrite as Nitrogen	0.698	mg/L	0.05	0.002		

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
3/9/2021	8260	2103091316B	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
3/9/2021	8260	2103091316B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1	0.2		
3/9/2021	8260	2103091316B	Dichlorofluoromethane (CFC 21)	2.7	ug/L	1	0.2		
3/9/2021	8260	2103091316B	1,1,2-Trichloro-1,2,2-Trifluoroethane	49	ug/L	1	0.2		
3/9/2021	8260	2103091316B	Trichloroethene (TCE)	0.85	ug/L	1	0.2		J
3/9/2021	8260	2103091316B	Sulfur Dioxide	40	ug/L	NA	NA		TIC RB FB
3/9/2021	607	2103091318B	N-Nitrosodimethylamine	4.5	µg/L	0.0094	0.0047	40	
3/9/2021	607	2103091318B	N-Nitrodimethylamine	4.8	µg/L	0.0094	0.0047	99	
3/9/2021	607	2103091318B	Bromacil	4	µg/L	0.0094	0.0047	107	
3/9/2021	METALS	2103091319B	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/9/2021	METALS	2103091319B	Boron, Total	0.23	mg/L	0.2	0.02		
3/9/2021	METALS	2103091319B	Calcium, Total	98.5	mg/L	1	0.3		
3/9/2021	METALS	2103091319B	Chromium, Total	0.005	mg/L	0.01	0.0006		J
3/9/2021	METALS	2103091319B	Iron, Total	0.12	mg/L	0.1	0.07		
3/9/2021	METALS	2103091319B	Magnesium, Total	68.1	mg/L	1	0.03		
3/9/2021	METALS	2103091319B	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
3/9/2021	METALS	2103091319B	Potassium, Total	3.1	mg/L	2	0.2		
3/9/2021	METALS	2103091319B	Sodium, Total	89.7	mg/L	1	0.2		
3/9/2021	METALS	2103091319B	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
3/9/2021	METALS	2103091319B	Antimony, Total	0.0007	mg/L	0.001	0.0002		J
3/9/2021	METALS	2103091319B	Aluminum, Total	0.12	mg/L	0.1	0.03		
3/9/2021	METALS	2103091319B	Barium, Total	0.038	mg/L	0.02	0.003		
3/9/2021	METALS	2103091319B	Strontium, Total	2.88	mg/L	0.1	0.002		
3/9/2021	ANIONS	2103091320B	Sulfate	293	mg/L	8	1.6		
3/9/2021	ANIONS	2103091320B	Alkalinity, Total as CaCO3	275	mg/L	2	1.8		
3/9/2021	ANIONS	2103091320B	Fluoride, undistilled	0.77	mg/L	0.1	0.01		
3/9/2021	ANIONS	2103091320B	Chloride	74	mg/L	2	0.5		
3/9/2021	SM2540C	2103091321B	Total Dissolved Solids (TDS)	900	mg/L	10	9		
3/9/2021	6850	2103091322B	Perchlorate	0.62	ug/L	0.2	0.06		
3/9/2021	353.2	2103091323B	Nitrate+Nitrite as Nitrogen	6.4	mg/L	0.25	0.008		

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
4/19/2021	8260	2104190950C	1,1,2-Trichloro-1,2,2-Trifluoroethane	5.2	ug/L	1	0.2		
4/19/2021	8260	2104190950C	Trichlorofluoromethane (CFC 11)	0.42	ug/L	1	0.24		J
4/19/2021	8260	2104190950C	Sulfur Dioxide	8.6	ug/L	NA	NA		TIC
4/19/2021	8260	2104190950C	Unknown	5.4	ug/L	NA	NA		TIC
4/19/2021	607	2104190952C	Bromacil	0.27	µg/L	0.0094	0.0047	85	
4/19/2021	METALS	2104190953C	Molybdenum, Total	0.032	mg/L	0.025	0.003		
4/19/2021	METALS	2104190953C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
4/19/2021	METALS	2104190953C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/19/2021	METALS	2104190953C	Barium, Total	0.026	mg/L	0.02	0.003		
4/19/2021	METALS	2104190953C	Boron, Total	0.09	mg/L	0.2	0.02		J
4/19/2021	METALS	2104190953C	Calcium, Total	268	mg/L	10	3		
4/19/2021	METALS	2104190953C	Chromium, Total	0.283	mg/L	0.01	0.0006		
4/19/2021	METALS	2104190953C	Iron, Total	2.24	mg/L	0.1	0.07		
4/19/2021	METALS	2104190953C	Manganese, Total	0.004	mg/L	0.01	0.004		J
4/19/2021	METALS	2104190953C	Nickel, Total	0.596	mg/L	0.04	0.003		
4/19/2021	METALS	2104190953C	Potassium, Total	2.4	mg/L	2	0.2		
4/19/2021	METALS	2104190953C	Sodium, Total	124	mg/L	1	0.2		
4/19/2021	METALS	2104190953C	Strontium, Total	7.4	mg/L	0.1	0.002		
4/19/2021	METALS	2104190953C	Magnesium, Total	86.8	mg/L	1	0.03		
4/19/2021	METALS	2104190954C	Barium, Total	0.026	mg/L	0.02	0.003		
4/19/2021	METALS	2104190954C	Manganese, Total	0.005	mg/L	0.01	0.004		J
4/19/2021	METALS	2104190954C	Strontium, Total	7.24	mg/L	0.1	0.002		
4/19/2021	METALS	2104190954C	Sodium, Total	121	mg/L	1	0.2		
4/19/2021	METALS	2104190954C	Potassium, Total	2.3	mg/L	2	0.2		
4/19/2021	METALS	2104190954C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
4/19/2021	METALS	2104190954C	Molybdenum, Total	0.031	mg/L	0.025	0.003		
4/19/2021	METALS	2104190954C	Magnesium, Total	85	mg/L	1	0.03		
4/19/2021	METALS	2104190954C	Iron, Total	2.22	mg/L	0.1	0.07		
4/19/2021	METALS	2104190954C	Chromium, Total	0.282	mg/L	0.01	0.0006		
4/19/2021	METALS	2104190954C	Calcium, Total	247	mg/L	1	0.3		
4/19/2021	METALS	2104190954C	Boron, Total	0.08	mg/L	0.2	0.02		J
4/19/2021	METALS	2104190954C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/19/2021	METALS	2104190954C	Nickel, Total	0.585	mg/L	0.04	0.003		
4/19/2021	ANIONS	2104190955C	Sulfate	698	mg/L	20	4		
4/19/2021	ANIONS	2104190955C	Alkalinity, Total as CaCO3	74.2	mg/L	2	1.8		
4/19/2021	ANIONS	2104190955C	Chloride	352	mg/L	8	1.7		
4/19/2021	ANIONS	2104190955C	Fluoride, undistilled	0.27	mg/L	0.1	0.01		
4/19/2021	SM2540C	2104190956C	Total Dissolved Solids (TDS)	1540	mg/L	11	10		

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
4/19/2021	6850	2104190957C	Perchlorate	0.97	ug/L	0.2	0.06		
4/19/2021	353.2	2104190958C	Nitrate+Nitrite as Nitrogen	5.04	mg/L	0.5	0.02		

Analytical Results for Sampling Events at BW-6-355

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/11/2021	8260	2103111035B	Sulfur Dioxide	44	ug/L	NA	NA		TIC RB FB

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
4/8/2021	8260_LL	2104080831A	Toluene	1.1	ug/L	0.5	0.2		
4/8/2021	8270	2104080835A	1,4-Dioxane	5.5	ug/L	0.04	0.027		
4/8/2021	8270	2104080835A	1,4-Dioxane	4.6	ug/L	0.04	0.027		T

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
4/8/2021	8260_LL	2104080851A	Vinyl Chloride	0.33	ug/L	0.5	0.2		J
4/8/2021	8260_LL	2104080851A	Toluene	0.6	ug/L	0.5	0.2		
4/8/2021	NDMA_LL	2104080853A	N-Nitrosodimethylamine	1.8	ng/L	0.48	0.34		RB FB
4/8/2021	NDMA_LL	2104080853A	N-Nitrodimethylamine	0.88	ng/L	0.48	0.2		FB
4/8/2021	8270	2104080855A	1,4-Dioxane	6.2	ug/L	0.04	0.027		QD
4/8/2021	8270	2104080856A	1,4-Dioxane	4.4	ug/L	0.04	0.027		QD

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
4/8/2021	8260_LL	2104080911A	Toluene	0.5	ug/L	0.5	0.2		J
4/8/2021	8260_LL	2104080911A	Vinyl Chloride	0.29	ug/L	0.5	0.2		J
4/8/2021	NDMA_LL	2104080913A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		RB FB
4/8/2021	NDMA_LL	2104080913A	N-Nitrodimethylamine	0.98	ng/L	0.47	0.2		
4/8/2021	8270	2104080915A	1,4-Dioxane	2.8	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
4/20/2021	8260_LL	2104200951A	Toluene	0.69	ug/L	0.5	0.2		
4/20/2021	NDMA_LL	2104200953A	N-Nitrosodimethylamine	2.5	ng/L	0.48	0.33		RB FB
4/20/2021	8270	2104200955A	1,4-Dioxane	5.3	ug/L	0.04	0.027		

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
4/20/2021	8260_LL	2104201016A	Toluene	0.42	ug/L	0.5	0.2		J
4/20/2021	NDMA_LL	2104201018A	N-Nitrosodimethylamine	2.1	ng/L	0.48	0.33		RB FB
4/20/2021	NDMA_LL	2104201020A	N-Nitrosodimethylamine	2.7	ng/L	0.47	0.33		RB FB
4/20/2021	8270	2104201021A	1,4-Dioxane	1.2	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
4/20/2021	8260_LL	2104201031A	Toluene	0.45	ug/L	0.5	0.2		J
4/20/2021	NDMA_LL	2104201033A	N-Nitrosodimethylamine	4	ng/L	0.47	0.33		FB
4/20/2021	8270	2104201035A	1,4-Dioxane	3.5	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
4/13/2021	NDMA_LL	2104131402C	N-Nitrosodimethylamine	0.37	ng/L	0.48	0.33		J * FB
4/13/2021	METALS	2104131406C	Barium, Total	0.023	mg/L	0.02	0.003		
4/13/2021	METALS	2104131406C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/13/2021	METALS	2104131406C	Sodium, Total	47.4	mg/L	1	0.2		
4/13/2021	METALS	2104131406C	Potassium, Total	3.6	mg/L	2	0.2		
4/13/2021	METALS	2104131406C	Nickel, Total	0.01	mg/L	0.04	0.003		J
4/13/2021	METALS	2104131406C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/13/2021	METALS	2104131406C	Magnesium, Total	65.1	mg/L	1	0.03		
4/13/2021	METALS	2104131406C	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
4/13/2021	METALS	2104131406C	Strontium, Total	2.14	mg/L	0.1	0.002		
4/13/2021	METALS	2104131406C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/13/2021	METALS	2104131406C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/13/2021	METALS	2104131406C	Calcium, Total	101	mg/L	1	0.3		

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
4/13/2021	607	2104131002C	Bromacil	0.015	µg/L	0.0094	0.0047	80	
4/13/2021	METALS	2104131006C	Zinc, Total	0.013	mg/L	0.02	0.01		J
4/13/2021	METALS	2104131006C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
4/13/2021	METALS	2104131006C	Calcium, Total	103	mg/L	1	0.3		
4/13/2021	METALS	2104131006C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/13/2021	METALS	2104131006C	Magnesium, Total	73.8	mg/L	1	0.03		
4/13/2021	METALS	2104131006C	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/13/2021	METALS	2104131006C	Nickel, Total	0.007	mg/L	0.04	0.003		J
4/13/2021	METALS	2104131006C	Potassium, Total	3.3	mg/L	2	0.2		
4/13/2021	METALS	2104131006C	Sodium, Total	41.3	mg/L	1	0.2		
4/13/2021	METALS	2104131006C	Strontium, Total	2.5	mg/L	0.1	0.002		
4/13/2021	METALS	2104131006C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/13/2021	METALS	2104131006C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/13/2021	METALS	2104131006C	Barium, Total	0.022	mg/L	0.02	0.003		
4/13/2021	ANIONS	2104131007C	Fluoride, undistilled	0.84	mg/L	0.1	0.01		
4/13/2021	ANIONS	2104131007C	Chloride	44.4	mg/L	2	0.5		
4/13/2021	ANIONS	2104131007C	Alkalinity, Total as CaCO3	230	mg/L	2	1.8		
4/13/2021	ANIONS	2104131007C	Sulfate	347	mg/L	8	1.6		
4/13/2021	SM2540C	2104131008C	Total Dissolved Solids (TDS)	821	mg/L	10	9		
4/13/2021	6850	2104131009C	Perchlorate	0.32	ug/L	0.2	0.06		
4/13/2021	353.2	2104131010C	Nitrate+Nitrite as Nitrogen	0.673	mg/L	0.05	0.002		

Analytical Results for Sampling Events at JP-3-509

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260_LL	2104150905C	2-Propanol	4.4	ug/L	40	3.4		J

Analytical Results for Sampling Events at JP-3-689

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260_LL	2104151035C	2-Propanol	3.4	ug/L	40	3.4		J
4/15/2021	NDMA_LL	2104151037C	N-Nitrosodimethylamine	0.56	ng/L	0.47	0.33		* FB

Analytical Results for Sampling Events at NASA 3

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
3/17/2021	8260_LL	2103170905B	Sulfur Dioxide	87	ug/L	NA	NA		TIC RB FB
3/17/2021	NDMA_LL	2103170907B	N-Nitrosodimethylamine	0.58	ng/L	0.47	0.33		* TB FB
3/17/2021	METALS	2103170909B	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/17/2021	METALS	2103170909B	Barium, Total	0.023	mg/L	0.02	0.003		
3/17/2021	METALS	2103170909B	Calcium, Total	107	mg/L	1	0.3		
3/17/2021	METALS	2103170909B	Boron, Total	0.05	mg/L	0.2	0.02		J
3/17/2021	METALS	2103170909B	Magnesium, Total	51.5	mg/L	1	0.03		
3/17/2021	METALS	2103170909B	Zinc, Total	0.017	mg/L	0.02	0.01		J
3/17/2021	METALS	2103170909B	Thallium, Total	0.00009	mg/L	0.001	0.00004		J
3/17/2021	METALS	2103170909B	Strontium, Total	1.22	mg/L	0.1	0.002		
3/17/2021	METALS	2103170909B	Sodium, Total	30.6	mg/L	1	0.2		
3/17/2021	METALS	2103170909B	Potassium, Total	2.2	mg/L	2	0.2		
3/17/2021	METALS	2103170909B	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/17/2021	METALS	2103170909B	Arsenic, Total	0.001	mg/L	0.001	0.0004		

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
4/6/2021	NDMA_LL	2104060946Y	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		RB
4/6/2021	METALS	2104061010Y	Calcium, Total	104	mg/L	1	0.3		
4/6/2021	METALS	2104061010Y	Magnesium, Total	68.4	mg/L	1	0.03		
4/6/2021	METALS	2104061010Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
4/6/2021	METALS	2104061010Y	Potassium, Total	3.5	mg/L	2	0.2		
4/6/2021	METALS	2104061010Y	Sodium, Total	44.2	mg/L	1	0.2		
4/6/2021	METALS	2104061010Y	Strontium, Total	3.22	mg/L	0.1	0.002		
4/6/2021	METALS	2104061010Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/6/2021	METALS	2104061010Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/6/2021	METALS	2104061010Y	Barium, Total	0.024	mg/L	0.02	0.003		
4/6/2021	ANIONS	2104061011Y	Fluoride, undistilled	0.76	mg/L	0.1	0.01		
4/6/2021	ANIONS	2104061011Y	Alkalinity, Total as CaCO3	232	mg/L	2	1.8		
4/6/2021	ANIONS	2104061011Y	Chloride	43.3	mg/L	2	0.5		
4/6/2021	ANIONS	2104061011Y	Sulfate	324	mg/L	8	1.6		
4/6/2021	SM2540C	2104061012Y	Total Dissolved Solids (TDS)	791	mg/L	10	9		
4/6/2021	6850	2104061035Y	Perchlorate	0.34	ug/L	0.2	0.06		
4/6/2021	353.2	2104061036Y	Nitrate+Nitrite as Nitrogen	0.639	mg/L	0.05	0.002		

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
4/5/2021	NDMA_LL	2104051457Y	N-Nitrosodimethylamine	0.99	ng/L	0.48	0.33		RB
4/5/2021	METALS	2104051459Y	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
4/5/2021	METALS	2104051459Y	Barium, Total	0.022	mg/L	0.02	0.003		
4/5/2021	METALS	2104051459Y	Boron, Total	0.06	mg/L	0.2	0.02		J
4/5/2021	METALS	2104051459Y	Calcium, Total	103	mg/L	1	0.3		
4/5/2021	METALS	2104051459Y	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
4/5/2021	METALS	2104051459Y	Magnesium, Total	69.2	mg/L	1	0.03		
4/5/2021	METALS	2104051459Y	Potassium, Total	3.6	mg/L	2	0.2		
4/5/2021	METALS	2104051459Y	Zinc, Total	0.014	mg/L	0.02	0.01		J
4/5/2021	METALS	2104051459Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
4/5/2021	METALS	2104051459Y	Manganese, Total	0.012	mg/L	0.01	0.004		
4/5/2021	METALS	2104051459Y	Strontium, Total	3.25	mg/L	0.1	0.002		
4/5/2021	METALS	2104051459Y	Sodium, Total	44.9	mg/L	1	0.2		
4/5/2021	METALS	2104051459Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/5/2021	METALS	2104051459Y	Nickel, Total	0.044	mg/L	0.04	0.003		
4/5/2021	ANIONS	2104051520Y	Fluoride, undistilled	0.69	mg/L	0.1	0.01		
4/5/2021	ANIONS	2104051520Y	Chloride	43.6	mg/L	2	0.5		
4/5/2021	ANIONS	2104051520Y	Alkalinity, Total as CaCO3	221	mg/L	2	1.8		
4/5/2021	ANIONS	2104051520Y	Sulfate	336	mg/L	8	1.6		
4/5/2021	SM2540C	2104051521Y	Total Dissolved Solids (TDS)	797	mg/L	10	9		
4/5/2021	6850	2104051522Y	Perchlorate	0.25	ug/L	0.2	0.06		
4/5/2021	353.2	2104051523Y	Nitrate+Nitrite as Nitrogen	0.658	mg/L	0.05	0.002		

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
4/1/2021	NDMA_LL	2104050830Y	N-Nitrodimethylamine	1.1	ng/L	0.48	0.2		
4/1/2021	NDMA_LL	2104050830Y	N-Nitrosodimethylamine	5.7	ng/L	0.48	0.33		
4/1/2021	METALS	2104050831Y	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
4/1/2021	METALS	2104050831Y	Strontium, Total	2.89	mg/L	0.1	0.002		
4/1/2021	METALS	2104050831Y	Sodium, Total	72.9	mg/L	1	0.2		
4/1/2021	METALS	2104050831Y	Potassium, Total	6.1	mg/L	2	0.2		
4/1/2021	METALS	2104050831Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
4/1/2021	METALS	2104050831Y	Magnesium, Total	46.1	mg/L	1	0.03		
4/1/2021	METALS	2104050831Y	Chromium, Total	0.002	mg/L	0.01	0.0006		J
4/1/2021	METALS	2104050831Y	Calcium, Total	75.2	mg/L	1	0.3		
4/1/2021	METALS	2104050831Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/1/2021	METALS	2104050831Y	Barium, Total	0.055	mg/L	0.02	0.003		
4/1/2021	METALS	2104050831Y	Arsenic, Total	0.0016	mg/L	0.001	0.0004		
4/1/2021	METALS	2104050831Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/1/2021	ANIONS	2104050832Y	Fluoride, undistilled	0.26	mg/L	0.1	0.01		
4/1/2021	ANIONS	2104050832Y	Chloride	43.8	mg/L	2	0.5		
4/1/2021	ANIONS	2104050832Y	Alkalinity, Total as CaCO3	164	mg/L	2	1.8		
4/1/2021	ANIONS	2104050832Y	Sulfate	299	mg/L	8	1.6		
4/1/2021	SM2540C	2104050833Y	Total Dissolved Solids (TDS)	709	mg/L	10	9		
4/1/2021	6850	2104050834Y	Perchlorate	0.31	ug/L	0.2	0.06		
4/1/2021	353.2	2104050835Y	Nitrate+Nitrite as Nitrogen	1.15	mg/L	0.05	0.002		

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
4/5/2021	NDMA_LL	2104051052Y	N-Nitrosodimethylamine	1.2	ng/L	0.48	0.33		RB
4/5/2021	METALS	2104051305Y	Potassium, Total	5	mg/L	2	0.2		
4/5/2021	METALS	2104051305Y	Arsenic, Total	0.0026	mg/L	0.001	0.0004		
4/5/2021	METALS	2104051305Y	Barium, Total	0.017	mg/L	0.02	0.003		J
4/5/2021	METALS	2104051305Y	Boron, Total	0.12	mg/L	0.2	0.02		J
4/5/2021	METALS	2104051305Y	Calcium, Total	49.8	mg/L	1	0.3		
4/5/2021	METALS	2104051305Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
4/5/2021	METALS	2104051305Y	Molybdenum, Total	0.011	mg/L	0.025	0.003		J
4/5/2021	METALS	2104051305Y	Sodium, Total	114	mg/L	1	0.2		
4/5/2021	METALS	2104051305Y	Strontium, Total	2.29	mg/L	0.1	0.002		
4/5/2021	METALS	2104051305Y	Magnesium, Total	36.9	mg/L	1	0.03		
4/5/2021	METALS	2104051305Y	Vanadium, Total	0.017	mg/L	0.05	0.0007		J
4/5/2021	ANIONS	2104051306Y	Alkalinity, Total as CaCO3	170	mg/L	2	1.8		
4/5/2021	ANIONS	2104051306Y	Chloride	44.2	mg/L	2	0.5		
4/5/2021	ANIONS	2104051306Y	Fluoride, undistilled	0.37	mg/L	0.1	0.01		
4/5/2021	ANIONS	2104051306Y	Sulfate	289	mg/L	8	1.6		
4/5/2021	SM2540C	2104051307Y	Total Dissolved Solids (TDS)	13	mg/L	10	9		*
4/5/2021	6850	2104051308Y	Perchlorate	0.45	ug/L	0.2	0.06		
4/5/2021	353.2	2104051309Y	Nitrate+Nitrite as Nitrogen	1.12	mg/L	0.05	0.002		

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
3/2/2021	8260_LL	2103021016A	Toluene	1.9	ug/L	0.5	0.2		
3/2/2021	NDMA_LL	2103021018A	N-Nitrodimethylamine	0.33	ng/L	0.48	0.2		J
3/2/2021	NDMA_LL	2103021018A	N-Nitrosodimethylamine	2.4	ng/L	0.48	0.33		RB
3/2/2021	8270	2103021300A	1,4-Dioxane	8.7	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
3/2/2021	8260_LL	2103021031A	Toluene	0.22	ug/L	0.5	0.2		J
3/2/2021	NDMA_LL	2103021033A	N-Nitrodimethylamine	0.23	ng/L	0.48	0.2		J
3/2/2021	NDMA_LL	2103021033A	N-Nitrosodimethylamine	1.9	ng/L	0.48	0.34		RB FB
3/2/2021	8270	2103021311A	1,4-Dioxane	5.8	ug/L	0.04	0.027		
3/2/2021	8270	2103021312A	1,4-Dioxane	7.4	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
3/2/2021	8260_LL	2103021046A	Toluene	0.31	ug/L	0.5	0.2		J
3/2/2021	NDMA_LL	2103021048A	N-Nitrosodimethylamine	1.6	ng/L	0.47	0.33		RB FB
3/2/2021	NDMA_LL	2103021048A	N-Nitrodimethylamine	0.21	ng/L	0.47	0.2		J
3/2/2021	8270	2103021330A	1,4-Dioxane	7.2	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
3/4/2021	8260_LL	2103040846A	Toluene	0.38	ug/L	0.5	0.2		J T
3/4/2021	NDMA_LL	2103040848A	N-Nitrosodimethylamine	0.93	ng/L	0.48	0.34		
3/4/2021	NDMA_LL	2103040925A	N-Nitrosodimethylamine	0.88	ng/L	0.49	0.34		

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
3/4/2021	8260_LL	2103040901A	Toluene	0.27	ug/L	0.5	0.2		J

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
2/8/2021	8260	2102081510B	1,1,2-Trichloro-1,2,2-Trifluoroethane	6.3	ug/L	1	0.2		
2/8/2021	8260	2102081510B	Tetrachloroethene (PCE)	0.29	ug/L	1	0.21		J
2/8/2021	8260	2102081510B	Trichloroethene (TCE)	16	ug/L	1	0.2		
2/8/2021	8260	2102081510B	Trichlorofluoromethane (CFC 11)	16	ug/L	1	0.24		
2/8/2021	8260	2102081511B	Trichlorofluoromethane (CFC 11)	14	ug/L	1	0.24		
2/8/2021	8260	2102081511B	Trichloroethene (TCE)	17	ug/L	1	0.2		
2/8/2021	8260	2102081511B	1,1,2-Trichloro-1,2,2-Trifluoroethane	7.1	ug/L	1	0.2		
2/8/2021	607	2102081513B	Bromacil	0.04	µg/L	0.0099	0.005	74	
2/8/2021	NDMA_LL	2102081514B	N-Nitrosodimethylamine	5	ng/L	0.48	0.33		FB
2/8/2021	NDMA_LL	2102081514B	N-Nitrodimethylamine	0.83	ng/L	0.48	0.2		FB
2/8/2021	NDMA_LL	2102081516B	N-Nitrodimethylamine	1.2	ng/L	0.48	0.2		FB
2/8/2021	NDMA_LL	2102081516B	N-Nitrosodimethylamine	5.2	ng/L	0.48	0.33		FB
2/8/2021	8270	2102081518B	Trichloroethene (TCE)	1.9	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	n-Hexadecanoic acid	1.7	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Stearic Acid (Octadecanoic Acid)	1.2	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Unknown	3.6	ug/L	NA	NA		TIC
2/8/2021	8270	2102081518B	Drometrizole	3.2	ug/L	NA	NA		TIC
2/8/2021	METALS	2102081519B	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/8/2021	METALS	2102081519B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102081519B	Strontium, Total	2.47	mg/L	0.1	0.002		
2/8/2021	METALS	2102081519B	Antimony, Total	0.0002	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102081519B	Potassium, Total	3.5	mg/L	2	0.2		
2/8/2021	METALS	2102081519B	Magnesium, Total	64.2	mg/L	1	0.03		
2/8/2021	METALS	2102081519B	Chromium, Total	0.003	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102081519B	Calcium, Total	108	mg/L	1	0.3		
2/8/2021	METALS	2102081519B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/8/2021	METALS	2102081519B	Barium, Total	0.029	mg/L	0.02	0.003		
2/8/2021	METALS	2102081519B	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
2/8/2021	METALS	2102081519B	Sodium, Total	36.7	mg/L	1	0.2		
2/8/2021	ANIONS	2102081520B	Alkalinity, Total as CaCO3	235	mg/L	2	1.8		
2/8/2021	ANIONS	2102081520B	Chloride	37	mg/L	2	0.5		
2/8/2021	ANIONS	2102081520B	Fluoride, undistilled	0.88	mg/L	0.1	0.01		
2/8/2021	ANIONS	2102081520B	Sulfate	325	mg/L	8	1.6		
2/8/2021	SM2540C	2102081521B	Total Dissolved Solids (TDS)	780	mg/L	10	9		
2/8/2021	6850	2102081522B	Perchlorate	0.33	ug/L	0.2	0.06		
2/8/2021	353.2	2102081523B	Nitrate+Nitrite as Nitrogen	0.806	mg/L	0.05	0.002		

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
2/8/2021	8260	2102080950B	Trichloroethene (TCE)	14	ug/L	1	0.2		
2/8/2021	8260	2102080950B	Trichlorofluoromethane (CFC 11)	12	ug/L	1	0.24		
2/8/2021	8260	2102080950B	Tetrachloroethene (PCE)	0.27	ug/L	1	0.21		J
2/8/2021	8260	2102080950B	Dichlorofluoromethane (CFC 21)	0.34	ug/L	1	0.2		J
2/8/2021	8260	2102080950B	1,1,2-Trichloro-1,2,2-Trifluoroethane	2.9	ug/L	1	0.2		
2/8/2021	8260	2102080950B	Unknown	5.2	ug/L	NA	NA		TIC
2/8/2021	607	2102080952B	Bromacil	0.019	µg/L	0.0095	0.0048	74	
2/8/2021	NDMA_LL	2102080953B	N-Nitrosodimethylamine	6.8	ng/L	0.47	0.33		FB Q
2/8/2021	NDMA_LL	2102080953B	N-Nitrodimethylamine	1.2	ng/L	0.47	0.2		
2/8/2021	8270	2102080955B	Benzoic acid, 3,5-bis(1,1-dimethyl	1.3	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	2,4,6-Triallyloxy-1,3,5-triazine	3.6	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Drometrizole	1.3	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Unknown	2.5	ug/L	NA	NA		TIC
2/8/2021	8270	2102080955B	Trichloroethene (TCE)	1.7	ug/L	NA	NA		TIC
2/8/2021	METALS	2102080956B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/8/2021	METALS	2102080956B	Antimony, Total	0.0003	mg/L	0.001	0.0002		J RB
2/8/2021	METALS	2102080956B	Barium, Total	0.03	mg/L	0.02	0.003		
2/8/2021	METALS	2102080956B	Potassium, Total	3.7	mg/L	2	0.2		
2/8/2021	METALS	2102080956B	Calcium, Total	105	mg/L	1	0.3		
2/8/2021	METALS	2102080956B	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
2/8/2021	METALS	2102080956B	Magnesium, Total	63.3	mg/L	1	0.03		
2/8/2021	METALS	2102080956B	Sodium, Total	38	mg/L	1	0.2		
2/8/2021	METALS	2102080956B	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/8/2021	METALS	2102080956B	Arsenic, Total	0.0018	mg/L	0.001	0.0004		
2/8/2021	METALS	2102080956B	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
2/8/2021	METALS	2102080956B	Strontium, Total	2.45	mg/L	0.1	0.002		
2/8/2021	ANIONS	2102080957B	Sulfate	324	mg/L	8	1.6		
2/8/2021	ANIONS	2102080957B	Fluoride, undistilled	0.96	mg/L	0.1	0.01		
2/8/2021	ANIONS	2102080957B	Chloride	37	mg/L	2	0.5		
2/8/2021	ANIONS	2102080957B	Alkalinity, Total as CaCO3	238	mg/L	2	1.8		
2/8/2021	SM2540C	2102080958B	Total Dissolved Solids (TDS)	787	mg/L	10	9		
2/8/2021	6850	2102080959B	Perchlorate	0.31	ug/L	0.2	0.06		
2/8/2021	353.2	2102081000B	Nitrate+Nitrite as Nitrogen	0.696	mg/L	0.05	0.002		

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
4/19/2021	8260_LL	2104191455C	Trichloroethene (TCE)	0.21	ug/L	0.5	0.2		J
4/19/2021	8260_LL	2104191455C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.62	ug/L	0.5	0.2		
4/19/2021	8260_LL	2104191455C	Trichlorofluoromethane (CFC 11)	0.27	ug/L	0.5	0.24		J
4/19/2021	8260_LL	2104191456C	Trichloroethene (TCE)	0.23	ug/L	0.5	0.2		J
4/19/2021	8260_LL	2104191456C	Trichlorofluoromethane (CFC 11)	0.26	ug/L	0.5	0.24		J
4/19/2021	8260_LL	2104191456C	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.74	ug/L	0.5	0.2		
4/19/2021	607	2104191458C	Bromacil	0.062	µg/L	0.0095	0.0048	85	RB
4/19/2021	NDMA_LL	2104191459C	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB TB
4/19/2021	METALS	2104191501C	Magnesium, Total	64.8	mg/L	1	0.03		
4/19/2021	METALS	2104191501C	Strontium, Total	2.38	mg/L	0.1	0.002		
4/19/2021	METALS	2104191501C	Barium, Total	0.021	mg/L	0.02	0.003		
4/19/2021	METALS	2104191501C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/19/2021	METALS	2104191501C	Calcium, Total	103	mg/L	1	0.3		
4/19/2021	METALS	2104191501C	Chromium, Total	0.003	mg/L	0.01	0.0006		J
4/19/2021	METALS	2104191501C	Potassium, Total	3.2	mg/L	2	0.2		
4/19/2021	METALS	2104191501C	Sodium, Total	39	mg/L	1	0.2		
4/19/2021	METALS	2104191501C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/19/2021	METALS	2104191501C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/19/2021	ANIONS	2104191502C	Chloride	47.1	mg/L	2	0.5		
4/19/2021	ANIONS	2104191502C	Alkalinity, Total as CaCO3	199	mg/L	2	1.8		
4/19/2021	ANIONS	2104191502C	Sulfate	347	mg/L	8	1.6		
4/19/2021	ANIONS	2104191502C	Fluoride, undistilled	0.86	mg/L	0.1	0.01		
4/19/2021	SM2540C	2104191503C	Total Dissolved Solids (TDS)	793	mg/L	10	9		
4/19/2021	6850	2104191504C	Perchlorate	0.29	ug/L	0.2	0.06		
4/19/2021	353.2	2104191505C	Nitrate+Nitrite as Nitrogen	1.06	mg/L	0.05	0.002		

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
3/15/2021	8260	2103150955B	Tetrachloroethene (PCE)	0.91	ug/L	1	0.21		J
3/15/2021	8260	2103150955B	Dichlorofluoromethane (CFC 21)	2.4	ug/L	1	0.2		
3/15/2021	8260	2103150955B	Trichloroethene (TCE)	65	ug/L	1	0.2		
3/15/2021	8260	2103150955B	Trichlorofluoromethane (CFC 11)	41	ug/L	1	0.24		
3/15/2021	8260	2103150955B	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.6	ug/L	1	0.2		J
3/15/2021	8260	2103150955B	1,1,2-Trichloro-1,2,2-Trifluoroethane	34	ug/L	1	0.2		
3/15/2021	607	2103150957B	N-Nitrodimethylamine	0.056	µg/L	0.0095	0.0048	96	
3/15/2021	607	2103150957B	Bromacil	0.03	µg/L	0.0095	0.0048	99	
3/15/2021	607	2103150957B	N-Nitrosodimethylamine	0.078	µg/L	0.0095	0.0048	38	

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
3/11/2021	8260	2103110945C	Silane, methoxytrimethyl-	7.4	ug/L	NA	NA		TIC
3/11/2021	8260	2103110945C	Sulfur Dioxide	24	ug/L	NA	NA		TIC RB TB FB
3/11/2021	8260	2103110946C	Sulfur Dioxide	39	ug/L	NA	NA		TIC RB TB FB
3/11/2021	METALS	2103110952C	Barium, Total	0.021	mg/L	0.02	0.003		
3/11/2021	METALS	2103110952C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/11/2021	METALS	2103110952C	Strontium, Total	2.4	mg/L	0.1	0.002		
3/11/2021	METALS	2103110952C	Sodium, Total	38.1	mg/L	1	0.2		
3/11/2021	METALS	2103110952C	Potassium, Total	3.2	mg/L	2	0.2		
3/11/2021	METALS	2103110952C	Nickel, Total	0.006	mg/L	0.04	0.003		J
3/11/2021	METALS	2103110952C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
3/11/2021	METALS	2103110952C	Magnesium, Total	68.5	mg/L	1	0.03		
3/11/2021	METALS	2103110952C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
3/11/2021	METALS	2103110952C	Calcium, Total	109	mg/L	1	0.3		
3/11/2021	METALS	2103110952C	Zinc, Total	0.016	mg/L	0.02	0.01		J
3/11/2021	METALS	2103110952C	Boron, Total	0.06	mg/L	0.2	0.02		J

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
4/8/2021	NDMA_LL	2104081500Y	N-Nitrosodimethylamine	0.76	ng/L	0.48	0.33		RB EB
4/8/2021	METALS	2104081501Y	Manganese, Total	0.023	mg/L	0.01	0.004		
4/8/2021	METALS	2104081501Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081501Y	Potassium, Total	4.1	mg/L	2	0.2		
4/8/2021	METALS	2104081501Y	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
4/8/2021	METALS	2104081501Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		
4/8/2021	METALS	2104081501Y	Strontium, Total	2.98	mg/L	0.1	0.002		
4/8/2021	METALS	2104081501Y	Sodium, Total	40.6	mg/L	1	0.2		
4/8/2021	METALS	2104081501Y	Barium, Total	0.022	mg/L	0.02	0.003		
4/8/2021	METALS	2104081501Y	Calcium, Total	102	mg/L	1	0.3		
4/8/2021	METALS	2104081501Y	Magnesium, Total	71.3	mg/L	1	0.03		
4/8/2021	METALS	2104081501Y	Nickel, Total	0.184	mg/L	0.04	0.003		
4/8/2021	METALS	2104081501Y	Boron, Total	0.06	mg/L	0.2	0.02		J

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
4/8/2021	607	2104081026Y	Bromacil	0.042	µg/L	0.0095	0.0048	114	RB
4/8/2021	NDMA_LL	2104081050Y	N-Nitrodimethylamine	0.23	ng/L	0.48	0.2		J
4/8/2021	NDMA_LL	2104081050Y	N-Nitrosodimethylamine	0.87	ng/L	0.48	0.33		RB EB
4/8/2021	METALS	2104081051Y	Arsenic, Total	0.0004	mg/L	0.001	0.0004		J
4/8/2021	METALS	2104081051Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
4/8/2021	METALS	2104081051Y	Vanadium, Total	0.007	mg/L	0.05	0.0007		J
4/8/2021	METALS	2104081051Y	Strontium, Total	3.57	mg/L	0.1	0.002		
4/8/2021	METALS	2104081051Y	Sodium, Total	46.4	mg/L	1	0.2		
4/8/2021	METALS	2104081051Y	Potassium, Total	5.1	mg/L	2	0.2		
4/8/2021	METALS	2104081051Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081051Y	Magnesium, Total	61.1	mg/L	1	0.03		
4/8/2021	METALS	2104081051Y	Chromium, Total	0.0006	mg/L	0.01	0.0006		J
4/8/2021	METALS	2104081051Y	Calcium, Total	100	mg/L	1	0.3		
4/8/2021	METALS	2104081051Y	Barium, Total	0.027	mg/L	0.02	0.003		
4/8/2021	METALS	2104081051Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/8/2021	METALS	2104081115Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/8/2021	METALS	2104081115Y	Barium, Total	0.029	mg/L	0.02	0.003		
4/8/2021	METALS	2104081115Y	Boron, Total	0.07	mg/L	0.2	0.02		J
4/8/2021	METALS	2104081115Y	Calcium, Total	104	mg/L	1	0.3		
4/8/2021	METALS	2104081115Y	Magnesium, Total	63.8	mg/L	1	0.03		
4/8/2021	METALS	2104081115Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
4/8/2021	METALS	2104081115Y	Potassium, Total	5.4	mg/L	2	0.2		
4/8/2021	METALS	2104081115Y	Sodium, Total	48.4	mg/L	1	0.2		
4/8/2021	METALS	2104081115Y	Strontium, Total	3.74	mg/L	0.1	0.002		
4/8/2021	METALS	2104081115Y	Vanadium, Total	0.008	mg/L	0.05	0.0007		J

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
2/3/2021	NDMA_LL	2102031021Y	N-Nitrosodimethylamine	4.9	ng/L	0.5	0.35		
2/3/2021	NDMA_LL	2102031021Y	N-Nitrodimethylamine	0.29	ng/L	0.5	0.2		J

Analytical Results for Sampling Events at PL-7-560

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/2/2021	NDMA_LL	2102021456Y	N-Nitrosodimethylamine	0.84	ng/L	0.48	0.33		EB

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
2/2/2021	NDMA_LL	2102021105Y	N-Nitrosodimethylamine	0.71	ng/L	0.48	0.34		TB EB
2/2/2021	METALS	2102021106Y	Zinc, Total	0.014	mg/L	0.02	0.01		J
2/2/2021	METALS	2102021106Y	Vanadium, Total	0.013	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021106Y	Strontium, Total	3.08	mg/L	0.1	0.002		
2/2/2021	METALS	2102021106Y	Sodium, Total	54.5	mg/L	1	0.2		
2/2/2021	METALS	2102021106Y	Potassium, Total	7.8	mg/L	2	0.2		
2/2/2021	METALS	2102021106Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021106Y	Manganese, Total	0.013	mg/L	0.01	0.004		
2/2/2021	METALS	2102021106Y	Aluminum, Total	0.9	mg/L	0.1	0.03		
2/2/2021	METALS	2102021106Y	Magnesium, Total	57.9	mg/L	1	0.03		
2/2/2021	METALS	2102021106Y	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
2/2/2021	METALS	2102021106Y	Iron, Total	0.42	mg/L	0.1	0.07		
2/2/2021	METALS	2102021106Y	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021106Y	Calcium, Total	86	mg/L	1	0.3		
2/2/2021	METALS	2102021106Y	Boron, Total	0.07	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021106Y	Beryllium, Total	0.0002	mg/L	0.003	0.0002		J
2/2/2021	METALS	2102021106Y	Barium, Total	0.046	mg/L	0.02	0.003		

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
3/4/2021	NDMA_LL	2103041026Y	N-Nitrosodimethylamine	0.61	ng/L	0.48	0.33		EB
3/4/2021	8270	2103041100Y	1,4-Dioxane	0.074	ug/L	0.04	0.027		
3/4/2021	METALS	2103041130Y	Barium, Total	0.023	mg/L	0.02	0.003		
3/4/2021	METALS	2103041130Y	Sodium, Total	42.3	mg/L	1	0.2		
3/4/2021	METALS	2103041130Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/4/2021	METALS	2103041130Y	Arsenic, Total	0.0007	mg/L	0.001	0.0004		J
3/4/2021	METALS	2103041130Y	Strontium, Total	2.61	mg/L	0.1	0.002		
3/4/2021	METALS	2103041130Y	Potassium, Total	3.7	mg/L	2	0.2		
3/4/2021	METALS	2103041130Y	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/4/2021	METALS	2103041130Y	Magnesium, Total	72.3	mg/L	1	0.03		
3/4/2021	METALS	2103041130Y	Calcium, Total	106	mg/L	1	0.3		
3/4/2021	METALS	2103041130Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/4/2021	METALS	2103041130Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J

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
3/3/2021	NDMA_LL	2103031041Y	N-Nitrosodimethylamine	0.45	ng/L	0.48	0.33		J RB EB
3/3/2021	METALS	2103031112Y	Barium, Total	0.027	mg/L	0.02	0.003		
3/3/2021	METALS	2103031112Y	Sodium, Total	45.3	mg/L	1	0.2		
3/3/2021	METALS	2103031112Y	Strontium, Total	3.18	mg/L	0.1	0.002		
3/3/2021	METALS	2103031112Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031112Y	Potassium, Total	3.6	mg/L	2	0.2		
3/3/2021	METALS	2103031112Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031112Y	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103031112Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/3/2021	METALS	2103031112Y	Magnesium, Total	69.2	mg/L	1	0.03		

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
3/8/2021	NDMA_LL	2103081022Y	N-Nitrosodimethylamine	0.65	ng/L	0.48	0.33		
3/8/2021	METALS	2103081055Y	Sodium, Total	49.9	mg/L	1	0.2		
3/8/2021	METALS	2103081055Y	Potassium, Total	4.3	mg/L	2	0.2		
3/8/2021	METALS	2103081055Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081055Y	Vanadium, Total	0.008	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081055Y	Strontium, Total	3.07	mg/L	0.1	0.002		
3/8/2021	METALS	2103081055Y	Molybdenum, Total	0.009	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081055Y	Barium, Total	0.038	mg/L	0.02	0.003		
3/8/2021	METALS	2103081055Y	Calcium, Total	92.3	mg/L	1	0.3		
3/8/2021	METALS	2103081055Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/8/2021	METALS	2103081055Y	Magnesium, Total	54.5	mg/L	1	0.03		
3/8/2021	METALS	2103081055Y	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
3/8/2021	METALS	2103081055Y	Zinc, Total	0.013	mg/L	0.02	0.01		J
3/8/2021	ANIONS	2103081310Y	Alkalinity, Total as CaCO3	197	mg/L	2	1.8		
3/8/2021	ANIONS	2103081310Y	Chloride	42.5	mg/L	2	0.5		
3/8/2021	ANIONS	2103081310Y	Fluoride, undistilled	0.51	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081310Y	Sulfate	276	mg/L	8	1.6		
3/8/2021	SM2540C	2103081311Y	Total Dissolved Solids (TDS)	746	mg/L	10	9		
3/8/2021	6850	2103081312Y	Perchlorate	0.42	ug/L	0.2	0.06		
3/8/2021	353.2	2103081313Y	Nitrate+Nitrite as Nitrogen	1.04	mg/L	0.05	0.002		

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
3/3/2021	NDMA_LL	2103031520Y	N-Nitrodimethylamine	0.2	ng/L	0.48	0.2		J
3/3/2021	NDMA_LL	2103031520Y	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB EB
3/3/2021	METALS	2103031521Y	Nickel, Total	0.011	mg/L	0.04	0.003		J
3/3/2021	METALS	2103031521Y	Vanadium, Total	0.018	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031521Y	Strontium, Total	1.29	mg/L	0.1	0.002		
3/3/2021	METALS	2103031521Y	Potassium, Total	4.5	mg/L	2	0.2		
3/3/2021	METALS	2103031521Y	Chromium, Total	0.004	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103031521Y	Molybdenum, Total	0.02	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031521Y	Magnesium, Total	21.8	mg/L	1	0.03		
3/3/2021	METALS	2103031521Y	Arsenic, Total	0.0026	mg/L	0.005	0.0016		J
3/3/2021	METALS	2103031521Y	Barium, Total	0.012	mg/L	0.02	0.003		J
3/3/2021	METALS	2103031521Y	Boron, Total	0.23	mg/L	0.2	0.02		
3/3/2021	METALS	2103031521Y	Calcium, Total	42.1	mg/L	1	0.3		
3/3/2021	METALS	2103031521Y	Sodium, Total	110	mg/L	1	0.2		

Analytical Results for Sampling Events at ST-1-473

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	8260	2104120930C	Unknown	5.2	ug/L	NA	NA		TIC FB
4/12/2021	8260	2104120930C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.97	ug/L	1	0.2		J
4/12/2021	8260	2104120930C	1,1,2-Trichloro-1,2,2-Trifluoroethane	160	ug/L	2	0.4		
4/12/2021	8260	2104120930C	Chloroform	0.38	ug/L	1	0.24		J
4/12/2021	8260	2104120930C	Dichlorofluoromethane (CFC 21)	0.72	ug/L	1	0.2		J
4/12/2021	8260	2104120930C	Tetrachloroethene (PCE)	8.1	ug/L	1	0.21		
4/12/2021	8260	2104120930C	1,1-Dichloroethene	2.3	ug/L	1	0.2		
4/12/2021	8260	2104120930C	Trichlorofluoromethane (CFC 11)	180	ug/L	1	0.24		
4/12/2021	8260	2104120930C	Trichloroethene (TCE)	200	ug/L	2	0.4		
4/12/2021	8260	2104120931C	1,1-Dichloroethene	2	ug/L	1	0.2		
4/12/2021	8260	2104120931C	1,1,2-Trichloro-1,2,2-Trifluoroethane	200	ug/L	1	0.2		
4/12/2021	8260	2104120931C	Chloroform	0.34	ug/L	1	0.24		J
4/12/2021	8260	2104120931C	Dichlorofluoromethane (CFC 21)	0.62	ug/L	1	0.2		J
4/12/2021	8260	2104120931C	Tetrachloroethene (PCE)	7.8	ug/L	1	0.21		
4/12/2021	8260	2104120931C	Trichloroethene (TCE)	220	ug/L	2	0.4		
4/12/2021	8260	2104120931C	Trichlorofluoromethane (CFC 11)	170	ug/L	1	0.24		
4/12/2021	8260	2104120931C	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1	ug/L	1	0.2		
4/12/2021	8260	2104120931C	Unknown	5.2	ug/L	NA	NA		TIC FB
4/12/2021	607	2104120933C	Bromacil	0.1	µg/L	0.0094	0.0047	80	QD
4/12/2021	607	2104120933C	N-Nitrodimethylamine	0.21	µg/L	0.0094	0.0047	120	
4/12/2021	607	2104120933C	N-Nitrosodimethylamine	0.42	µg/L	0.0094	0.0047	50	
4/12/2021	607	2104120934C	N-Nitrodimethylamine	0.2	µg/L	0.0096	0.0048	120	
4/12/2021	607	2104120934C	Bromacil	0.042	µg/L	0.0096	0.0048	80	QD
4/12/2021	607	2104120934C	N-Nitrosodimethylamine	0.41	µg/L	0.0096	0.0048	50	
4/12/2021	METALS	2104120935C	Calcium, Total	116	mg/L	1	0.3		
4/12/2021	METALS	2104120935C	Vanadium, Total	0.001	mg/L	0.05	0.0007		J
4/12/2021	METALS	2104120935C	Strontium, Total	2.61	mg/L	0.1	0.002		
4/12/2021	METALS	2104120935C	Sodium, Total	38.9	mg/L	1	0.2		
4/12/2021	METALS	2104120935C	Potassium, Total	3.3	mg/L	2	0.2		
4/12/2021	METALS	2104120935C	Nickel, Total	0.006	mg/L	0.04	0.003		J
4/12/2021	METALS	2104120935C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
4/12/2021	METALS	2104120935C	Chromium, Total	0.008	mg/L	0.01	0.0006		J
4/12/2021	METALS	2104120935C	Boron, Total	0.06	mg/L	0.2	0.02		J
4/12/2021	METALS	2104120935C	Barium, Total	0.022	mg/L	0.02	0.003		
4/12/2021	METALS	2104120935C	Arsenic, Total	0.0005	mg/L	0.001	0.0004		J
4/12/2021	METALS	2104120935C	Magnesium, Total	70.1	mg/L	1	0.03		
4/12/2021	ANIONS	2104120936C	Chloride	54.5	mg/L	2	0.5		
4/12/2021	ANIONS	2104120936C	Sulfate	328	mg/L	8	1.6		

Analytical Results for Sampling Events at ST-1-473

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/12/2021	ANIONS	2104120936C	Alkalinity, Total as CaCO3	240	mg/L	2	1.8		
4/12/2021	ANIONS	2104120936C	Fluoride, undistilled	0.72	mg/L	0.1	0.01		
4/12/2021	SM2540C	2104120937C	Total Dissolved Solids (TDS)	818	mg/L	10	9		
4/12/2021	6850	2104120938C	Perchlorate	0.54	ug/L	0.2	0.06		
4/12/2021	353.2	2104120939C	Nitrate+Nitrite as Nitrogen	2.79	mg/L	0.25	0.008		

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
2/2/2021	607	2102021503C	Bromacil	0.0096	µg/L	0.0096	0.0048	98	
2/2/2021	METALS	2102021507C	Calcium, Total	105	mg/L	1	0.3		
2/2/2021	METALS	2102021507C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021507C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021507C	Sodium, Total	39.2	mg/L	1	0.2		
2/2/2021	METALS	2102021507C	Boron, Total	0.06	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021507C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021507C	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2021	METALS	2102021507C	Potassium, Total	3.3	mg/L	2	0.2		
2/2/2021	METALS	2102021507C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021507C	Magnesium, Total	72.1	mg/L	1	0.03		
2/2/2021	METALS	2102021507C	Strontium, Total	2.64	mg/L	0.1	0.002		
2/2/2021	METALS	2102021508C	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/2/2021	METALS	2102021508C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
2/2/2021	METALS	2102021508C	Strontium, Total	2.61	mg/L	0.1	0.002		
2/2/2021	METALS	2102021508C	Sodium, Total	38.6	mg/L	1	0.2		
2/2/2021	METALS	2102021508C	Potassium, Total	3.2	mg/L	2	0.2		
2/2/2021	METALS	2102021508C	Calcium, Total	104	mg/L	1	0.3		
2/2/2021	METALS	2102021508C	Chromium, Total	0.002	mg/L	0.01	0.0006		J
2/2/2021	METALS	2102021508C	Barium, Total	0.022	mg/L	0.02	0.003		
2/2/2021	METALS	2102021508C	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/2/2021	METALS	2102021508C	Boron, Total	0.06	mg/L	0.2	0.02		J
2/2/2021	METALS	2102021508C	Magnesium, Total	71	mg/L	1	0.03		
2/2/2021	ANIONS	2102021509C	Chloride	38.1	mg/L	2	0.5		
2/2/2021	ANIONS	2102021509C	Fluoride, undistilled	0.73	mg/L	0.1	0.01		
2/2/2021	ANIONS	2102021509C	Alkalinity, Total as CaCO3	239	mg/L	2	1.8		
2/2/2021	ANIONS	2102021509C	Sulfate	332	mg/L	8	1.6		
2/2/2021	SM2540C	2102021510C	Total Dissolved Solids (TDS)	799	mg/L	10	9		
2/2/2021	6850	2102021511C	Perchlorate	0.25	ug/L	0.2	0.06		
2/2/2021	353.2	2102021512C	Nitrate+Nitrite as Nitrogen	0.663	mg/L	0.05	0.002		

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
3/3/2021	8260_LL	2103030955C	2-Propanol	8.5	ug/L	40	3.4		J
3/3/2021	NDMA_LL	2103030957C	N-Nitrosodimethylamine	0.44	ng/L	0.47	0.33		J RB
3/3/2021	METALS	2103030959C	Sodium, Total	39.6	mg/L	1	0.2		
3/3/2021	METALS	2103030959C	Antimony, Total	0.0011	mg/L	0.005	0.0009		J
3/3/2021	METALS	2103030959C	Barium, Total	0.025	mg/L	0.02	0.003		
3/3/2021	METALS	2103030959C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2021	METALS	2103030959C	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103030959C	Chromium, Total	0.001	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103030959C	Magnesium, Total	65	mg/L	1	0.03		
3/3/2021	METALS	2103030959C	Potassium, Total	4	mg/L	2	0.2		
3/3/2021	METALS	2103030959C	Strontium, Total	2.52	mg/L	0.1	0.002		
3/3/2021	METALS	2103030959C	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103030959C	Zinc, Total	0.011	mg/L	0.02	0.01		J
3/3/2021	METALS	2103030959C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031000C	Strontium, Total	2.52	mg/L	0.1	0.002		
3/3/2021	METALS	2103031000C	Boron, Total	0.07	mg/L	0.2	0.02		J
3/3/2021	METALS	2103031000C	Calcium, Total	102	mg/L	1	0.3		
3/3/2021	METALS	2103031000C	Chromium, Total	0.0008	mg/L	0.01	0.0006		J
3/3/2021	METALS	2103031000C	Magnesium, Total	65	mg/L	1	0.03		
3/3/2021	METALS	2103031000C	Molybdenum, Total	0.007	mg/L	0.025	0.003		J
3/3/2021	METALS	2103031000C	Sodium, Total	39.5	mg/L	1	0.2		
3/3/2021	METALS	2103031000C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/3/2021	METALS	2103031000C	Zinc, Total	0.01	mg/L	0.02	0.01		J
3/3/2021	METALS	2103031000C	Potassium, Total	3.9	mg/L	2	0.2		
3/3/2021	METALS	2103031000C	Barium, Total	0.025	mg/L	0.02	0.003		
3/3/2021	ANIONS	2103031001C	Fluoride, undistilled	0.56	mg/L	0.1	0.01		
3/3/2021	ANIONS	2103031001C	Sulfate	310	mg/L	8	1.6		
3/3/2021	ANIONS	2103031001C	Chloride	42.7	mg/L	2	0.5		
3/3/2021	ANIONS	2103031001C	Alkalinity, Total as CaCO3	234	mg/L	2	1.8		
3/3/2021	SM2540C	2103031002C	Total Dissolved Solids (TDS)	756	mg/L	10	9		
3/3/2021	6850	2103031003C	Perchlorate	0.33	ug/L	0.2	0.06		
3/3/2021	353.2	2103031004C	Nitrate+Nitrite as Nitrogen	0.808	mg/L	0.05	0.002		

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
3/2/2021	NDMA_LL	2103021504C	N-Nitrosodimethylamine	0.78	ng/L	0.47	0.33		RB FB
3/2/2021	METALS	2103021506C	Molybdenum, Total	0.039	mg/L	0.025	0.003		
3/2/2021	METALS	2103021506C	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021506C	Thallium, Total	0.00005	mg/L	0.001	0.00004		J
3/2/2021	METALS	2103021506C	Strontium, Total	1.37	mg/L	0.1	0.002		
3/2/2021	METALS	2103021506C	Sodium, Total	112	mg/L	1	0.2		
3/2/2021	METALS	2103021506C	Potassium, Total	8.7	mg/L	2	0.2		
3/2/2021	METALS	2103021506C	Nickel, Total	0.005	mg/L	0.04	0.003		J
3/2/2021	METALS	2103021506C	Manganese, Total	0.011	mg/L	0.01	0.004		
3/2/2021	METALS	2103021506C	Magnesium, Total	19.6	mg/L	1	0.03		
3/2/2021	METALS	2103021506C	Chromium, Total	0.0009	mg/L	0.01	0.0006		J
3/2/2021	METALS	2103021506C	Calcium, Total	34.7	mg/L	1	0.3		
3/2/2021	METALS	2103021506C	Boron, Total	0.2	mg/L	0.2	0.02		
3/2/2021	METALS	2103021506C	Barium, Total	0.034	mg/L	0.02	0.003		
3/2/2021	METALS	2103021506C	Antimony, Total	0.0005	mg/L	0.001	0.0002		J
3/2/2021	METALS	2103021506C	Arsenic, Total	0.0026	mg/L	0.001	0.0004		
3/2/2021	ANIONS	2103021507C	Chloride	22.8	mg/L	2	0.5		
3/2/2021	ANIONS	2103021507C	Alkalinity, Total as CaCO3	193	mg/L	2	1.8		
3/2/2021	ANIONS	2103021507C	Fluoride, undistilled	0.66	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021507C	Sulfate	212	mg/L	8	1.6		
3/2/2021	SM2540C	2103021508C	Total Dissolved Solids (TDS)	569	mg/L	10	9		

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
2/17/2021	METALS	2102171405B	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/17/2021	METALS	2102171405B	Antimony, Total	0.0005	mg/L	0.001	0.0002		J FB
2/17/2021	METALS	2102171405B	Arsenic, Total	0.0009	mg/L	0.001	0.0004		J
2/17/2021	METALS	2102171405B	Barium, Total	0.022	mg/L	0.02	0.003		
2/17/2021	METALS	2102171405B	Boron, Total	0.06	mg/L	0.2	0.02		J
2/17/2021	METALS	2102171405B	Calcium, Total	99.8	mg/L	1	0.3		
2/17/2021	METALS	2102171405B	Magnesium, Total	69.7	mg/L	1	0.03		
2/17/2021	METALS	2102171405B	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
2/17/2021	METALS	2102171405B	Potassium, Total	3.1	mg/L	2	0.2		
2/17/2021	METALS	2102171405B	Sodium, Total	42	mg/L	1	0.2		
2/17/2021	METALS	2102171405B	Strontium, Total	2.43	mg/L	0.1	0.002		
2/17/2021	353.2	2102171407B	Nitrate+Nitrite as Nitrogen	0.813	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
2/1/2021	NDMA_LL	2102011440Y	N-Nitrosodimethylamine	0.46	ng/L	0.49	0.34		J
2/1/2021	NDMA_LL	2102011440Y	N-Nitrodimethylamine	0.41	ng/L	0.49	0.2		J
2/1/2021	METALS	2102011510Y	Barium, Total	0.022	mg/L	0.02	0.003		
2/1/2021	METALS	2102011510Y	Arsenic, Total	0.0008	mg/L	0.001	0.0004		J
2/1/2021	METALS	2102011510Y	Boron, Total	0.06	mg/L	0.2	0.02		J
2/1/2021	METALS	2102011510Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/1/2021	METALS	2102011510Y	Magnesium, Total	68.8	mg/L	1	0.03		
2/1/2021	METALS	2102011510Y	Molybdenum, Total	0.005	mg/L	0.025	0.003		J
2/1/2021	METALS	2102011510Y	Potassium, Total	3.3	mg/L	2	0.2		
2/1/2021	METALS	2102011510Y	Sodium, Total	38.4	mg/L	1	0.2		
2/1/2021	METALS	2102011510Y	Strontium, Total	2.38	mg/L	0.1	0.002		
2/1/2021	METALS	2102011510Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
2/1/2021	METALS	2102011510Y	Calcium, Total	88.7	mg/L	1	0.3		
2/1/2021	ANIONS	2102011511Y	Sulfate	313	mg/L	8	1.6		
2/1/2021	ANIONS	2102011511Y	Fluoride, undistilled	0.61	mg/L	0.1	0.01		
2/1/2021	ANIONS	2102011511Y	Chloride	37.5	mg/L	2	0.5		
2/1/2021	ANIONS	2102011511Y	Alkalinity, Total as CaCO3	213	mg/L	2	1.8		
2/1/2021	SM2540C	2102011512Y	Total Dissolved Solids (TDS)	745	mg/L	10	9		
2/1/2021	6850	2102011513Y	Perchlorate	0.42	ug/L	0.2	0.06		
2/1/2021	353.2	2102011535Y	Nitrate+Nitrite as Nitrogen	0.782	mg/L	0.05	0.002		

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
2/1/2021	607	2102011006Y	Bromacil	0.0097	µg/L	0.0097	0.0049	98	
2/1/2021	NDMA_LL	2102011035Y	N-Nitrosodimethylamine	0.46	ng/L	0.47	0.33		J TB EB
2/1/2021	METALS	2102011036Y	Strontium, Total	2.55	mg/L	0.1	0.002		
2/1/2021	METALS	2102011036Y	Arsenic, Total	0.0012	mg/L	0.001	0.0004		
2/1/2021	METALS	2102011036Y	Barium, Total	0.028	mg/L	0.02	0.003		
2/1/2021	METALS	2102011036Y	Boron, Total	0.08	mg/L	0.2	0.02		J
2/1/2021	METALS	2102011036Y	Calcium, Total	56	mg/L	1	0.3		
2/1/2021	METALS	2102011036Y	Chromium, Total	0.001	mg/L	0.01	0.0006		J
2/1/2021	METALS	2102011036Y	Magnesium, Total	46.9	mg/L	1	0.03		
2/1/2021	METALS	2102011036Y	Molybdenum, Total	0.012	mg/L	0.025	0.003		J
2/1/2021	METALS	2102011036Y	Sodium, Total	51.1	mg/L	1	0.2		
2/1/2021	METALS	2102011036Y	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
2/1/2021	METALS	2102011036Y	Potassium, Total	3.7	mg/L	2	0.2		

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
3/9/2021	8260_LL	2103090956A	Benzene	0.22	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090956A	Sulfur Dioxide	18	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090956A	Toluene	0.21	ug/L	0.5	0.2		J
3/9/2021	8270	2103091030A	1,4-Dioxane	2.5	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
3/9/2021	8260_LL	2103090926A	Toluene	0.42	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090926A	Trichloroethene (TCE)	0.45	ug/L	0.5	0.2		J
3/9/2021	8260_LL	2103090926A	Trichlorofluoromethane (CFC 11)	0.32	ug/L	0.5	0.24		J
3/9/2021	8260_LL	2103090926A	Sulfur Dioxide	35	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090926A	Unknown	7.1	ug/L	NA	NA		TIC FB
3/9/2021	NDMA_LL	2103090928A	N-Nitrosodimethylamine	0.81	ng/L	0.5	0.35		* FB
3/9/2021	NDMA_LL	2103090928A	N-Nitrodimethylamine	0.26	ng/L	0.5	0.21		J
3/9/2021	NDMA_LL	2103091005A	N-Nitrosodimethylamine	0.64	ng/L	0.49	0.34		* FB
3/9/2021	8270	2103091006A	1,4-Dioxane	3.4	ug/L	0.04	0.027		

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
3/9/2021	8260_LL	2103090945A	1,4-Dioxane	13	ug/L	40	13		J
3/9/2021	8260_LL	2103090945A	Sulfur Dioxide	24	ug/L	NA	NA		TIC RB FB
3/9/2021	8260_LL	2103090945A	Toluene	0.53	ug/L	0.5	0.2		
3/9/2021	NDMA_LL	2103090947A	N-Nitrosodimethylamine	0.9	ng/L	0.48	0.34		*
3/9/2021	8270	2103091045A	1,4-Dioxane	1.9	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
3/11/2021	8260_LL	2103110941A	Sulfur Dioxide	59	ug/L	NA	NA		TIC RB TB FB
3/11/2021	8260_LL	2103110941A	Toluene	0.59	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
3/11/2021	8260_LL	2103111001A	Sulfur Dioxide	32	ug/L	NA	NA		TIC RB FB
3/11/2021	8260_LL	2103111001A	Toluene	0.41	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
4/6/2021	8260_LL	2104060916A	Dichlorofluoromethane (CFC 21)	0.34	ug/L	0.5	0.2		J
4/6/2021	8260_LL	2104060916A	Benzene	0.35	ug/L	0.5	0.2		J
4/6/2021	NDMA_LL	2104060918A	N-Nitrosodimethylamine	0.49	ng/L	0.48	0.34		RB

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
4/6/2021	NDMA_LL	2104060937A	N-Nitrosodimethylamine	0.57	ng/L	0.48	0.33		RB

Analytical Results for Sampling Events at ST-7-779

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/6/2021	8260_LL	2104060945A	Toluene	0.23	ug/L	0.5	0.2		J
4/6/2021	NDMA_LL	2104060947A	N-Nitrosodimethylamine	0.52	ng/L	0.48	0.33		RB FB

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
3/1/2021	METALS	2103011419C	Magnesium, Total	68.5	mg/L	1	0.03		
3/1/2021	METALS	2103011419C	Vanadium, Total	0.002	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011419C	Strontium, Total	2.34	mg/L	0.1	0.002		
3/1/2021	METALS	2103011419C	Sodium, Total	36.8	mg/L	1	0.2		
3/1/2021	METALS	2103011419C	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011419C	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
3/1/2021	METALS	2103011419C	Calcium, Total	105	mg/L	1	0.3		
3/1/2021	METALS	2103011419C	Boron, Total	0.06	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011419C	Barium, Total	0.023	mg/L	0.02	0.003		
3/1/2021	METALS	2103011419C	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103011419C	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011419C	Potassium, Total	2.9	mg/L	2	0.2		

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
3/8/2021	607	2103081002C	Bromacil	0.0094	µg/L	0.0094	0.0047	107	
3/8/2021	METALS	2103081005C	Manganese, Total	0.005	mg/L	0.01	0.004		J
3/8/2021	METALS	2103081005C	Strontium, Total	2.87	mg/L	0.1	0.002		
3/8/2021	METALS	2103081005C	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081005C	Sodium, Total	69.3	mg/L	1	0.2		
3/8/2021	METALS	2103081005C	Potassium, Total	3.3	mg/L	2	0.2		
3/8/2021	METALS	2103081005C	Nickel, Total	0.456	mg/L	0.04	0.003		
3/8/2021	METALS	2103081005C	Molybdenum, Total	0.013	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081005C	Magnesium, Total	46.5	mg/L	1	0.03		
3/8/2021	METALS	2103081005C	Iron, Total	0.51	mg/L	0.1	0.07		
3/8/2021	METALS	2103081005C	Chromium, Total	0.073	mg/L	0.01	0.0006		
3/8/2021	METALS	2103081005C	Calcium, Total	61.6	mg/L	1	0.3		
3/8/2021	METALS	2103081005C	Boron, Total	0.14	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081005C	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
3/8/2021	METALS	2103081005C	Barium, Total	0.024	mg/L	0.02	0.003		
3/8/2021	ANIONS	2103081006C	Alkalinity, Total as CaCO3	155	mg/L	2	1.8		
3/8/2021	ANIONS	2103081006C	Chloride	40.6	mg/L	2	0.5		
3/8/2021	ANIONS	2103081006C	Fluoride, undistilled	0.68	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081006C	Sulfate	252	mg/L	8	1.6		
3/8/2021	SM2540C	2103081007C	Total Dissolved Solids (TDS)	661	mg/L	10	9		
3/8/2021	6850	2103081008C	Perchlorate	0.35	ug/L	0.2	0.06		
3/8/2021	353.2	2103081009C	Nitrate+Nitrite as Nitrogen	0.816	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
3/8/2021	METALS	2103081525C	Strontium, Total	2.89	mg/L	0.1	0.002		
3/8/2021	METALS	2103081525C	Vanadium, Total	0.014	mg/L	0.05	0.0007		J
3/8/2021	METALS	2103081525C	Sodium, Total	69.5	mg/L	1	0.2		
3/8/2021	METALS	2103081525C	Potassium, Total	3.3	mg/L	2	0.2		
3/8/2021	METALS	2103081525C	Nickel, Total	0.044	mg/L	0.04	0.003		
3/8/2021	METALS	2103081525C	Molybdenum, Total	0.014	mg/L	0.025	0.003		J
3/8/2021	METALS	2103081525C	Iron, Total	0.27	mg/L	0.1	0.07		
3/8/2021	METALS	2103081525C	Chromium, Total	0.043	mg/L	0.01	0.0006		
3/8/2021	METALS	2103081525C	Calcium, Total	62.6	mg/L	1	0.3		
3/8/2021	METALS	2103081525C	Boron, Total	0.14	mg/L	0.2	0.02		J
3/8/2021	METALS	2103081525C	Arsenic, Total	0.0011	mg/L	0.001	0.0004		
3/8/2021	METALS	2103081525C	Barium, Total	0.025	mg/L	0.02	0.003		
3/8/2021	METALS	2103081525C	Magnesium, Total	46.9	mg/L	1	0.03		
3/8/2021	ANIONS	2103081526C	Fluoride, undistilled	0.69	mg/L	0.1	0.01		
3/8/2021	ANIONS	2103081526C	Alkalinity, Total as CaCO3	158	mg/L	2	1.8		
3/8/2021	ANIONS	2103081526C	Sulfate	251	mg/L	8	1.6		
3/8/2021	ANIONS	2103081526C	Chloride	39	mg/L	2	0.5		
3/8/2021	SM2540C	2103081527C	Total Dissolved Solids (TDS)	665	mg/L	10	9		
3/8/2021	6850	2103081528C	Perchlorate	0.38	ug/L	0.2	0.06		
3/8/2021	353.2	2103081529C	Nitrate+Nitrite as Nitrogen	0.83	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
3/2/2021	NDMA_LL	2103021017Y	N-Nitrosodimethylamine	0.75	ng/L	0.47	0.33		RB
3/2/2021	NDMA_LL	2103021017Y	N-Nitrodimethylamine	0.3	ng/L	0.47	0.2		J
3/2/2021	METALS	2103021045Y	Potassium, Total	3	mg/L	2	0.2		
3/2/2021	METALS	2103021045Y	Zinc, Total	0.012	mg/L	0.02	0.01		J
3/2/2021	METALS	2103021045Y	Vanadium, Total	0.003	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021045Y	Strontium, Total	2.42	mg/L	0.1	0.002		
3/2/2021	METALS	2103021045Y	Sodium, Total	41.6	mg/L	1	0.2		
3/2/2021	METALS	2103021045Y	Magnesium, Total	70.5	mg/L	1	0.03		
3/2/2021	METALS	2103021045Y	Calcium, Total	104	mg/L	1	0.3		
3/2/2021	METALS	2103021045Y	Boron, Total	0.06	mg/L	0.2	0.02		J
3/2/2021	METALS	2103021045Y	Barium, Total	0.029	mg/L	0.02	0.003		
3/2/2021	METALS	2103021045Y	Arsenic, Total	0.0006	mg/L	0.001	0.0004		J
3/2/2021	METALS	2103021045Y	Molybdenum, Total	0.006	mg/L	0.025	0.003		J
3/2/2021	ANIONS	2103021046Y	Sulfate	345	mg/L	8	1.6		
3/2/2021	ANIONS	2103021046Y	Alkalinity, Total as CaCO3	241	mg/L	2	1.8		
3/2/2021	ANIONS	2103021046Y	Chloride	40.2	mg/L	2	0.5		
3/2/2021	ANIONS	2103021046Y	Fluoride, undistilled	0.63	mg/L	0.1	0.01		
3/2/2021	SM2540C	2103021047Y	Total Dissolved Solids (TDS)	798	mg/L	10	9		
3/2/2021	6850	2103021048Y	Perchlorate	0.24	ug/L	0.2	0.06		
3/2/2021	353.2	2103021110Y	Nitrate+Nitrite as Nitrogen	0.519	mg/L	0.05	0.002		

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
3/1/2021	NDMA_LL	2103011027Y	N-Nitrosodimethylamine	0.46	ng/L	0.48	0.33		J
3/1/2021	NDMA_LL	2103011027Y	N-Nitrodimethylamine	0.42	ng/L	0.48	0.2		J
3/1/2021	METALS	2103011055Y	Molybdenum, Total	0.008	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011055Y	Sodium, Total	45.6	mg/L	1	0.2		
3/1/2021	METALS	2103011055Y	Strontium, Total	2.64	mg/L	0.1	0.002		
3/1/2021	METALS	2103011055Y	Zinc, Total	0.016	mg/L	0.02	0.01		J
3/1/2021	METALS	2103011055Y	Potassium, Total	3.7	mg/L	2	0.2		
3/1/2021	METALS	2103011055Y	Calcium, Total	99.9	mg/L	1	0.3		
3/1/2021	METALS	2103011055Y	Boron, Total	0.07	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011055Y	Barium, Total	0.026	mg/L	0.02	0.003		
3/1/2021	METALS	2103011055Y	Arsenic, Total	0.001	mg/L	0.001	0.0004		J
3/1/2021	METALS	2103011055Y	Antimony, Total	0.0003	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011055Y	Vanadium, Total	0.004	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011055Y	Magnesium, Total	67.2	mg/L	1	0.03		

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
3/1/2021	METALS	2103011435Y	Sodium, Total	57	mg/L	1	0.2		
3/1/2021	METALS	2103011435Y	Zinc, Total	0.011	mg/L	0.02	0.01		J
3/1/2021	METALS	2103011435Y	Strontium, Total	2.86	mg/L	0.1	0.002		
3/1/2021	METALS	2103011435Y	Potassium, Total	4.3	mg/L	2	0.2		
3/1/2021	METALS	2103011435Y	Molybdenum, Total	0.01	mg/L	0.025	0.003		J
3/1/2021	METALS	2103011435Y	Magnesium, Total	56.8	mg/L	1	0.03		
3/1/2021	METALS	2103011435Y	Calcium, Total	82.2	mg/L	1	0.3		
3/1/2021	METALS	2103011435Y	Boron, Total	0.08	mg/L	0.2	0.02		J
3/1/2021	METALS	2103011435Y	Antimony, Total	0.0002	mg/L	0.001	0.0002		J
3/1/2021	METALS	2103011435Y	Barium, Total	0.028	mg/L	0.02	0.003		
3/1/2021	METALS	2103011435Y	Vanadium, Total	0.01	mg/L	0.05	0.0007		J
3/1/2021	METALS	2103011435Y	Arsenic, Total	0.0013	mg/L	0.001	0.0004		
3/1/2021	METALS	2103011435Y	Chromium, Total	0.0007	mg/L	0.01	0.0006		J
3/1/2021	ANIONS	2103011437Y	Sulfate	316	mg/L	8	1.6		
3/1/2021	ANIONS	2103011437Y	Alkalinity, Total as CaCO3	173	mg/L	2	1.8		
3/1/2021	ANIONS	2103011437Y	Chloride	41.6	mg/L	2	0.5		
3/1/2021	ANIONS	2103011437Y	Fluoride, undistilled	0.49	mg/L	0.1	0.01		
3/1/2021	SM2540C	2103011438Y	Total Dissolved Solids (TDS)	725	mg/L	10	9		
3/1/2021	6850	2103011439Y	Perchlorate	0.38	ug/L	0.2	0.06		
3/1/2021	353.2	2103011440Y	Nitrate+Nitrite as Nitrogen	0.714	mg/L	0.05	0.002		

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
3/2/2021	NDMA_LL	2103021442Y	N-Nitrosodimethylamine	0.86	ng/L	0.48	0.33		RB
3/2/2021	METALS	2103021510Y	Molybdenum, Total	0.021	mg/L	0.025	0.003		J
3/2/2021	METALS	2103021510Y	Antimony, Total	0.0004	mg/L	0.001	0.0002		J
3/2/2021	METALS	2103021510Y	Vanadium, Total	0.006	mg/L	0.05	0.0007		J
3/2/2021	METALS	2103021510Y	Zinc, Total	0.352	mg/L	0.02	0.01		
3/2/2021	METALS	2103021510Y	Strontium, Total	1.32	mg/L	0.1	0.002		
3/2/2021	METALS	2103021510Y	Sodium, Total	141	mg/L	1	0.2		
3/2/2021	METALS	2103021510Y	Potassium, Total	4.1	mg/L	2	0.2		
3/2/2021	METALS	2103021510Y	Magnesium, Total	23.3	mg/L	1	0.03		
3/2/2021	METALS	2103021510Y	Calcium, Total	49.3	mg/L	1	0.3		
3/2/2021	METALS	2103021510Y	Boron, Total	0.23	mg/L	0.2	0.02		
3/2/2021	METALS	2103021510Y	Arsenic, Total	0.0027	mg/L	0.001	0.0004		
3/2/2021	METALS	2103021510Y	Barium, Total	0.023	mg/L	0.02	0.003		
3/2/2021	METALS	2103021510Y	Manganese, Total	0.102	mg/L	0.01	0.004		
3/2/2021	ANIONS	2103021511Y	Alkalinity, Total as CaCO3	168	mg/L	2	1.8		
3/2/2021	ANIONS	2103021511Y	Chloride	38.2	mg/L	2	0.5		
3/2/2021	ANIONS	2103021511Y	Fluoride, undistilled	0.54	mg/L	0.1	0.01		
3/2/2021	ANIONS	2103021511Y	Sulfate	317	mg/L	8	1.6		
3/2/2021	SM2540C	2103021512Y	Total Dissolved Solids (TDS)	719	mg/L	10	9		
3/2/2021	6850	2103021513Y	Perchlorate	0.093	ug/L	0.2	0.06		J
3/2/2021	353.2	2103021514Y	Nitrate+Nitrite as Nitrogen	0.31	mg/L	0.05	0.002		

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
4/13/2021	8260_LL	2104130900A	Toluene	1.3	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130910A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		* FB

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
4/13/2021	8260_LL	2104130915A	Toluene	0.67	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130920A	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		*

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
4/13/2021	8260_LL	2104130926A	Toluene	3.9	ug/L	0.5	0.2		
4/13/2021	8260_LL	2104130926A	Unknown	55	ug/L	NA	NA		TIC
4/13/2021	NDMA_LL	2104130930A	N-Nitrosodimethylamine	1.4	ng/L	0.47	0.33		* FB

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
4/13/2021	8260_LL	2104130940A	Toluene	8.4	ug/L	0.5	0.2		
4/13/2021	NDMA_LL	2104130945A	N-Nitrodimethylamine	0.93	ng/L	0.47	0.2		
4/13/2021	NDMA_LL	2104130945A	N-Nitrosodimethylamine	6.5	ng/L	0.47	0.33		*

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** 2/9/2021

Sample	Parameter	Result	Units
2102091320	Conductivity	1135	µS/cm
2102091320	pH	7.81	NA
2102091320	Temperature	25.1	ºC
2102091320	Turbidity	0.49	NTU

Well ID B650-EFF-1 **Event Date** 3/5/2021

Sample	Parameter	Result	Units
2103050520	Conductivity	1095	µS/cm
2103050520	pH	8.16	NA
2103050520	Temperature	24.7	ºC
2103050520	Turbidity	0.18	NTU

Well ID B650-EFF-1 **Event Date** 4/14/2021

Sample	Parameter	Result	Units
2104141405	Conductivity	1085	µS/cm
2104141405	pH	8.69	NA
2104141405	Temperature	25.6	ºC
2104141405	Turbidity	1.75	NTU

Well ID B650-INF-1 **Event Date** 2/9/2021

Sample	Parameter	Result	Units
2102091403	Conductivity	1110	µS/cm
2102091403	pH	7.42	NA
2102091403	Temperature	24.2	ºC
2102091403	Turbidity	0.83	NTU

Well ID B650-INF-1 **Event Date** 3/5/2021

Sample	Parameter	Result	Units
2103050548	Conductivity	1103	µS/cm
2103050548	pH	7.32	NA
2103050548	Temperature	24.0	ºC
2103050548	Turbidity	0.53	NTU

Well ID B650-INF-1 **Event Date** 4/14/2021

Sample	Parameter	Result	Units
2104141415	Conductivity	1080	µS/cm
2104141415	pH	7.41	NA
2104141415	Temperature	25.5	ºC
2104141415	Turbidity	2.79	NTU

Well ID	PFE-2	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151430	Conductivity		1057	µS/cm
2104151430	pH		7.76	NA
2104151430	Temperature		26.9	ºC
2104151430	Turbidity		21.7	NTU

Well ID	PFE-3	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150925	Conductivity		1158	µS/cm
2104150925	pH		7.76	NA
2104150925	Temperature		23.6	ºC
2104150925	Turbidity		0.92	NTU

Well ID	PFE-4A	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104150949	Conductivity		1100	µS/cm
2104150949	pH		7.27	NA
2104150949	Temperature		24.2	ºC
2104150949	Turbidity		11.3	NTU

Well ID	PFE-5	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151033	Conductivity		951	µS/cm
2104151033	pH		7.75	NA
2104151033	Temperature		25.3	ºC
2104151033	Turbidity		2.56	NTU

Well ID	PFE-7	Event Date	4/15/2021	
Sample	**Parameter**		**Result**	**Units**
2104151315	Conductivity		1102	µS/cm
2104151315	pH		8.55	NA
2104151315	Temperature		24.9	ºC
2104151315	Turbidity		1.89	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
2/9/2021	8260_LL	2102091322	Chloromethane	0.33	ug/L	0.5	0.28		J
2/9/2021	607	2102091324	Bromacil	0.0057	µg/L	0.0095	0.0048	96	J
3/5/2021	8260_LL	2103050525	Chloromethane	0.36	ug/L	0.5	0.28		J
3/5/2021	607	2103050527	Bromacil	0.0057	µg/L	0.0095	0.0048	107	J
4/14/2021	607	2104141408	Bromacil	0.059	µg/L	0.0095	0.0048	80	
4/14/2021	NDMA_LL	2104141409	N-Nitrodimethylamine	0.84	ng/L	0.48	0.2		
4/14/2021	NDMA_LL	2104141409	N-Nitrosodimethylamine	3.5	ng/L	0.48	0.33		*

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
2/9/2021	8260	2102091405	1,1,2-Trichloro-1,2,2-Trifluoroethane	21	ug/L	1	0.2		
2/9/2021	8260	2102091405	Tetrachloroethene (PCE)	0.48	ug/L	1	0.21		J
2/9/2021	8260	2102091405	Trichloroethene (TCE)	17	ug/L	1	0.2		
2/9/2021	8260	2102091405	Trichlorofluoromethane (CFC 11)	11	ug/L	1	0.24		
2/9/2021	607	2102091407	N-Nitrosodimethylamine	0.078	µg/L	0.0097	0.0049	40	
2/9/2021	607	2102091407	Bromacil	0.045	µg/L	0.0097	0.0049	96	
2/9/2021	607	2102091407	N-Nitrodimethylamine	0.06	µg/L	0.0097	0.0049	97	
3/5/2021	8260	2103050554	1,1,2-Trichloro-1,2,2-Trifluoroethane	26	ug/L	1	0.2		
3/5/2021	8260	2103050554	Tetrachloroethene (PCE)	0.83	ug/L	1	0.21		J
3/5/2021	8260	2103050554	Trichloroethene (TCE)	17	ug/L	1	0.2		
3/5/2021	8260	2103050554	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
3/5/2021	8260	2103050555	1,1,2-Trichloro-1,2,2-Trifluoroethane	25	ug/L	1	0.2		
3/5/2021	8260	2103050555	Trichlorofluoromethane (CFC 11)	15	ug/L	1	0.24		
3/5/2021	8260	2103050555	Trichloroethene (TCE)	17	ug/L	1	0.2		
3/5/2021	8260	2103050555	Tetrachloroethene (PCE)	0.55	ug/L	1	0.21		J
3/5/2021	607	2103050557	N-Nitrodimethylamine	0.054	µg/L	0.0096	0.0048	99	
3/5/2021	607	2103050557	N-Nitrosodimethylamine	0.062	µg/L	0.0096	0.0048	40	
3/5/2021	607	2103050557	Bromacil	0.041	µg/L	0.0096	0.0048	107	
3/5/2021	607	2103050558	N-Nitrosodimethylamine	0.064	µg/L	0.01	0.005	40	
3/5/2021	607	2103050558	N-Nitrodimethylamine	0.054	µg/L	0.01	0.005	99	
3/5/2021	607	2103050558	Bromacil	0.044	µg/L	0.01	0.005	107	
4/14/2021	8260	2104141416	Trichloroethene (TCE)	14	ug/L	1	0.2		
4/14/2021	8260	2104141416	Tetrachloroethene (PCE)	0.58	ug/L	1	0.21		J
4/14/2021	8260	2104141416	Trichlorofluoromethane (CFC 11)	13	ug/L	1	0.24		
4/14/2021	8260	2104141416	1,1,2-Trichloro-1,2,2-Trifluoroethane	24	ug/L	1	0.2		
4/14/2021	8260	2104141418	Trichloroethene (TCE)	14	ug/L	1	0.2		
4/14/2021	8260	2104141418	Trichlorofluoromethane (CFC 11)	12	ug/L	1	0.24		
4/14/2021	8260	2104141418	1,1,2-Trichloro-1,2,2-Trifluoroethane	23	ug/L	1	0.2		
4/14/2021	8260	2104141418	Tetrachloroethene (PCE)	0.56	ug/L	1	0.21		J
4/14/2021	607	2104141419	Bromacil	0.037	µg/L	0.0098	0.0049	80	
4/14/2021	607	2104141419	N-Nitrosodimethylamine	0.045	µg/L	0.0098	0.0049	50	
4/14/2021	607	2104141419	N-Nitrodimethylamine	0.039	µg/L	0.0098	0.0049	120	

Analytical Results for Sampling Events at PFE-2

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151431	Trichloroethene (TCE)	0.3	ug/L	1	0.2		J
4/15/2021	8260	2104151431	Trichlorofluoromethane (CFC 11)	0.31	ug/L	1	0.24		J
4/15/2021	8260	2104151431	Toluene	0.25	ug/L	1	0.2		J
4/15/2021	METALS	2104151434	Calcium, Total	75.9	mg/L	1	0.3		
4/15/2021	METALS	2104151434	Chromium, Total	0.004	mg/L	0.01	0.0006		J RB
4/15/2021	METALS	2104151434	Boron, Total	0.1	mg/L	0.2	0.02		J
4/15/2021	METALS	2104151434	Zinc, Total	0.015	mg/L	0.02	0.01		J
4/15/2021	METALS	2104151434	Cobalt, Total	0.001	mg/L	0.05	0.0009		J
4/15/2021	METALS	2104151434	Iron, Total	1.72	mg/L	0.1	0.07		
4/15/2021	METALS	2104151434	Magnesium, Total	47	mg/L	1	0.03		
4/15/2021	METALS	2104151434	Potassium, Total	7.6	mg/L	2	0.2		
4/15/2021	METALS	2104151434	Manganese, Total	0.03	mg/L	0.01	0.004		
4/15/2021	METALS	2104151434	Sodium, Total	83.5	mg/L	1	0.2		
4/15/2021	METALS	2104151434	Aluminum, Total	1.35	mg/L	0.1	0.03		
4/15/2021	METALS	2104151434	Molybdenum, Total	0.016	mg/L	0.025	0.003		J
4/15/2021	METALS	2104151434	Strontium, Total	2.54	mg/L	0.1	0.002		
4/15/2021	METALS	2104151434	Vanadium, Total	0.015	mg/L	0.05	0.0007		J
4/15/2021	METALS	2104151434	Arsenic, Total	0.0014	mg/L	0.001	0.0004		
4/15/2021	METALS	2104151434	Barium, Total	0.031	mg/L	0.02	0.003		
4/15/2021	ANIONS	2104151435	Fluoride, undistilled	0.37	mg/L	0.1	0.01		
4/15/2021	ANIONS	2104151435	Sulfate	310	mg/L	8	1.6		
4/15/2021	ANIONS	2104151435	Alkalinity, Total as CaCO3	181	mg/L	2	1.8		
4/15/2021	ANIONS	2104151435	Chloride	43.1	mg/L	2	0.5		
4/15/2021	SM2540C	2104151436	Total Dissolved Solids (TDS)	744	mg/L	10	9		
4/15/2021	6850	2104151437	Perchlorate	0.34	ug/L	0.2	0.06		
4/15/2021	353.2	2104151438	Nitrate+Nitrite as Nitrogen	0.634	mg/L	0.05	0.002		

Analytical Results for Sampling Events at PFE-3

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104150930	1,1,2-Trichloro-1,2,2-Trifluoroethane	95	ug/L	1	0.2		
4/15/2021	8260	2104150930	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
4/15/2021	8260	2104150930	Trichloroethene (TCE)	45	ug/L	1	0.2		
4/15/2021	8260	2104150930	Trichlorofluoromethane (CFC 11)	45	ug/L	1	0.24		
4/15/2021	8260	2104150930	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.33	ug/L	1	0.2		J
4/15/2021	607	2104150932	Bromacil	0.12	µg/L	0.0098	0.0049	85	RB
4/15/2021	607	2104150932	N-Nitrodimethylamine	0.13	µg/L	0.0098	0.0049	98	
4/15/2021	607	2104150932	N-Nitrosodimethylamine	0.16	µg/L	0.0098	0.0049	40	

Analytical Results for Sampling Events at PFE-4A

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104150950	1,1,2-Trichloro-1,2,2-Trifluoroethane	2	ug/L	1	0.2		
4/15/2021	8260	2104150950	Trichloroethene (TCE)	1.2	ug/L	1	0.2		
4/15/2021	8260	2104150950	Trichlorofluoromethane (CFC 11)	0.81	ug/L	1	0.24		J
4/15/2021	8260	2104150952	1,1,2-Trichloro-1,2,2-Trifluoroethane	1.7	ug/L	1	0.2		
4/15/2021	8260	2104150952	Trichloroethene (TCE)	1.1	ug/L	1	0.2		
4/15/2021	8260	2104150952	Trichlorofluoromethane (CFC 11)	0.83	ug/L	1	0.24		J
4/15/2021	607	2104150953	Bromacil	0.03	µg/L	0.0097	0.0049	85	RB QD
4/15/2021	607	2104150953	N-Nitrodimethylamine	0.0078	µg/L	0.0097	0.0049	98	J
4/15/2021	607	2104150953	N-Nitrosodimethylamine	0.0078	µg/L	0.0097	0.0049	40	J
4/15/2021	607	2104150954	Bromacil	0.018	µg/L	0.0097	0.0049	85	RB QD
4/15/2021	607	2104150954	N-Nitrosodimethylamine	0.0068	µg/L	0.0097	0.0049	40	J
4/15/2021	607	2104150954	N-Nitrodimethylamine	0.0087	µg/L	0.0097	0.0049	98	J

Analytical Results for Sampling Events at PFE-5

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151030	Tetrachloroethene (PCE)	2.8	ug/L	1	0.21		
4/15/2021	8260	2104151030	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.31	ug/L	1	0.2		J
4/15/2021	8260	2104151030	Trichloroethene (TCE)	59	ug/L	1	0.2		
4/15/2021	8260	2104151030	1,1,2-Trichloro-1,2,2-Trifluoroethane	30	ug/L	1	0.2		
4/15/2021	8260	2104151030	Dichlorofluoromethane (CFC 21)	0.28	ug/L	1	0.2		J
4/15/2021	8260	2104151030	Trichlorofluoromethane (CFC 11)	32	ug/L	1	0.24		
4/15/2021	607	2104151032	N-Nitrosodimethylamine	0.38	µg/L	0.0099	0.005	40	
4/15/2021	607	2104151032	N-Nitrodimethylamine	0.23	µg/L	0.0099	0.005	98	
4/15/2021	607	2104151032	Bromacil	0.048	µg/L	0.0099	0.005	85	RB

Analytical Results for Sampling Events at PFE-7

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
4/15/2021	8260	2104151320	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
4/15/2021	8260	2104151320	Trichlorofluoromethane (CFC 11)	4.8	ug/L	1	0.24		
4/15/2021	8260	2104151320	1,1,2-Trichloro-1,2,2-Trifluoroethane	4.9	ug/L	1	0.2		
4/15/2021	8260	2104151320	2-Propanol	4.3	ug/L	50	3.4		J
4/15/2021	607	2104151322	Bromacil	0.0096	µg/L	0.0096	0.0048	85	RB
4/15/2021	NDMA_LL	2104151323	N-Nitrodimethylamine	0.89	ng/L	0.5	0.2		
4/15/2021	NDMA_LL	2104151323	N-Nitrosodimethylamine	2.9	ng/L	0.5	0.35		* FB
4/15/2021	NDMA_LL	2104151325	N-Nitrosodimethylamine	2.8	ng/L	0.48	0.33		* FB
4/15/2021	NDMA_LL	2104151325	N-Nitrodimethylamine	0.56	ng/L	0.48	0.2		

Appendix A.5
MPITS Indicator Parameters

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
2/9/2021	607	2102090856	Bromacil	0.0096	µg/L	0.0096	0.0048	96	
3/5/2021	607	2103050709	Bromacil	0.0078	µg/L	0.0097	0.0049	107	J
4/14/2021	607	2104141328	Bromacil	0.079	µg/L	0.0095	0.0048	80	
4/14/2021	NDMA_LL	2104141329	N-Nitrosodimethylamine	0.38	ng/L	0.48	0.34		J * FB

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
2/9/2021	8260	2102090844	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	2	0.4		
2/9/2021	8260	2102090844	Dichlorofluoromethane (CFC 21)	1.8	ug/L	1	0.2		
2/9/2021	8260	2102090844	Tetrachloroethene (PCE)	2.5	ug/L	1	0.21		
2/9/2021	8260	2102090844	Trichloroethene (TCE)	53	ug/L	1	0.2		
2/9/2021	8260	2102090844	Trichlorofluoromethane (CFC 11)	110	ug/L	1	0.24		
2/9/2021	8260	2102090844	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.5	ug/L	1	0.2		
2/9/2021	607	2102090846	N-Nitrodimethylamine	1.2	µg/L	0.0095	0.0048	97	
2/9/2021	607	2102090846	Bromacil	0.34	µg/L	0.0095	0.0048	96	
2/9/2021	607	2102090846	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	40	
3/5/2021	8260	2103050806	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
3/5/2021	8260	2103050806	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
3/5/2021	8260	2103050806	Trichloroethene (TCE)	44	ug/L	1	0.2		
3/5/2021	8260	2103050806	Trichlorofluoromethane (CFC 11)	84	ug/L	1	0.24		
3/5/2021	8260	2103050806	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.2	ug/L	1	0.2		
3/5/2021	8260	2103050806	1,1,2-Trichloro-1,2,2-Trifluoroethane	140	ug/L	1	0.2		
3/5/2021	607	2103050808	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	40	
3/5/2021	607	2103050808	N-Nitrodimethylamine	0.96	µg/L	0.0095	0.0048	99	
3/5/2021	607	2103050808	Bromacil	0.24	µg/L	0.0095	0.0048	107	
4/14/2021	8260	2104141346	1,1,2-Trichloro-1,2,2-Trifluoroethane	190	ug/L	1	0.2		
4/14/2021	8260	2104141346	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.4	ug/L	1	0.2		
4/14/2021	8260	2104141346	Trichlorofluoromethane (CFC 11)	95	ug/L	1	0.24		
4/14/2021	8260	2104141346	Dichlorofluoromethane (CFC 21)	1.1	ug/L	1	0.2		
4/14/2021	8260	2104141346	Tetrachloroethene (PCE)	2.1	ug/L	1	0.21		
4/14/2021	8260	2104141346	Trichloroethene (TCE)	44	ug/L	1	0.2		
4/14/2021	607	2104141348	N-Nitrosodimethylamine	1.8	µg/L	0.0098	0.0049	50	
4/14/2021	607	2104141348	N-Nitrodimethylamine	1.1	µg/L	0.0098	0.0049	120	
4/14/2021	607	2104141348	Bromacil	0.23	µg/L	0.0098	0.0049	80	

Analytical Results for Sampling Events at MPE-1

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100901	Trichloroethene (TCE)	82	ug/L	1	0.2		
2/10/2021	8260	2102100901	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100901	Unknown	5.2	ug/L	NA	NA		TIC RB
2/10/2021	8260	2102100901	Trichlorofluoromethane (CFC 11)	180	ug/L	1	0.24		
2/10/2021	8260	2102100901	Tetrachloroethene (PCE)	4	ug/L	1	0.21		
2/10/2021	8260	2102100901	Dichlorofluoromethane (CFC 21)	1.8	ug/L	1	0.2		
2/10/2021	8260	2102100901	2-Propanol	8.3	ug/L	50	3.4		J
2/10/2021	8260	2102100901	1,1,2-Trichloro-1,2,2-Trifluoroethane	350	ug/L	2.5	0.5		
2/10/2021	8260	2102100901	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.1	ug/L	1	0.2		
2/10/2021	607	2102100903	N-Nitrosodimethylamine	3.9	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102100903	N-Nitrodimethylamine	2.1	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102100903	Bromacil	0.74	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-10

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100946	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	1.7	ug/L	1	0.2		
2/10/2021	8260	2102100946	1,1,2-Trichloro-1,2,2-Trifluoroethane	100	ug/L	1	0.2		
2/10/2021	8260	2102100946	Dichlorofluoromethane (CFC 21)	2.2	ug/L	1	0.2		
2/10/2021	8260	2102100946	Tetrachloroethene (PCE)	3.1	ug/L	1	0.21		
2/10/2021	8260	2102100946	Trichloroethene (TCE)	61	ug/L	1	0.2		
2/10/2021	8260	2102100946	Unknown	5.6	ug/L	NA	NA		TIC RB FB
2/10/2021	8260	2102100946	Trichlorofluoromethane (CFC 11)	97	ug/L	1	0.24		
2/10/2021	607	2102100948	N-Nitrosodimethylamine	3.4	µg/L	0.0095	0.0048	40	
2/10/2021	607	2102100948	N-Nitrodimethylamine	1.7	µg/L	0.0095	0.0048	97	
2/10/2021	607	2102100948	Bromacil	0.3	µg/L	0.0095	0.0048	96	

Analytical Results for Sampling Events at MPE-11

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102101101	1,1,2-Trichloro-1,2,2-Trifluoroethane	7.6	ug/L	1	0.2		
2/10/2021	8260	2102101101	2-Propanol	6.3	ug/L	50	3.4		J FB
2/10/2021	8260	2102101101	Dichlorofluoromethane (CFC 21)	0.71	ug/L	1	0.2		J
2/10/2021	8260	2102101101	Tetrachloroethene (PCE)	0.25	ug/L	1	0.21		J
2/10/2021	8260	2102101101	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
2/10/2021	8260	2102101101	Trichlorofluoromethane (CFC 11)	6.7	ug/L	1	0.24		
2/10/2021	8260	2102101101	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	0.56	ug/L	1	0.2		J
2/10/2021	607	2102101103	N-Nitrosodimethylamine	0.26	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102101103	N-Nitrodimethylamine	0.14	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102101103	Bromacil	0.024	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-8

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100931	Dichlorofluoromethane (CFC 21)	1.5	ug/L	1	0.2		
2/10/2021	8260	2102100931	Tetrachloroethene (PCE)	3.4	ug/L	1	0.21		
2/10/2021	8260	2102100931	Trichloroethene (TCE)	77	ug/L	1	0.2		
2/10/2021	8260	2102100931	Trichlorofluoromethane (CFC 11)	150	ug/L	1	0.24		
2/10/2021	8260	2102100931	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.2	ug/L	1	0.2		
2/10/2021	8260	2102100931	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100931	1,1,2-Trichloro-1,2,2-Trifluoroethane	300	ug/L	2.5	0.5		
2/10/2021	8260	2102100933	Unknown	13	ug/L	NA	NA		TIC
2/10/2021	8260	2102100933	Tetrachloroethene (PCE)	3.2	ug/L	1	0.21		
2/10/2021	8260	2102100933	2-Propanol	12	ug/L	50	3.4		J
2/10/2021	8260	2102100933	Dichlorofluoromethane (CFC 21)	1.3	ug/L	1	0.2		
2/10/2021	8260	2102100933	1,1,2-Trichloro-1,2,2-Trifluoroethane	300	ug/L	2.5	0.5		
2/10/2021	8260	2102100933	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2.3	ug/L	1	0.2		
2/10/2021	8260	2102100933	Trichloroethene (TCE)	75	ug/L	1	0.2		
2/10/2021	8260	2102100933	Trichlorofluoromethane (CFC 11)	160	ug/L	1	0.24		
2/10/2021	8260	2102100933	Silane, fluorotrimethyl-	7.9	ug/L	NA	NA		TIC
2/10/2021	607	2102100934	N-Nitrosodimethylamine	2.6	µg/L	0.0096	0.0048	40	
2/10/2021	607	2102100934	N-Nitrodimethylamine	1.4	µg/L	0.0096	0.0048	97	
2/10/2021	607	2102100934	Bromacil	0.37	µg/L	0.0096	0.0048	96	

Analytical Results for Sampling Events at MPE-9

Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
2/10/2021	8260	2102100916	Dichlorofluoromethane (CFC 21)	1.7	ug/L	1	0.2		
2/10/2021	8260	2102100916	1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	2	ug/L	1	0.2		
2/10/2021	8260	2102100916	Trichlorofluoromethane (CFC 11)	110	ug/L	1	0.24		
2/10/2021	8260	2102100916	Tetrachloroethene (PCE)	4.2	ug/L	1	0.21		
2/10/2021	8260	2102100916	Chloroform	0.27	ug/L	1	0.24		J
2/10/2021	8260	2102100916	1,1,2-Trichloro-1,2,2-Trifluoroethane	90	ug/L	1	0.2		
2/10/2021	8260	2102100916	Trichloroethene (TCE)	96	ug/L	1	0.2		
2/10/2021	607	2102100918	N-Nitrosodimethylamine	4.6	µg/L	0.0097	0.0049	40	
2/10/2021	607	2102100918	N-Nitrodimethylamine	2.4	µg/L	0.0097	0.0049	97	
2/10/2021	607	2102100918	Bromacil	0.5	µg/L	0.0097	0.0049	96	
2/10/2021	607	2102100919	Bromacil	0.5	µg/L	0.0097	0.0049	96	
2/10/2021	607	2102100919	N-Nitrosodimethylamine	4.9	µg/L	0.0097	0.0049	40	
2/10/2021	607	2102100919	N-Nitrodimethylamine	2.5	µg/L	0.0097	0.0049	97	

Appendix B
Sampling Event Logbook Entries and Internal CoC Forms

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PROJECT 100-A-182

Notebook No. 032 #110

Continued from page 12

Marcus Avalos & Tony Torres 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. Parameters will be collected using a YSI MP20 flow cell & water analyzer. Carboy G-3.

Calibrations

DO- Cal in saturated air @ 639 mm/Hg 177.25

PH- Cal using Fisher Buffers (4, 7, 10)

Conductivity- Cal using 1413 us/cm STD solution.

Turb Meter #20 STD- 5.63 NTU RDG- 5.70 NTU Lot- 9107 Exp: 2/28/21

Parameters (time)	Temp (°C)	Cond (mS/cm)	DO	PH	ORP	Turb (NTU)	DTW
1) 210203 0955 C	20.51	1.292	3.83	6.96	199	0.97	178.80
2) 210203 0957 C	20.54	1.284	3.76	6.95	197	1.08	"
3) —— 0959 C	20.48	1.288	3.70	6.94	198	1.10	"

Sample #	Analysis	Samples Preserve	Container	lot	Lab
210203 1000 C	VOA by 8260 - (FB)	HCl / Ice	(3) 40 ml vials	25732	ALS
—— 1001 C					
—— 1002 C	GRO by 8015D				
—— 1003 C	607 / Bromacil - (FB)	Ice	(1) 1L Amber	108501	SDI
—— 1004 C					
—— 1005 C	SVOA by 8270D		(2)	101920 10K	ALS
—— 1006 C	DRO by 8015D		(1)		
—— 1007 C	Total Metals - (FB)	HNO3 / Ice	(2) 125 ml poly	191129	ALS
—— 1008 C					

IDW- 2 gal

Continued from page

Read and Understood By

Signed — Date 2/3/21

Signed — Date 2-4-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of 1

Sample Location: 100-A-182

Sample Number	# of Containers	Sample Matrix*	8260	GRO	67	SUOA 8270	DRO			Charge Number
Pertinent Notes (if any)										
210203 1000C	3	A	X							XGMD
1001C (FB)	3		X							
1002C	3		MS MSD	X						
1003C	1				X					
1004C (FB)	1				X					
1005C	2					X				
1006C	1						X			

Sample Location:

Sample Number	# of Containers	Sample Matrix*	T. Metals							Charge Number
Pertinent Notes (if any)										
210203 1007C	2	A	X							
1008C (FB)	2	1	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/3/21 @ 1105			2-4-21 / 0915

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

PROJECT 100-C-365 ENV-0078

Notebook No. D32#119(B)

Continued from page

AL Montez & Tony Torres present. The weather is clear & cool. This zone will be purged & sampled using a dedicated TEFLON Bladder pump. Params will be collected with a QED MP-20 flow cell. Samples will be collected with a TEFLON discharge tube. Carboy G-3

Calibrations

DO sensor cal'd @ Bldg 638 in 640 mm/Hg saturated air

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

pH sensor cal'd in 4, 7, 10 buffers using the Optical method

Turbometer #20 std 5.63 @ 5.69 Lot# 9107 Exp. 2/21

Params

Samples	Temp	Cond	DO	pH	ORP	Turb	DTW
210222094DB	19.85	0.851	4.15	8.23	-10	0.74	285.75
0944B	19.87	0.855	4.02	8.24	-10	0.68	285.75
0942B	19.87	0.849	3.92	8.25	-10	0.81	285.71

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210222 0945B	8260 II	ICE/HCl	2538	(3) 40 mL vials	ALS
0946B	" (FB)	"	"	"	"
0947B	GRO	"	"	"	"
0948B	6007	ICE	108501	(1) 1LT amber	SRL
0949B	8270	"	"	(2) "	"
0950B	TOT & METALS	ICE/HNO_3	200707	(2) 125 ml poly	ALS
0951B	" (Dup)	"	"	"	"
0952B	Anions/Alk	ICE	200707	" "	"
0953B	TDS	"	"	(1) 125 ml poly	"
0954B	DRO	"	080219DK	(1) 1LT Amber	"
0955B	Perchlorate	"	200707	(1) 125 ml poly	"
0956B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250 ml poly	"

Continued from page

Read and Understood By

J. [signature] 2-22-21

Signed Date

Jeri Munch 2-23-21

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-22-21 Page 1 of 1

Sample Location: 100-C-365

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260C	GRO	6007	8270	Total Metals			Charge Number: X6MA
210222 0945 B		3		X							
0946 B (FB)		3		X							
0947 B		3			X						
0948 B		1				X					
0949 B		2					X				
0950 B		2						X			
0951 B (Dup)		2						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	ANIONS ACK	TDS	DRO	PERCHLORATE	NO2 NO3			Charge Number: X6MA
0952 B		2		X							
0953 B		1			X						
0954 B		1				X					
0955 B		1					X				
0956 B		1						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/22/21 / 1100		[signature]	2-23-21 / 0905

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

Marcus Avalos & Robert Burrows present. Weather is cloudy & cold. This zone will be sampled using 5 triple rinsed, steam cleaned stainless steel sample tubes. Gear in use. Probe #2167. Surface checks performed on probe prior to sampling.

30-Min Equipment Blanks
Carboy CB-5

Sample #	Analysis	Preserve	Container	lot	lab
210218143041	VOA by 8260	HCl/Ice	(3) 40ml vials	25732	ALS

Initial Parameters		Final	Meter ID		
Time	210218150041	210218154541	pH/Cond	13	
pH	7.14	7.05	Turb	21	
Temp	18.4°C	14.4°C	= 510	56.8 NTU	
Cond	1320 uS/cm	1498 uS/cm	= 606	54.3 NTU	
Turb	1.31 NTU	0.72 NTU	= LOT	9/017	
pH pre	7.03 / 9.98 (12.6°C)	7.06 / 10.01 (11.8°C)	= Exp	2/21	
pH post	7.02 / 10.01	7.01 / 10.02			
DTW	149.00'	149.20'	Buffers	lot	exp
Atmos	12.58 psia	12.55 psia	7	40026691	8/21
		FDW: 0.50 gal	10	40010005	6/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210218152041	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
——— 1521Y	607/Bromacil	Ice	(1) 1L Amber	0108501F	SRI
——— 1540Y	Total Metals	HNO3/Ice	(2) 125 ml polys	200707	ALS

Runs	1)	2)	3)
	25.35	25.34	25.36
	29.90	29.92	29.91
	28.87	29.88	29.89
	25.33	25.31	25.35

Continued from page

Signed 2/18/21 Date

Read and understood by

Signed 2-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200 - C - 170

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607/8270	TCL/Metals					Charge Number
210218143OY (EB)	3	A	X							VGMD
1520Y	3	1	X							1
1521Y	1	1		X						1
1540Y	2	1			X					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:
[signature]	2/18/21 @ 1600	[signature]	2-22-21 / 0900

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

WSTF 381C (05/2016)

Marcus Avalos & Robert Burrows present. Weather is clear & cold. This zone will be sampled using 5 stainless steel, steam cleaned, & triple rinsed Sample tubes. Gen in use. Probe # 2167. Surface checks performed on probe prior to sampling.

30-Min Equipment Blanks - Carboy G-5

Sample #	Analysis	Preserve	Container	lot	lab
210218 1015 y	VOA by 8260	HCl / Ice	(3) 40 ml vials	25732	Als

Initial Parameters	Final	Meter ID
Time - 210218 1050 y	210218 1350 y	PH/Cond - 13
PH - ~~20.56~~ 7.96	7.90	Turb - 21
Temp - 19.8 °C	15.1 °C	= STD - 56.8 NTU
Cond - 1485 us/cm	1358 us/cm	= RDG - 54.3 NTUs
Turb - 0.43 NTU	0.27 NTU	= Lot - 91017
PH pre - 6.99 / 10.05 (13.8°)	6.98 / 10.04 (10.8°)	= Exp - 2/21
PH post - 7.03 / 10.01	6.99 / 10.02	
DTW - 148.70'	149.06'	Buffers / lot / exp
Atmos - 12.60 psia	12.62 psia	7 / 4002691 / 8/21
	IDW - 0.50 gal	10 / 4601005 / 6/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210218 1245 y	VOA by 8260	HCl / Ice	(3) 40 ml vials	25732	Als
—— 1246 y	60T / Bromacil	Ice	(1) 1L Amber	0108501F	SGI
—— 1315 y	Total Metals	HNO3 / Ice	(2) 125 ml polys	200764	Als
—— 1316 y	Anions / Alk	Ice / Zero HS	"	"	"
—— 1317 y	TDS by SM2540C	Ice	(1)	"	"
—— 1345 y	Perchlorate by 6850	Ice / 1/3 HS	"	"	"
—— 1346 y	NO2, NO3 by 353.2	H2SO4 / Ice	(1) 250 ml poly	200811	"

Runs	1)	2)	3)	4)
	49.82	49.88	49.85	49.84
	53.70	53.66	53.69	53.65
	53.64	53.63	53.67	53.66
	49.81	49.84	49.82	49.79

Continued from page

Read and Understood By

Signed — Date 2/18/21

Signed — Date 2-22-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200-C-225

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	T. Metals	Anions/Alk	TDS	Perchlorate		Charge Number
210218 1015Y (EB)	3	A	X							XGMD
1245Y	3		X							
1246Y	1			X						
1315Y	2				X					
1316Y	2					X				
1317Y	1						X			
1345Y	1							X		—

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	NO2 NO3							Charge Number
210218 1346Y	1	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/18/21 @ 1600		[signature]	2-22-21 / 0900

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

Marcus Avalos & Robert Burrows present. Weather is cloudy & sleet. This zone will be sampled using 5 steam cleaned & triple rinsed stainless steel sample tubes. Crew in use. Probe #1167. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G-5

Sample #	Analysis	Preserve	Container	lot	lab
210217145oy	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	Als

Initial Parameters	Final	Meter ID
Time - 210217153oy	210218092 3y	PH/Cond - #13
PH - 7.90	7.65	Turb - #21
Temp - 18.8 °C	14.4 °C	STD - 56.8 NTU
Cond - 1492 us/cm	1534 us/cm	PDG - 56.6 NTU
Turb - 0.64 NTU	0.50 NTU	LOT - 91017
PH pre - 7.03/10.03 (14.1°C)	6.96/9.97 (10.8°C)	EXP - 2/21
PH post - 7.02/10.05	7.01/9.95	
OTW - 148.37'	148.70'	
Atmos - 12.38 psia	12.59 psia	
	IDW - 0.50 gal	

Buffers	lot	exp
7	4002G91	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preserve	Container	lot	lab
210218084oy	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	Als
—— 0841y	607/Bromacil	Ice	(1) 1L Amber	0108501F	SRI
—— 0915y	Total Metals	HNO3/Ice	(2) 125 ml polys	200707	Als

Runs	1)	2)	3)
	69.44	69.42	69.41
	73.03	73.02	73.07
	72.94	73.03	73.04
	69.33	69.41	69.42

Continued from page

Read and Understood By

MJ CS — Signed — 2/18/21 — Date

Peri Munch — Signed — 2-22-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/17/21

Sample Location: 200-C-270

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210217145oy (EB)	3	A	X							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:
MS GS	2/17/21 @ 1600	[signature]	2-18-21 / 0925

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/18/21 Page 1 of 1

Sample Location: 200-C-270

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6010	T. Metals					Charge Number
210218085404	3	A	X							VGMO
085114	1	A		X						
~~085124~~ MB										
210218091504	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:
[signature]	2/18/21 @ 1105	[signature]	2-22-21 / 0900

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

PROJECT 200-F-225 WJI ENV-0020

Notebook No. D64#127(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. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks – Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210223092SY	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters

Time – 210223101OY
PH – 7.67
Temp – 20.0°C
Cond – 1387 us/cm
Turb – 4.03 NTU's
pHpre – 7.09/10.12 (17.1°C)
pHpost – 7.09/10.10
DTW – 176.06ft.
Atmos – 12.48psia

Final

Time – 2102231106Y
PH – 7.45
Temp – 20.9°C
Cond – 1371 us/cm
Turb – 2.92 NTU's
pHpre – 7.05/10.08 (18.3°C)
pHpost – 7.03/10.09
DTW – 176.17ft.
Atmos – 12.50psia
IDW – 1/2 gal.

Meter ID

pH/cond – ~~21~~ 13
Turb ~~21~~ 00 21
u Std – 56.8
u rdg – 54.8
u lot – 91017
u Exp – 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210223104OY	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1041Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1105Y	Total Metals	ice/HNO_3	(2) 125ml/poly's	20-07-07	ALS

Runs	1)	2)	3)
	37.54	37.52	37.45
	42.62	40.30	40.35
	40.13	38.60	38.12
	37.54	37.47	37.42

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/23/21 — Date

Jeri Wunderlich — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 1 of 1

Sample Location: 200-F-225

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210223092SY (EB)	3	A	✓							XGMD
1040Y	3	A	✓							"
1041Y	1	A		✓						"
1105Y	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	2/23/21 1115 hrs.		Jon W Munch	2-24-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5' steam cleaned & triple rinsed, stainless steel sample tubes. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210222 0945Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters
Time - 210222 0945Y
PH - 7.36
Temp - 20.4°C
Cond - 1492 us/cm
Turb - 2.08 NTU's
pH pre - 7.16/10.11 (15.3°C)
pH post - 7.18/10.10
DTW - 175.72ft.
Atmos - 12.60psia

Final
Time - 210222 1031Y
PH - 7.27
Temp - 20.7°C
Cond - 1475 us/cm
Turb - 1.51 NTU's
pH pre - 7.11/10.08 (17.7°C)
pH post - 7.09/10.05
DTW - 175.87ft.
Atmos - 12.58 psia
IDW - ½ gal.

Meter ID
pH/cond - 13
Turb - 21
u · Std - 56.8
u rdg - 55.0
u lot - 91017
u Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1010Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1011Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SPL
——— 1030Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	100.39	100.37	100.28
	104.91	104.87	104.86
	104.91	104.82	104.84
	100.38	100.31	100.29

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/22/21 — Date
John Munch — Signed — 2.23.21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/22/21 Page 1 of 1

Sample Location: 200-F-370

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210222091SY (EB)	3	A	✓							XGMD
1010Y	3	A	✓							u
1011Y	1	A		✓						u
1030Y	2	A			✓					u

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	2/22/21 1115hrs.		[signature]	2-23-21 / 0905

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1435Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1436Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Initial Parameters

Time - 210222 1505Y
PH - 7.51
Temp - 22.3°C
Cond - 1593 us/cm
Turb - 7.22 NTU's
pHpre - 7.04/10.01 (25.2°C)
pHpost - 7.03/9.98
DTW - 175.87 ft.
Atmos - 12.53 psia

Final

Time - 210223 0845Y
PH - 7.37
Temp - 21.7°C
Cond - 1605 us/cm
Turb - 4.41 NTU's
pHpre - 7.15/10.10 (14.7°C)
pHpost - 7.16/10.09
DTW - 176.06 ft.
Atmos - 12.57 psia
IDW - ½ gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 56.8
" rdg - 55.0
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210222 1535Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1536Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SPL
210223 0840Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0841Y	Anions/Alk.	ice	"	N/A	"
——— 0842Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0843Y	Perchlorate by 6850	"	"	"	"
——— 0844Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-08-11	"

Runs	1)	2)	3)
	121.59	121.53	121.40
	126.92	~~126.~~ eq	126.71
	126.90	125.55	126.72
	121.57	125.51	121.35
		121.48	

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/23/21 — Date

Jeri W Mundt — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/22/21 Page 1 of 2

Sample Location: 200-F-420

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210222 1435y (EB)	3	A	✓							XGMD
1436y (EB)	2	A			✓					4
1535y	3	A	✓							4
1536y	1	A		✓						4

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 Dell'Orso	2/22/21 1550hrs		Jon Munch	2-23-21 /0905

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

WSTF 381C (05/2016)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 2 of 2

Sample Location: 200-F-420

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210223 0840Y	2	A	✓							XGMD
0841Y	2	A		✓						4
0842Y	1	A			✓					4
0843Y	1	A				✓				4
0844Y	1	A					✓			4

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terzo	2/23/21 1115 hrs			2-24-21 / 0915

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

DAN HALVORSEN & TONY TOLLEF PRESENT. THIS WEATHER IS CLEAR & COLD. THIS ZONE WILL BE SAMPLED & PURGED WITH A TEFLON bladder pump. SAMPLES COLLECTED WITH A TEFLON DISCHARGE TUBE. PARAM's WILL BE COLLECTED FROM a QED MP-20 FLOWCELL. CARBOY G-3

CALIBRATIONS

DO SENSOR Cal'd in 639 mm/Hg @ Bldg 607B
COND SENSOR Cal'd in 1413 µs/cm STANDARD.
pH SENSOR cal'd using 3pt cal METHOD using 4, 7, 10 buffers.
Turb # 20 STD Rdg LOT# Exp

	Params		Temp	Cond	DO	pH	ORP	Turb
1)	210218	1015B	20.94	0.974	4.27	7.62	94	4.71
2)	——	1016B	21.03	0.981	4.24	7.62	96	4.77
3)	——	1017B	20.89	0.978	4.13	7.62	96	4.83

SAMPLES

Sample #	Analysis	Preserv	LOT #	Cont	Lab
210218 1020B	8260	ICE/HCl	253B	(3) 40ml vials	ALS
—— 1021B	" (FB)	"	"	"	"
—— 1022B	607	ICE	108501	(1) 1LT Amber	SRL
—— 1023B	TOTAL METALS	ICE/HNO_3	200707	(2) 125ml/poly	ALS
—— 1024B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250ml/poly	"

Continued from page

Read and Understood By

T- Signed — 2/18/21 Date — Jon W Munch Signed — 2-18-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-18-21 Page 1 of 1

Sample Location: 300.A.170

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	NO2/NO3				Charge Number
										X6MD
210218 1020B	3	A	X							
1021B (FB)	3		X							
1022B	1			X						
1023B	2				X					
1024B	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:
[signature]	2-18-21		[signature]	2-22-21 / 0900

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

Marcus Avalos & Tony Torres 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. Parameters will be collected using a QED MP.20 flow cell & water analyzer. Carboy G-

Calibrations DTW - 163.55'

DO - Cal in saturated air @ 639 mm/Hg.
pH - Cal using Fisher Buffers (4,7,10)
Conductivity - Cal using 1413 us/cm STD solution.
Turb Meter - #20 STD - 5.63 NTU ROC - 5.70 NTU Lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (°C)	Cond (ms/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210203/1450C	20.67	0.850	4.78	7.43	171	1.25	163.60'
2) ——— 1451C	20.71	0.849	4.55	7.44	175	1.29	:"
3) ——— 1452C	20.69	0.836	4.62	7.46	174	1.59	:"

Sample #	Analysis	Samples Preserve	Container	Lot	Lab
210203/1455C	VOA by 8260	HCl/Ice	(3) 40ml vials	25732	ALS
——— 1456C	:" (FB)	:"	:"	:"	:"
——— 1457C	607/Bromacil	Ice	(1) 1L Amber	108501	SBL
——— 1458C	Total Metals	HNO3/Ice	(2) 125ml poly	191129	ALS
——— 1459C	Anions/Alk	Ice/Zero HS	:"	:"	:"
——— 1500C	TDS by SM2540C	Ice	(1) :"	:"	:"
——— 1501C	Perchlorate 6850	Ice/1/3 HS	:"	:"	:"
——— 1502C	NO2, NO3 by 353.2	H2SO4/Ice	(1) 250ml poly	200221	:"

IDW - 2 gal

Continued from page

Read and Understood By

Marcus Avalos Signed 2/3/21 Date

Pam Munch Signed 2-4-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of

Sample Location: 300 B - 166

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260	6007	T. Metals	Anions/Alk	TDS	Perchlorate		Charge Number
210203 1455C	3	A	X							XGMD
1456C (FB)	3		X							
1457C	1			X						
1458C	2				X					
1459C	2					X				
1500C	1						X			
1501C	1							X		

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	NO2 NO3							Charge Number
210203 1502C	1	A	X							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2/3/20 @ 1600			2-4-21 / 0915

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

Bob Tufts & Craig Del Fevaro present. Weather is clear & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Then in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210223140oy	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS

Initial Parameters

Time - 210223143 5y
PH - 8.04
Temp - 20.7°c
Cond - 1489 us/cm
Turb - 1.71 NTU's
pH pre - 7.03/10.06 (21.2°c)
pH post - 7.04/10.06
DTW - 138.30 ft.
Atmos - 12.40 psia

Final

Time - 2102240840y
PH - 7.86
Temp - 20.3°c
Cond - 1506 us/cm
Turb - 1.12 NTU's
pH pre - 7.10/10.12 (15.5°c)
pH post - 7.12/10.08
DTW - 138.36 ft.
Atmos - 12.49 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb -21
" Std - 56.8
" rdg - 54.8
" Lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210223150oy	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1501y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
210224 0815y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0816y	Anions/Alk.	ice	"	N/A	"
——— 0817y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0818y	Perchlorate by 6850	"	"	"	"
——— 0819y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)	4)	5)
	16.27	16.26	16.24	16.29	16.35
	22.49	22.47	22.47	22.50	22.53
	22.45	22.45	22.45	22.50	22.49
	16.32	16.27	16.24	16.31	16.32

Continued from page

Read and Understood By

Craig Del Fevaro — Signed — 2/24/21 — Date

Jeri Mumdr — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/23/21 Page 1 of 2

Sample Location: 300-E-138

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210223140oy (EB)	3	A	✓							XGMD
1500y	3	A	✓							4
1501y	1	A		✓						4

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 Fernal	2/23/21 1540hrs		[signature]	2-24-21 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/24/21 Page 2 of 2

Sample Location: 300-E-138

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210224 0815Y	2	A	✓							XGMD
0816Y	2	A		✓						4
0817Y	1	A			✓					4
0818Y	1	A				✓				4
0819Y	1	A					✓			4

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	2/24/21 1055 hrs.		[signature]	2-24-21 / 1100

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

b Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be mpled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. obe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy C2

ample	Analysis	Preservative	Container	Lot	Lab
2102240925y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0926y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI

nitial Parameters	Final	Meter ID
ime - 2102241000y	Time - 2102241041y	pH/cond - 13
H - 7.94	PH - 8.01	Turb -21
mp - 19.4°C	Temp - 19.9°C	" std - 56.8
nd - 1067 us/cm	Cond - 1036 us/cm	" rdg - 55.4
rb - 1.44 NTU's	Turb - 1.07 NTU's	" lot - 91017
pre - 7.06/10.10 (18.0°C)	pHpre - 7.03/10.08 (18.7°C)	" Exp - 2/28/21
post - 7.04/10.13	pHpost - 7.04/10.08	
tw - 138.36ft.	STW - 138.52 ft.	Buffers Lot Exp.
Tmos - 12.47psia	Atmos - 12.49 psia	7 4002691 8/21
	IDW - ½ gal.	10 4001205 6/21

Samples

ample	Analysis	Preservative	Container	Lot	Lab
2102241020y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1021y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1040y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

uns	1)	2)	3)
	35.89	35.84	35.81
	42.03	41.96	41.95
	42.00	41.96	41.96
	35.86	35.85	35.79

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/24/21 — Date

Peri W Munck — Signed — 2-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/24/21 Page 1 of 1

Sample Location: 300-E-183

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210224092SY (EB)	3	A	✓							XGMD
0926Y (EB)	1	A		✓						"
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 Del Torro	2/24/21 1055hrs		Jon Munch	2-24-21 / 1100

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This well will be purged & sampled using a dedicated Teflon bladder pump. Samples collected from a dedicated Tygon discharge tube. Parameters collected with a QED MP.20 flowcell. Canopy 6.5

Calibrations:
DO cal'd in 643mm/Hg in saturated air
Cond cal'd in 1413 uS/cm standard.
pH sensor cal'd with a 3pt cal method with 4, 7, 10 buffers.
Turb #20 Std = 5.63 Rdg 5.64 Lot# 91017 Exp 2-28-21

Parameters

Sample#	Temp	Cond	DO	pH	ORP	Turb	DTW
210201 1455c	19.88	1.480	4.66	8.02	54	5.63	142.70
" 1456c	19.87	1.470	4.79	8.02	56	5.76	142.70
" 1457c	19.87	1.460	4.63	8.02	56	5.83	142.70

Samples

Sample#	Analysis	Preserv	Lot#	Cont	Lab
210201 1500c	8260	1:1 HCl	25732	(3) 40mL vials	ACS
" 1501c	"	"	"	"	"

Continued from page

Read and Understood By

T. D. — Signed — 2-1-21 Date

Lori Munch — Signed — 2-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-1-21 Page 1 of 1

Sample Location: 400-EV-131

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number: XGMD
210201500C	3	A	X							
1501C	3	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. [illegible]	2-1-21 / 1600		[illegible]	2-2-21 / 0900

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

Marcus Avalos & Tony Torres present. The weather is overcast & cold. This zone will be purged & sampled using a Dedicated Teflon bladder pump. Samples collected with a Teflon Tube. Parameters collected in a QED MP-20 flow cell & water Analysis Carboy G-5

Calibrations

DO Sensor Cal'd in 643mm/Hg Saturated Air
pH Cal'd using the 3pt method with 4, 7, 10 buffers
Cond Cal'd in 1413uS/cm Standard.
Turb # 20 Std 5.63 Rdg 5.64 Lot# 9107 Exp 2/28/21

Params

Parameters	Temp	Cond	DO	pH	ORP	Turb	Other
210201 1015c	18.80	1.500ms/cm	4.53	7.67	71	0.71	
—— 1016c	18.79	1.500ms/cm	4.01	7.71	71	0.68	
—— 1017c	18.81	1.490ms/cm	4.16	7.71	71	0.73	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210201 1020c	8260	HCl	25732	13 VOAs	ALS
—— 1021c	11 (f3)	11	11		11

Continued from page

Read and Understood By

T. [illegible] Signed 2-1-21 Date

Signed 2-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-1-21 Page 1 of 1

Sample Location: 400.GW.125

Pertinent Notes (if any)

Analytical Requirement: 8260

XGMS

Sample Number	# of Containers	Sample Matrix*	Charge Number
210201 1020c	3	A	X
1021c	3	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:
T-D Z	2-1-21 / 1100		[signature]	2-2-21 / 0900

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

Marcus Ayala & Tony Tortez present. Weather is cloudy & cool. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a new teflon discharge tube. Parameters will be collected using a YSI MP-20 flowcell & water analyzer. Carboy G-3

Calibrations
DO - Cal in saturated air @ 644 mm/Hg.
PH - Cal using Fisher Buffers (4, 7, 10)
Conductivity - Cal using 1413 uS/cm STD solution.
Turb Meter - #7 STD - 3.48 NTU RDG - 5.24 NTU Lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (c)	Cond (ms/cm)	DO	pH	ORP	Turb (NTU)	DTW
1) 210202.0950c	20.66	2.07	2.55	8.08	4	1.03	N/A
2) ——— 0951c	20.69	2.06	2.47	8.09	3	0.71	"
3) ——— 0952c	20.71	2.07	2.38	8.10	3	0.69	"

Samples

Sample #	Analysis	Preserve	Container	Lot	DTW
210202.0955c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	N/A
———.0956c	" (FB)	"	"	"	"

IDW - 1 gal

Continued from page

Read and Understood By

Signed — Date — Signed — Date

2/2/21 — 2-3-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: 400-SU-150

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210202095SC	3	A	X							VGMO
0956C	3	L	X							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:
MS	2/2/21 @ 1100		Pam W Jumah	2-3-21 / 0930

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

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. in use. Probe #2167. Surface check performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210204 0935Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0936Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1040Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial Parameters
Time - 2102041250Y
PH - 8.62
Temp - 22.2°C
Cond - 1688 us/cm
Turb - 1.67 NTU's
pH pre - 7.06/10.03 (21.7°C)
pH post - 7.07/10.03
DTW - 261.09ft.
Atmos - 12.45 psia

Final
Time - 2102041331Y
PH - 8.40
Temp - 22.5°C
Cond - 1694 us/cm
Turb - 1.34 NTU's
pH pre - 7.02/9.98 (26.0°C)
pH post - 7.04/9.98
DTW - 261.25ft.
Atmos - 12.47 psia
IDW - ½ gal.

Meter ID
pH/cond - 13
Turb - 21
" Std - 56.8
" rdg - 57.7
" lot - 9107
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210204 1310Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1311Y	" (Dupl.)	"	"	"	"
——— 1312Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1330Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	25.26	25.21	25.20
	52.85	52.72	52.63
	52.84	52.65	52.56
	25.24	25.21	25.21

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/4/21 — Date

Peri Munch — Signed — 2-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/4/21 Page 1 of 1

Sample Location: 600-E-280

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals					Charge Number
210204 0935Y (EB)	3	A	✓							XGMD
0936Y (EB)	1	A		✓						u
1040Y (EB)	2	A			✓					u
1310Y	3	A	✓							u
1311Y (Dup.)	3	A	✓							u
1312Y	1	A		✓						u
1330Y	2	A			✓					u

Sample Location:

Sample Number	# of Containers	Sample Matrix*								Charge Number

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	2/4/21 1400 hrs.		[signature]	2-8-21 / 0910

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

Tim Moore present. Samples will be collected at the dedicated sample port located on the EFFluent side of the system. The sample port will be purged for one minute prior to parameters and sample collection. Carboy "FF" used for field blanks.

Parameters	meter ID	Buffer	Lot	Exp
Time: 210209 1320	PH/Cond = 12	7	4002691	6/22
PH = 7.81	Turb = 20	10	4001405	6/22
Temp = 25.1°C	" STD = 5.63			
Cond = 1135 µs/cm	" RJG = 5.82			
Turb = 0.419	" Lot = 91017			
PH/Cal = 7.01-10.01 (23.7°C)	" Exp 2/28/2021			
PH/Cal = 7.02-10.02				

Samples

Sample #	Analysis	Preserve	Cont	Lot #	Lab
210209 1322	VOA by 8260 LL	Ice/HCL	(3) 40 mL vials		ALS
——— 1323	" FB	"	"		"
——— 1324	NDMA/BMN/Bromide/1,4-D	Ice	(1) 1 LT Amb		SWET
——— 1325	Low Level NDMA	"	"		"
——— 1326	" FB	"	"		"

NOTE: Dan Halvorsen & Tony Torrez present to collect samples on 02-09-2021

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
210209 0700	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial		ALS
——— 0701	NDMA LL	Ice	(1) 1L Amber		SUB

Continued from page

Read and Understood By

Signed — 2-9-2021 Date

Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B650 - EFF - 1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: U06	907	U044					Charge Number
2102090700	TB	3	A	X							
1322		3		X							
1323	FB	3		X							
1324		1			X						
0701	TB	1				X					
1325		1				X					
1326	FB	1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-9-2021 1600			2-10-21 0930

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

Tim Morse present. Samples will be Collected from the dedicated Sample port Located on the Influent Side of the System. The Sample port will be purged for One Minute prior to parameters and Sample Collection Using "PFI" used for Field blanks. System was Run @ Half Flow Pipes & There was a lot of Air in the System.

Parameters	Meter ID	Bottle	Lot	Exp
Time: 2102091403	PH/Cond: 12	1	4002691	8/22
PH = 7.42	Turb = 20	10	4001805	6/22
Temp = 24.2°C	" STD = 5.63			
Cond = 1110 uS/cm	" PH = 5.82			
Turb = 0.83 ntus	" Lot = 91017			
PH/Cal = 7.01-10.02	" Exp 7/27/2021			
PH/Post = 7.09-10.03				

Sample #	Analysis	Samples Preserve	Containers	2.7	Co
2102 091405	VOA by 8260	Ice/HCL	(3) 40 ml Vials		A
——— 1406	" FB	"	"		
——— 1407	NDMA/DMW/Bromide/by 607	Ice	(1) 1 LT Amb		Sa

NOTE: Dan Halvorsen & Tony Torrez were present to collect Samples on 02-09-2021.

Continued from page

Read and Understood By

Signed — 2-9-2021 Date

Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B650 INF-1

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	607						Charge Number
210291405	3	A	X							
14106 FB	3		X							
1407	1			X						

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2-9-2021 1600			2-10-21 0930

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

Dan Halvorsen & Tony Torrez present. Samples will be collected from the duplicated sample port located on the effluent side of the system. Sample port will be purged for one minute prior to parameters and sample collection. Jar bag 6 in use.

Parameters		Meter ID		Buffer	Lot	Exp
Time	= 2102090852	PH/COND	= 12	7		
PH	= 8.48	TURB	= 20	10		
Temp	= 23.4 °C	STD	= 5.63			
COND	= 1107 µS/cm	ROS	= 5.82			
TURB	= 0.73 NTUs	LOT	= 9011			
PH Pre	= 7.00 · 10.01 (14.7°C)	EXP	= 2/21			
PH Post	= 7.00 · 10.01					

SAMPLES

Sample #	Analysis	Preserv	Container	Lot	Lab
2102090854	VOA by 8260 LL	HCl	(3) 40ml Vials		ALS
0855	" " (FB)	"	"		"
0856	NDMA/10MN Bromacil by 607	ICE	(1) 1L Amber		SRL
0857	NDMA LL	"	"		"
0858	" " (FB)	"	"		"

Continued from page

Read and Understood By

Signed — Date: 2-9-2021

Signed — Date: 2-10-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: BLSS-EBF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOC	607	NDMA LL					Charge Number
										XGMD
210209 0854	3	A	X							
0855 FB	3		X							
0856	1			X						
0857	1				X					
0858 FB	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:
	2-9-2021 1100			2-10-21 / 0930

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

Dan Halvorsen & Tony Torrez present. Samples will be collected from a dedicated sample port located on the Influent side of the System. Sample port will be purged for one minute prior to parameter and sample collection. Carboy 6 in use.

Parameters		Meter ID		Buffer	Lot	Exp
Time	= 2102090842	pH/Cond	= 12	7		
pH	= 7.75	Turb	= 20	10		
Temp	= 22.2°C	" STD	= 5.63			
Cond	= 1152 us/cm	" 606	= 5.82			
Turb	= 0.86 Ntu's	" Lot	= 9101			
pHPre	= 7.00-10.01 (14.7°C)	" Exp	= 2/21			
pHPost	= 7.00 10.01					

SAMPLES

Sample #	Analysis	Preservative	Container	Lot	Lab
2102090844	VOA by 8260	HCl	(3) 40 ml Vial		DHS
0845	" " (FB)	"	"		"
0846	NDMA/DMN Bromacil by 607	Ice	(1) 1L amber		SRL

Continued from page

Read and Understood By

Signed

2-9-2021
Date

Signed

2-10-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-9-2021 Page 1 of 1

Sample Location: B655-INF-2

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	Analytical Requirement: 609						Charge Number
210209 0844	3	A	X							XGMD
0845	3	1	X							
0846	1	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:
	2-9-2021 1100			2-10-21 / 0930

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

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 tube. 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 @ 639 mm/Hg.
Conductivity - calibrated using 1413us/cm std. solution
PH - calibrated using fisher buffers (7 - 10).
Turbidity meter # 4 std - 3.48 rdg - 3.58 lot - 91017 Exp - 2/28/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 210208 0900C	17.5	1.120	N/A	N/A	7.85	1.39	336.89
2) ——— 0902C	17.7	1.116	"	"	7.92	1.14	336.89
3) ——— 0904C	18.0	1.110	"	"	7.96	1.12	336.89

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210208 0906C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0907C	" (FB)	"	"	"	"
——— 0908C	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 0909C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210208 1115C	VOA by 8260	ice/HCL	(3) 40ml vials	21EH113A	ALS
——— 1116C	607/Bromacil	ice	(1) 1L Amber	21EH113B	SRI
——— 1117C	Total Metals	ice/HNO_3	(2) 125ml poly's	21EH113C	ALS

Modified Sampling Event

Initial Parameters - 336.74ft. Total Metal gallons purged - 1/4 gallon

* Flow cell unable to function properly. Crew monitored parameters with basic pH/cond meter. No ORP or DO will be collected.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 2/8/21 — Date

Jeri Wunderlich — Signed — 2-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page 1 of 1

Sample Location: BLM-21-400

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210208090 6C	3	A	✓							XGMD
0907C (FB)	3	A	✓							"
0908C	1	A		✓						"
0909C	2	A			✓					"
1115C (BC)	3	A	✓							"
1116C (BC)	1	A		✓						"
1117C (BC)	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 Dalton	2/8/21 1135hrs			2-9-21 / 0930

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be purged & sampled using a dedicated Teflon bladder pump Carboy G-3

	Initial	Final
	210204 1501c	210204/1520c
pH	7.35	7.37
Temp	20.0 c	21.6°c
Cond	1384 µs/cm	1383 µS/cm
Turb	1.09	0.99 NTU's
phpre	6.97/10.04(23.3)	7.01/10.05 (24.1°c)
phpost	7.00/10.06	7.00/10.07
DTW	330.90	330.95

METER ID's
pH/cond 601
Turb #7
" Std - 3.48
" Rdg = 3.73
" LOT# = 91017
" Exp = 2-28-21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210204 1305c	8260	Ice/HCl		(3) 40ml vials	ALS
1306c	" (FB)	"		"	"
1307c	6010	Ice		(1) 1Lt Amber	SRL
1308c	" (Dup)	"		"	"
1309c	~~Total Metals~~	~~Ice/HNO3~~		~~(2) 125ml poly~~	~~ALS~~
1310c	Anions/Alk	Ice		"	"
1311c	TDS	"		(1) "	"
1312c	Perchlorate	"		"	"
1313c	NO_2/NO_3	Ice/H_2SO_4		(1) 250ml poly	"

Continued from page

Read and Understood By

Craig M Zuccolo Signed 2/8/21 Date

Tom W Munch Signed 2-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-21 Page 1 of 1

Sample Location: Bldg-23-451

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	ANIONS / ALK	TDS	PERCHLORATE			Charge Number: X6MD
210204 1305c		3	A	X							
1306c FB		3		X							
1307c		1			X						
1308 Dup		1			X						
1310		2				X					
1311		1					X				
1312		1						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: NO2 / NO3							Charge Number
1313		1	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-[illegible]	2-4-21 / 1600		[signature]	2-8-21 / 0910

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

AL MONTES & ROB BURRUS PRESENT. WEATHER IS COOL & PARTLY CLOUDY. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES W/30 MINS BETWEEN PURGES. THE BUBBLER WAS SET @ 3 PSI AND STABILIZED. CARBOY G-5

INITIAL	FINAL	METERS
210202094SA	210202 1440A	PH/COND - 12
PG - 8.29	7.80	TURBMTR - 20
TEMP - 17.9°C	20.5°C	" STD - 5.63 NTU
COND - 1009 uS/cm	1017 uS/cm	" RDC - 5.43 NTU
PH PRE- 7.03/9.97 13.0°C	7.01/9.99 14.7°K	" LOT# - 91017
PH POST- 6.99/9.98	7.03/9.97	" EXP - 2-28-21
TURB - 1.43 NTU	0.37 NTU	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAS
210202 0947 A	VOA 8260	ICE HCL	2573-2	3-40ML VIALS	AS
0948 A	" " (FB)	"	"	"	"
0949 A	NDMA-DMN-3RD-607	ICE	108501	1LT AMBER	SR
1027 A	LL NDMA	"	"	"	SR
1028 A	" (FB)	"	"	"	"
1310 A	SVOA	"	"	2-1LT AMBER	AL
1428 A	TOTAL METALS	ICE HNO3	200707	2-125 P&A	"
1429 A	ANIONS/ALK	ICE-0 HEAD	NA	2- "	"
1430 A	TDS	ICE	"	1-250mL	"
1431 A	PERCHLORATE	ICE 2/3 FULL	"	"	"
1432 A	NO2 NO3	ICE-H2SO4		"	"

1DW-7gal

Continued from page NA

Read and Understood By

Signed — 2-2-21 Date

Signed — 2-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2·2·21 Page 1 of 1

Sample Location: BLM·32·543

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	20MA	LL 20MA	SVOA	T METALS			Charge Number
										XGMD
210202 0947 A	3	A	x							
0948 A FB	3	A	x							
0949 A	1	A		x						
1027 A	1	A			x					
1028 A FB	1	A			x					
1810 A	2	A				x				
1428 A	2	A					✓			

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	ANIONS ALK	TDS	PERCHLORATE	NO2 NO3				Charge Number
210202 1429 A	2	A	x							
1430 A	1	A		x						
1431 A	1	A			x					
1432 A	1	A				x				

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	2·2·21 4:10pm			2-3-21 / 0930

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

ALMONTES & RB BURROWS PRESENT. WEATHER IS COOL & CLOUDY. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. ZONE WILL BE PURGED AT LEAST 4 TIMES W/ 30 MINS BETWEEN PURGES. BUBBLER WAS SET @ 3PSI AND STABLIZED. CARBOY 0-5

INITIAL PARAMETERS	FINAL
TIME - 210202 1000A	210202 1045A
PH - 8.40	8.01
TEMP - 18.7°C	19.4°C
COND - 970 uS/cm	1008 uS/cm
TURB - 0.39 NTU	0.22 NTU
PH PRE - 7.01/9.98 13.0°C	700 /9.93 20.0°C
PH POST - 6.98/9.98	7.01/9.99

METER ID
PH/COND - 12
TURB MTR - 20
" STD - 5.63 NTU
" EDC - 5.43
" LOT# - 9C01Y
" EXP - 2.28.21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210202 1002 A	VOA 8260	ICE HCl	3-40mL VIALS	2573.2	ALS
1003 A	" " (FB)	"	"	"	"
1004 A	LL NOMA	"	1LT AMBER	108501	"
1005 A	LL NOMA (DUP)	"	"	"	"
1006 A	" (FB)	"	"	"	"

10 W-Tgal

Continued from page N/A

Signed

2-2-21
Date

Read and Understood By

Signed

2-3-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2·2·21 Page 1 of 1

Sample Location: BLM·32·571

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL ZMA						Charge Number
										X6M7
210202 1002 A	3	A	x							
1003 A FB	3	A	x							
1004 A	1	A		x						
1038 A DUP	1	A		x						
1006 A 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:
	2·2·21 11:20am			2-3-21 / 0930

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

AL MONTES & ROB BURROWS PRESENT. WEATHER IS COOL & CLOUDY. THIS ZONE WILL BE PURGED & SAMPLED USING FLUTE SYSTEM. ZONE WILL BE PURGED AT LEAST 4 TIMES W/ 30 MINS BETWEEN PURGES. BUBBLER WAS SET AND STAPLED @ 3PSI. CARBOY G-5

INITIAL PARAMETERS	FINAL	METER ID
TIME - 210202 1009 A	210202 1018 A	PH/COND - 12
PH - 8.56	8.03	TURB MTR - 20
TEMP - 18.0 °C	19.3 °C	" STD - 5.63 NTU
COND - 965 uS/cm	967 uS/cm	" RPG - 5.43 NTU
TURB - 0.69 NTU	0.40 NTU	" LOT# - A1017
PH PRE - 7.00/4.97 13.1°C	7.05/4.98 16.1°C	" EXP - 2.28.21
PH POST - 6.96/4.98	7.01/9.99	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	SAF
210202 1010 A	VOA 8260	ICE. HCl	3·40 mL VIALS	2573·2	ALS
—— 1011 A	" " (FB)	"	"	"	"
—— 1012 A	" NDMA	ICE	1 LT AMBER	108501	ERI
—— 1013 A	" (FB)	"	"	"	"

IDW - 7 gal

Continued from page N/A

Read and Understood By

Signed 2·2·21 Date

Signed 2-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2.2.21 Page 1 of 1

Sample Location: BLM-32-632

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL NDMA						Charge Number
									XGMD	
210202 1010A	3	A	x							
1011A FB	3	A	x							
1012A	1	A		x						
1013A 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:
	2.2.21 11:20am			2-3-21 0930

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

Dan Halvorsen & Tony Torres present. The well will be purged & sampled from a sample port located next to the well head. It will be purged for 1 min prior to sampling. Carboy G-5

Parameters

2102100900
pH 7.38
Temp 22.8°c
Cond 1299 ms/cm
Turb 0.63 NTUs
phpre 7.06 / 10.03 / (5.72)
phpost 7.07 / 10.03

Meter ID's

pH/cond 12
Turb # 20
11 Std = 5.63
11 Adj = 5.81
11 Lot # = 91017
11 Exp = 2/21

Samples

Sample #	Analysis	Lot #	Cont	Preserv	Lab
2102100901	8260	2573	(3) 40ml vials	HCl/HCl	ALS
0902	11 (FB)	11	11	11	11
0903	6010	01080501	(1) 1LT Amber	HNO3	SAL
0904					

Continued from page

Read and Understood By

T. D. — Signed — 2/10/21 Date

Lori W. Munch — Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-1

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
										X6MA
210210B901	3	A	X							
0902 (FB)	3	A	X							
0903	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	2-10-21 / 1100		John W Jurnda	2-11-21 / 0915

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

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PROJECT MPE-8

Notebook No. PFTS-#9

Continued from page _____

DAN HALVORSEN & TONY TORRES PRESENT. THIS WELL WILL BE PURGED FOR A MINUTE & SAMPLED FROM A PORT LOCATED NEXT TO THE WELL HEAD.

Carboy 6-5

PARAMETERS

210210 0930
pH ~~PE~~ 7.31
TEMP 22.5°C
COND 1231 µs/cm
TURB 29.8 NTUs *
pH PRE 7.05/10.06 (15.8°C)
pH POST 7.07/10.08

METER IDs

pH/COND 12
TURB #20
" STD = 5.83
" RDG = 5.81
" LOT # 91017
" EXP 2/21

SAMPLE #	ANALYSIS	SAMPLES PRESERV	LOT #	CONT	LAB
210210 0931	8260	HCl	2573	(3) 40 mL VIALS	ALS
0932	" (FB)	"	"	"	"
~~0933~~ 0933	" (Dup)	"	"	"	"
0934	6007		0108501	(1) LT AMBER	SNL

* WELL WAS TURNED ON 5 MINUTES PRIOR TO SAMPLING & TURBIDITY WAS IS ALWAYS HIGH ON START UP.

Continued from page

Read and Understood By

T. [signature] — Signed — 2-10-21 — Date

[signature] — Signed — 2-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-B

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260	6010						Charge Number
										X6mD
210210 0931	3	A	X							
— 0932 (FB)	3		X							
— 0933 (Dup)	3		X	X						
— 0934	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:
T. Z	2-10-21 / 1100		[signature]	2-11-21 / 0915

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

Dan Halvorsen & Tony Jones present. This well will be purged for a minute & sampled from a sample port next to the well head.

Parameters
210210 0915
pH 7.05
Temp 23.6
Cond 1250
Turb 0.90
pH pre 7.06 / 10.05 (15.8)
pH post 7.07 / 10.07

Meter ID's
pH/cond 12
Turb # 20
" Std = 5.603
" Rdg = 5.81
" Lot # = 91017
" Exp = 2/21

Carboy 6-5

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210210 0916	8260	Ice/HCl	2573	(3) 40ml VIALS	ALS
" 0917	" (FB)	"	"	"	"
" 0918	6010	HNO3	010850	(1) TAMBIEN	SRL
" 0919	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

Signed 2-10-21 Date

Signed 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: MPE-9

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6PPD						Charge Number
										X6MD
2102100916	3	A	X							
0917 (FB)	3	A	X							
0918	1	A		X						
0919 (Dup)	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. [illegible]	2-10-21 / 1100		[signature]	2-11-21 / 0915

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

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PROJECT MPE-10

Notebook No. PFTS#9

Continued from page

Dan Halvorsen & Tony Toker present. This well will be purge for 1 min & sampled out of a port located next to the well head. Canary 6-5

Parameters	
210210	0945
pH	7.38
Temp	21.5°c
Cond	1209
Turb	0.47
pHpre	7.05/10.09 (16.3°)
pHpost	7.05/10.07

Meter ID's

pH/cond = 12

Turb = 20

11 Std 5.63

11 Adj = 5.81

11 Lot# = 91017

11 Exp = 2/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210210 0946	8260	Ice/HCl	2573	(3) 40mL vials	KAS
0947	11 (FB)	11	11	11	11
0948	6007	Ice	0108501	(1) 1L Amber	SRL

Continued from page

Read and Understood By

T. [signature] Signed — 2-10-21 Date

[signature] Signed — 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2.10.21 Page 1 of 1

Sample Location: MPE 10

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6010						Charge Number
										X6mD
210210 0946	3	A	X							
0947 (FB)	3	A	X							
0948	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:
T. D.	2-10-11/1100		[signature]	2-11-21 /0915

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

Dan Halvorsen & Tony Tarter present. This well will be purged for A-minute & Sampled From a Port located next to the well Head. Carboy G-5

Parameters	
210210 1100	
pH	7.58
Temp	23.8 c
Cond	960
Turb	1.05
phpre	7.08 (10.07) (16.3)
phpost	7.07.10.07

Meters	
pH/cond 12	
Turb # 20	
" std =	5.63
" rdg =	5.61
" Lot # =	91017
" Exp =	2/21

Samples

Sample #	Analysis	Lot #	Preserv	Cont	Lab
210210 1101	8260	2573	HCl/HCl	(3) 40mL VOAs	ALS
" 1102	"	"	"	"	"
" 1103	607	0108501	ICE	(1) 1Lt Amber	SRL

Apparently I was in the Central Time Zone when doing the Times. TT

Continued from page

Read and Understood By

T. [signature] Signed 2-10-21 Date

[signature] Signed 2-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-10-21 Page 1 of 1

Sample Location: ~~AF~~ MPE-11

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
										X6MD
210210 1101	3	A	X							
1102 (FB)	3	A	X							
1103	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.	2/20/21 1100		[signature]	2-11-21 0915

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe#2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210203 0730Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0731Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210203 0855Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0856Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 2102030935Y
PH - 8.36
Temp - 21.3°C
Cond - 1189 us/cm
Turb - 0.47 NTU's
pH pre - 7.15/10.10 (16.7°C)
pH post - 7.13/10.11
DTW - 477.50ft.
Atmos - 12.70 psia

Final
Time - 2102031510Y
PH - 8.26
Temp - 21.8°C
Cond - 1170 us/cm
Turb - 0.48 NTU's
pH pre - 7.04/10.01 (24.3°C)
pH post - 7.06/10.01
DTW - 477.55ft.
Atmos - 12.68 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 13
Turb - 21
u std - 56.8
u rdg - 58.0
u lot - 91017
u Exp - 2/28/24

Buffers Lot Exp
7 4002G91 8/21
10 4001D05 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210203 1020Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1021Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Runs	1)	2)	3)	4)	5)	6)	7)
	17.65	17.59	17.50	17.44	17.36	17.24	17.22
	13.70	13.68	13.67	13.68	13.65	13.62	13.65
	13.70	13.66	13.68	13.62	13.62	13.63	13.61
	17.68	17.53	17.48	17.40	17.32	17.23	17.21

Continued from page _____

Read and Understood By

Craig Del Ferraro — Signed — 2/3/21 — Date

Lori V. Lynch — Signed — 2-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/3/21 Page 1 of 1

Sample Location: PL-7-480

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: Low Level/ NDMA	Charge Number
210203073OY (TB)	3	A	✓		XGMD
0731Y (TB)	1	A		✓	4
0855Y (EB)	3	A	✓		4
0856Y (EB)	1	A		✓	4
1020Y	3	A	✓		4
1021Y	1	A		✓	4

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	2/3/21 1525 hrs.		Jon Wunch	2-4-21 / 0915

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

Dan Halvorsen & Craig Del Ferraro present. Weather is partly cloudy & warm. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210202 1350y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1351y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 210202 1430y
PH - 8.04
Temp - 23.7°c
Cond - 1202 us/cm
Turb - 0.38 NTU's
pH pre - 7.04/10.02 (25.8°c)
pH post - 7.03/9.98
DTW - 477.35ft.
Atmos - 12.67 psia

Final
Time - 210202 1515y
PH - 7.94
Temp - 23.4°c
Cond - 1191 us/cm
Turb - 0.34 NTU's
pH pre - 7.05/10.00 (25.6°c)
pH post - 7.03/9.97
DTW - 477.50ft.
Atmos - 12.68 psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 13
Turb - 21
" std - 56.8
" rdg - 56.6
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/24
10	4001D05	6/24

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210202 1455y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1456y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Runs	1)	2)	3)
	~~54.65~~ cd	52.34	52.33
	52.36	47.88	47.90
	47.86	47.89	47.86
	47.81	52.36	52.31
	52.38		

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/2/21 — Date

Lori W Munch — Signed — 2-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: PL-7-560

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA						Charge Number
210202 1350Y (EB)	3	A	✓							XGM0
1351Y (EB)	1	A		✓						"
1455Y	3	A	✓							"
1456Y	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 Terzo	2/2/21 1540 hrs.			2-3-21 /0930

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

Dan Halvorsen & Craig DelFerraro present. Weather is cloudy & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210202074oy	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210202090 5y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0906y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time - 210202094 5y
PH - 8.30
Temp - 22.5°c
Cond - 1208 us/cm
Turb - 5.16 NTU's
pHpre - 7.13/10.10 (16.9°c)
pHpost - 7.10/10.11
DTW - 477.13ft.
Atmos - 12.70 psia

Final
Time - 210202130 5y
PH - 8.43
Temp - 22.3°c
Cond - 1185 us/cm
Turb - 3.38 NTU's
pHpre - 7.04/10.01 (24.3°c)
pHpost - 7.06/10.01
DTW - 477.35ft.
Atmos - 12.66 psia
IDW - 1/2 gal.

Meter ID
pH/cond - 13
Turb - 2 lab
" std - ~~5.68~~ 56
" rdg - ~~5.66~~ 56
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210202103 5y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1036y	607 Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1105y	Low Level NDMA	"	"	"	"
——— 1106y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)	4)
	83.02	82.84	82.87	82.76
	78.93	78.85	78.89	78.83
	78.93	78.85	78.87	78.80
	82.98	82.84	82.79	82.72

Continued from page

Read and Understood By

Craig DelFerro — Signed — 2/2/21 — Date

Ron Unrunh — Signed — 2-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page 1 of 1

Sample Location: PL-7-630

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals				Charge Number
210202 0740Y (TB)		1	A			✓					XGMD
0905Y (EB)		3	A	✓							"
0906Y (EB)		1	A			✓					"
1035Y		3	A	✓							"
1036Y		1	A		✓						"
1105Y		1	A			✓					"
1106Y		2	A				✓				"

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	2/2/21 1540 hrs.		Jon W Jumah	2-3-21 /0930

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

PROJECT Pl·12·570 WSI ENV·0053

Notebook No. D32 #119 (B)

Continued from page

Marcus Morales & Robert Burrows present. Weather is warm & breezy. 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 Gal·5

Calibrations 482.52'

DO·Cal in saturated air @ 639 mm/Hg.

pH·Cal using Buffers (4,7,10)

Conductivity·Cal using 1413 us/cm STD solution.

Turbidity Meter·#20· STD·5.63 NTU ROG·5.56 NTU Lot·9101T Exp·2/21

Parameters (time)	Temp(°C)	Cond (mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210208 1500 B	20.38	1.088	3.65	7.80	64	0.51	482.55'
2) —— 1502 B	20.47	1.092	3.71	7.76	63	0.69	:"
3) —— 1504 B	20.50	1.084	3.75	7.73	63	0.44	:"

Sample #	Analysis	Samples Preserve	Container	lot	Lab
210208 1510 B	VOA by 8260D	HCl/Ice	(3) 40 ml vials	2538	ATS
—— 1511 B	: (Dup)	:	:	:	:
—— 1512 B	: (FB)	:	:	:	:
—— 1513 B	607/Bromacil	Ice	(1) 1L Amber	108501	SPI
—— 1514 B	Low Level NWMA	:	:	:	:
—— 1516 B	: (Dup)	:	:	:	:
—— 1517 B	: (FB)	:	:	:	:
—— 1518 B	SVOA by 8270D	:	(2) :	:	ATS
—— 1519 B	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	:
—— 1520 B	Anions/Alk	Ice/ZeroHS	:	:	:
—— 1521 B	TDS by SM2540C	Ice	(1) :	:	:
—— 1522 B	Perchlorate 6850	Ice/1/3 HS	:	:	:
—— 1523 B	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly	200811	:

IDW ~ 2.5 gal

Continued from page

Read and Understood By

MS CJ — Signed — 2/8/21 Date

Lori Muench — Signed — 2-9-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page _____ of _____

Sample Location: P1-12.570

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	LL NDMA					Charge Number
210208151013		3	A	X							XGMD
1511B	(Dup)	3		X							
1512B	(FB)	3		X							
1513B		1			X						
1514B		1				X					
~~1515B~~ 1516B	(Dup)	1				X					
1517B	(FB)	1				X					

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: SVOA 8270	T. Metals	Anions/Alk	TDS	Perchlorate	NO2 NO3		Charge Number
210208151813		2	A	X							XGMD
1519B		2			X						
1520B		2				X					
1521B		1					X				
1522B		1						X			
1523B		1							X		

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/8/21 @ 1615		[signature]	2-9-21 / 0930

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

Marcus Ayalos & 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 tube. Water quality parameters will be monitored using a QED MP20 flow cell & water analyzer. Carboy G-5

Calibrations DTW - 482.50'

DO - Cal in saturated air @ 639 mm/Hg.
PH - Cal using Fisher Buffers (4, 7, 10)
Conductivity - Cal using 1413 us/cm STD. solution.
Turbidity Meter - #20 STD - 5.63 NTU ROG - 5.56 NTU Lot - 9017 Exp - 2/21

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
1) 210208 0940B	19.26	1.096	5.00	7.66	132	3.07	482.52'
2) —— 0942B	19.33	1.101	4.87	7.54	135	0.39	
3) —— 0944B	19.31	1.102	5.03	7.46	138	1.35	

Trip Blank Samples

Samples #	Analysis	Preserve	Container	lot	lab
210208 0700B	VOA by 8260	HCl / Ice	(3) 40ml vials	2538	ALS
0701B	Low Level NOMA	Ice	(1) 1L Amber	108501	SRI

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210208 0950B	VOA by 8260	HCl / Ice	(3) 40ml vials	2538	ALS
—— 0951B	: (FB)	:	:	:	:
—— 0952B	607 / Bromacil	Ice	(1) 1L Amber	108501	SRI
—— 0953B	Low Level NOMA	:	:	:	:
—— 0954B	: (FB)	:	:	:	:
—— 0955B	SVOA by 8270D	:	(2) :		ALS
—— 0956B	Total Metals	HNO3 / Ice	(2) 125ml poly	200707	:
—— 0957B	Anions / Alk	Ice / Zero HS	:	:	:
—— 0958B	TDS SM2540C	Ice	(1) :	:	:
—— 0959B	Perchlorate 6850	Ice / 1/3 HS	:	:	:
—— 1000B	NO2, NO3 353.2	H2SO4 / Ice	(1) 250ml poly	200811	:
	BC				
210208 1100B	Low Level NOMA	Ice	(1) 1L Amber	21CH114A	SRI

IDW - 2 gal

Continued from page

Read and Understood By

Signed — 2/8/21 Date — Signed — 2-9-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/8/21 Page 1 of 1

Sample Location: PI-12-800

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	LL NDMA					Charge Number
210208070013 (TB)	3	A	X							XGMD
070113 (TB)	1				X					
0950B	3		X							
0951B (FB)	3		X							
0952B	1			X						
0953B	1				X					
0954B (FB)	1				X					

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	SVOA 8270	T. Metals	Anions/AIK	TDS	Perchlorate	NO2 NO3	LL NDMA	Charge Number
210208095513	2	A	X							XGMD
0956B	2			X						
0957B	2				X					
0958B	1					X				
0959B	1						X			
1000B	1							X		
1100B (BC)	1								X	

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/8/21 @ 1100		[signature]	2-9-21 / 0930

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

Weews Aubos & Tony Torres 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. Parameters will be collected using a QED MP20 flow cell & water analyzer. Carboy Gr. 3

434.50'

Calibrations

DO- Cal in saturated air @ 644 mm/Hg.

PH- Cal using Fisher Buffers (4,7,10)

Conductivity- Cal using 1413 uS/cm STD solution.

Turb Meter- #7 STD - 3.48 NTU RDG - 5.24 NTU lot - 91017 Exp - 2/28/21

Parameters (time)	Temp (°c)	Cond (mS/cm)	DO	PH	ORP	Turb (NTU)	DTW (ft)
1) 2102021450c	20.78	1.095	4.20	8.54	21	1.16	434.62
2) —— 1452c	20.77	1.095	4.46	8.50	21	0.98	"
3) —— 1454c	20.70	1.092	5.05	8.53	21	1.04	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
2102021500c	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1501c	" (MS)	"	"	"	"
—— 1502c	" (FB)	"	"	"	"
—— 1503c	607/Bromacil	Ice	(1) 1L Amber	108501	SRI
—— 1504c	" (MS)	"	"	"	"
—— 1505c	Low Level NDMA	"	"	"	"
—— 1506c	" (FB)	"	"	"	"
—— 1507c	Total Metals	HNO3/Ice	(2) 125 ml poly	191129	ALS
—— 1508c	" (Dup)	"	"	"	"
—— 1509c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1510c	TDS by SM2540C	Ice	(1) "	"	"
—— 1511c	Perchlorate 6850	Ice/1/3 HS	"	"	"
—— 1512c	NO2 NO3 353.2	H2SO4/Ice	(1) 250 ml poly	200221	"

IDW - 2 gal

Continued from page

Read and Understood By

Signed — Date 2/2/21

Signed — Date 2-3-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/2/21 Page _____ of _____

Sample Location: St. 2 · 466

Sample Number	# of Containers	Sample Matrix*	8260C	607	LC UOMA					Charge Number
Pertinent Notes (if any)										
210202150OC	3	A	X							XGMD
1501C (MS)	3	|	X							|
1502C (FB)	3	|	X							|
1503C	1	|		X						|
1504C (MS)	1	|		X						|
1505C	1	|			X	~~X~~				|
1506C (FB)	1	|			X	~~X~~				|

Sample Location:

Sample Number	# of Containers	Sample Matrix*	T. Metals	Anions/Alk	TOC	Perchlorate	NO2 NO3			Charge Number
Pertinent Notes (if any)										
210202150?C	2	A	X							XGMD
1508C (Dup)	2	|	X							|
1509C	2	|		X						|
1510C	1	|			X					|
1511C	1	|				X				|
1512C	1	|					X			|

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2/2/21 @ 1600		[signature]	2-3-21 0930

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

MARCUS MCALOS & TONY TORRES THE WEATHER IS COOL & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES WILL BE COLLECTED USING A TEFLON TUBE. CA2004 G-3

INITIAL		FINAL	
210204	0955E	210204/1010E	
pH	7.88		7.93
Temp	19.2		19.2
Cond	822 µs/cm		841 µs/cm
Turb	0.88		0.77 NTUs
phPre	7.10/10.09 (16.5)		7.05/10.01 (17.8)
phPost	7.09/10.10		7.09/10.06
DTW	455.45		455.45

METER IDs
pH/cond 101
Turb # 7
" Std = 3.48
" Rdg = 3.73
" Lot # 91017
" Exp = 2-28-21

SAMPLES

SAMPLE #	Analysis	Preserv	Lot #	Cont	Lab
210204/1000C	8260D(L)	ICE/HCl	25732	(3) 40mL VOAs	ALS
1001C	" (PB)	"	"	"	"
1002C	LLNDMA	ICE	108501	(1) 1LT Amber	SRL
1003C	" (PB)	"	"	"	
~~1004C~~					

TRIP BLANKS

SAMPLE #	Analysis	Preserv	Lot #	Cont	Lab
210204 0700C	8260D(L)	ICE/HCl	25732	(3) 40mL VOAs	ALS
0701C	LLNDMA	ICE	108501	(1) 1LT Amber	SRL

Continued from page

Read and Understood By

T-B Signed — 2-4-21 Date — Signed — 2-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-4-21 Page 1 of 1

Sample Location: ST-4-589

Analytical Requirement: 8260 (C) | CLND34

Charge Number: XXGMD

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 (C)	CLND34						
210204/0700C	3	A	X							
— 0701C	1	|		X						
— 1000C	3	|	X							
— 1001C	3	|	X							
— 1002C	1	|		X						
— 1003C	1	—		X						

Sample Location:

Analytical Requirement

Charge Number

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	2-4-21		[signature]	2-8-21 / 0910

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

DAV. HALVORSEN & TONY TORRES PRESENT. THE WEATHER IS CLOUDY & COLD. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. THE SAMPLES WILL BE COLLECTED FROM A TEFLON DISCHARGE TUBE. PARAM'S WILL BE COLLECTED FROM A QED MP-20 FLOWCELL. CARBOY G-5 IN USE. WE GOT A LATE START DUE TO STI & HAS A G ISSUES. WELL TAKES ABOUT 45 MINS TO GET WATER FLOWING.

CALIBRATIONS
DO cal'd @ Bldg 638 in 639 mm/Hg SATURATED AIR
COND SENSOR CAL'd IN 1413 µs/cm STANDARD.
Turb # 20 STD=5.69 Rdg=5.64 LOT#=91017 Exp=2/21
pH SENSOR CAL'd USING THE 3pT CAL METHOD WITH 4, 7, 10 BUFFERS

PARAM'S

SAMPLE#	TEMP	COND	DO	pH	ORP	TURB	DTW
210217 1355 B	18.94	1081	4.93	7.59	68	0.88	422.19
" 1356 B	18.94	1082	4.71	7.59	68	0.94	422.19
" 1357 B	18.91	1082	4.84	7.59	68	0.91	422.19

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210217 1400 B	8260 (11)	ICE/HCl	2538	(3) 40 ml VIALS	~~STL~~ ALS
" 1401 B	" (FB)	"	"	"	"
" 1402 B	6010	ICE	108501	(1) 1LT AMBER	STL
" 1403 B	CLNDMA	ICE	"	"	"
" 1404 B	" (FB)	"	"	"	"
" 1405 B	TOTAL METALS	ICE/HNO_3	200707	(2) 125 ml poly	ALS
" 1406 B	" (FB)	"	"	"	"
" 1407 B	NO_2/NO_3	ICE/H_2SO_4	200811	(1) 250 ml poly	"

TRIP BLANKS

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210217 0900 B	8260 (11)	ICE/HCl	2538	(3) 40 ml VIALS	ALS
" 0901 B	CLNDMA	ICE	108501	(1) 1LT AMBER	STL

Continued from page

Read and Understood By

T. [signature] — Signed — 2.17.21 — Date

[signature] — Signed — 2-18-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2-17-21 Page 1 of 1

Sample Location: ST-5-481

Sample Number	# of Containers	Sample Matrix*	8260 (X)	LINDA	TOTAL METALS	607				Charge Number
										X6mS
210217 0900B	3	A	X							
0901B	1			X						
1400 B	3		X							
1401B	3		X							
1402	1					X				
1403	1			X						
1404	1			X						

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TOTAL METALS	NO2 / NO3						Charge Number
1405B	2	A	X							
1406B	2		X							
1407B	1			X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T.	2-17-21 / 1600			2-18-21 / 0925

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1315Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1316Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters

Time - 210201 1350Y
pH - 8.27
Temp - 21.3°C
Cond - 1214 us/cm
Turb - 0.89 NTU's
pHpre - 7.10/10.06 (17.9°C)
pHpost - 7.12/10.06
DTW - 472.00 ft.
Atmos - 12.74 psia

Final

Time - 210201 1536Y
PH - 8.21
Temp - 21.4°C
Cond - 1203 us/cm
Turb - 0.74 NTU's
pHpre - 7.09/10.03 (20.1°C)
pHpost - 7.11/10.04
DTW - 472.08 ft.
Atmos - 12.71 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 5.68
" rdg - 5.72
" lot - 91017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002991	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1415Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1416Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
——— 1440Y	Low Level NDMA	"	"	"	"
——— 1510Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1511Y	Anions/Alk.	ice	"	N/A	"
——— 1512Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1513Y	Perchlorate by 6850	"	"	"	"
——— 1535Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-08-11	"

Runs	1)	2)	3)	4)	5)
	23.14	23.10	23.07	23.05	23.07
	41.46	41.41	41.42	41.44	41.43
	41.44	41.42	41.40	41.43	41.40
	23.11	23.13	23.09	23.06	23.05

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 2/1/21 — Date

Tom Mundt — Signed — 2-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/21 Page 1 of 1

Sample Location: ST-5-485

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions/Alk.			Charge Number
Pertinent Notes (if any)										
210201 1315Y (EB)	3	A	✓							XGMD
1316Y (EB)	1	A			✓					"
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1510Y	2	A				✓				"
1511Y	2	A					✓			"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)										
210201 1512Y	1	A	✓							XGMD
1513Y	1	A		✓						"
1535Y	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	2/1/21 1600hrs.		Jon W Munch	2-2-21 /0900

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

Dan Halvorsen & Craig Del Ferraro present. Weather is cloudy & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Then in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210201 0745y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0746y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210201 0900y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0901y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210201 0940y
pH - 8.84
Temp - 20.4°c
Cond - 1018 us/cm
Turb - 3.54 NTU's
pHpre - 7.20 / 10.16 (13.4°c)
pHpost - 7.21 / 10.14
DTW - 471.86 ft.
Atmos - 12.78 psia

Final

Time - 210201 1105y
pH - 8.65
Temp - 20.7°c
Cond - 1007 us/cm
Turb - 1.87 NTU's
pHpre - 7.18 / 10.13 (14.8°c)
pHpost - 7.18 / 10.11
DTW - 472.00 ft.
Atmos - 12.76 psia
IDW - 1/2 gal.

Meter ID

pH/cond - 13
Turb - 21
" Std - 5.68
" rdg - 5.72
" lot - 9/017
" Exp - 2/28/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001205	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210201 1005y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1006y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1035y	Low Level NDMA	"	"	"	"
——— 1036y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	AL

Runs	1)	2)	3)	4)
	97.41	97.32	97.28	97.21
	115.06	115.04	115.00	115.01
	115.07	115.06	114.99	114.96
	97.37	97.27	97.23	97.21

Continued from page

Read and Understood

Craig Del Ferro — 2/1/21 (Signed / Date)

Jon W. Munch — 2-2-21 (Signed / Date)

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 2/1/21 Page 1 of 1

Sample Location: ST-5-655

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210201074 5Y (TB)	3	A	✓							XGMD
0746Y (TB)	1	A			✓					4
0900Y (EB)	3	A	✓							4
0901Y (EB)	1	A			✓					4
1005Y	3	A	✓							4
1006Y	1	A		✓						4
1035Y	1	A			✓					4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals							Charge Number
2102011036Y	2	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	2/1/21 1125 hrs.		Lori Lynch	2-2-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge hose. Parameters will be monitored using a standard pH/cond. meter. No QED Flow cell available. ORP & DO will not be monitored. Carboy G5.

Parameters (time)	temp (°c)	cond (us/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210311 1415B	20.2	1139	7.92	1.75	128.53
2) ——— 1418B	20.3	1146	7.90	1.49	128.53
3) ——— 1421B	20.5	1149	7.86	1.24	128.53

*pre cal - 7.02/10.05 (21.6°c) *post cal - 7.03/10.07
Turbidity meter #7 std - 4.60 std - 4.54 lot - 91017 Exp - 3/31/21
PH/Cond meter #61

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210311 1425B	VOA by 8260	ice/HCl	(3) 40ml vials	2583	ALS
——— 1426B	" (Dupl.)	"	"	"	"
——— 1427B	" (FB)	"	"	"	"
——— 1428B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1429B	" (FB)	"	"	"	"
——— 1430B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1431B	" (FB)	"	"	"	"
——— 1432B	Anions/Alk.	ice	"	N/A	"
——— 1433B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1434B	Perchlorate by 6850	"	"	"	"
——— 1435B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 127.50ft. Total gallons purged - 1

Continued from page

Read and Understood By

Craig Del Ferro 3/11/21 Per Munch 3-19-21
Signed Date Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: 100-HG-139

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals					Charge Number
210311 1425B		3	A	✓							XGMD
1426B (Dupl.)		3	A	✓							"
1427B (FB)		3	A	✓							"
1428B		1	A		✓						"
1429B (FB)		1	A		✓						"
1430B		2	A			✓					"
1431B (FB)		2	A			✓					"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perchlorate	NO_2 / NO_3				Charge Number
210311 1432B		2	A	✓							XGMD
1433B		1	A		✓						"
1434B		1	A			✓					"
1435B		1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTerzo	3/11/21 1500hrs.		[signature]	3-15-21 0920

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

PROJECT 200-B-240 ENV.0053

Notebook No. D32#121(C)

Continued from page

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. WATER QUALITY PARAM'S WILL BE COLLECTED FROM A QED MP-20 FLOW-THRU CARBOY 6-3

CALIBRATIONS

DO SENSOR cal'd in Collamm/Hg SATURATED AIR

COND SENSOR cal'd in 1413 µs/cm STANDARD

pH SENSOR cal'd in 4, 7, 10 buffers using THE 3pt cal METHOD

TURB #20 STD = 5.75 Rdg = 5.69 LOT# = 91017 Exp = 3/31/21

PARAM'S	TEMP	COND	DO	pH	ORP	TURB	DTW
1) 210305 1000c	21.44	1.260	4.22	8.66	-9	1.03	195.36
2) — 1001c	21.22	1.253	4.18	8.65	-9	1.25	195.55
3) — 1002c	21.30	1.257	4.15	8.66	-9	1.09	195.55

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	GOVT	LAB
210315 1003c	8260	ICE/HCl	(3) 40ml VIALS	ALS
— 1004c	" (FB)	"	"	"
— 1005c	6010	ICE	(1) LITER AMBER	JNF
— 1006c	8270D SUB A	"	(2) "	ALS
— 1007c	8081B PESTICIDES	"	(1) "	"
— 1008c	8151A HERBICIDES	"	" "	"
— 1009c	8290 DIOXINS/FURANS	"	" "	SNL
— 1010c	PCB's by 8082A	"	" "	ALS
— 1011c	PHENOLICS	ICE/H_2SO_4	(1) 250ml AMBER	"
— 1012c	TOTAL METALS	ICE/HNO3	(2) 125ml poly	"
— 1013c	SULFIDES	ICE/ZA/NaOH	(1) 500ml poly	"
— 1014c	CYANIDE	ICE/NaOH	(1) 250ml poly	"

Continued from page

Read and Understood By

T. [signature] 3-15-21 Date

[signature] Signed 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-15-21 Page 1 of 1

Sample Location: 200-B-240

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	6007	SVOA	PESTICIDES	HERBICIDES	DIOXINFURANS		Charge Number
										X(GMD)
210315 1003c	3	A	X							
1004c (FB)	3		X							
1005c	1			X						
1006c	2				X					
1007c	1					X				
1008c	1						X			
1009c	1							X		

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	PCB's	PHENOLICS	TOTAL METALS	SULFIDES	CYANIDE			Charge Number
1010c	~~1~~	A	X							
1011c	1			X						
1012c	2				X					
1013c	1					X				
1014c	1						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-[illegible]	3/15/21/1100		[signature]	3-16-21 / 0910

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

Notebook No. D32#121 c

ROJECT 200.D.240 W51.GW.0053 Continued from page N4

I MONTES & TONY TORREZ PRESENT. WEATHER IS COOL AND WINDY. THIS WEEK WILL SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A TEFLON DISCHARGE TUBE. WATER PARAMETERS WILL MONITORED WITH A QED MP-20 FLOWCELL ARROY-G-3

ALIBRATIONS

D - SATURATED AIR @ 644 mm/Hg IDW-2gal

ND - W/ 1413 us/cm STD.

H - W/ 4,7,10 BUFFERS SPT. METHOD

IRB MTR #20 STD - 573 us/cm RDC - 5 PSI/FT W/S LOT# - 9,017 EXP - 3.31.21

RAMETERS	TEMP(C)	COND(us/cm)	DO	PH	ORP	TURB NTU	FLOW
210316 1000 C	20.01	1.345	3.75	8.62	-39	2.25	NA
—— 1005 C	19.53	1.335	3.74	8.58	-39	2.11	"
—— 1010 C	19.69	1.335	3.79	8.58	-39	2.06	"

SAMPLES

AMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210316 1015 C	VOA 8260	ICE · HCl	3-40mL VIALS	2573-2	ALS
—— 1016 C	" (FB)	"	"	"	"
—— 1017 C	NDMA · DMN · 607	ICE	1LT AMBER	108501	SRL
—— 1018 C	TOTAL METALS	ICE · HNO_3	2-125mL Poly	260707	ALS
—— 1019 C	ANIONS/ALK	ICE · Ø HEAD	2- "	NA	"
—— 1020 C	TDS	ICE	1- "	"	"
—— 1021 C	PERCHLORATE	ICE · 2/3 Full	1- "	"	"
—— 1022 C	NO_2 NO_3	ICE · H_2SO_4	1- 250 Poly		"
—— 1330 C	NDMA 607 (BC)	ICE	1LT AMBER 21EH1116C	108501	SRL
—— 1331 C	TOTAL METAL (BC)	ICE · HNO_3	2-125 Poly 21EH1116D	260707	ALS

Continued from page NA

Read and Understood By

Signed — 3-16-21 Date — Signed — 3-17-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3.16.21 Page 1 of 1

Sample Location: 200 D 240

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 00200	2034 607	T METALS	AR625 ACK	TDS	PCB Soil		Charge Number: XGMO
210316 1015c	3	A	x							
—— 1016c (FB)	3		x							
—— 1017c	1			x						
—— 1018c	2				x					
—— 1019c	2					x				
—— 1020c	1						x			
—— 1021c	1							x		

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 2022 WC3	607	T. METALS					Charge Number
210316 1022c	1	A	x							
—— 1330c (BC)	1	A		x						
—— 1331c (BC)	2	A			x					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3.16.21 14:15 pm			3-17-21 / 0900

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

PROJECT 200·KU·150 WJI ENV·0013

Notebook No. D31 # 121(C)
Continued from page

Marcus Avalos & Robert Borrows present. Weather is breezy & 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 QED MJ·20 flow cell & water analyzer. Carboy. Gw

Calibrations

DO - Cal in saturated air @ 616 mm/Hg. DTW - 159.54'
pH - Cal using Oakton Buffers (4, 7, 10)
Conductivity - Cal using 1413 uS/cm STD solutions.
Turbidity Meter - # 21 STD - 66.5 NTU RDG - 55.9 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond (mS/cm)	DO	pH	ORP	Turb (NTU)	DTW (ft)
210310 1430	22.34	1.175	1.03	7.68	49	5.79	159.60'
1431	22.35	1.170	1.01	7.74	43	5.08	-
1432	22.36	1.155	1.04	7.79	37	5.02	-

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
210310 1435	VOA by 8260	HCl/Ice	(3) 40 ml vials	25152	Als
1436	" (Dup)	"	"	"	"
1437	" (FB)	"	"	"	"
1438	607/Bromacil	Ice	(1) 1L Amber	108501	SPL
1439	SVOA by 8270D	"	(2) "		Als
1440	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	"
1441	Anions/Alk	Ice/ZeroHS	"	"	"
1442	TDS by SM2540C	Ice	(1) "	"	"
1443	Perchlorate 6850	Ice/½ HS	"	"	"
1444	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly		"

IOW - 1.5 gal

Continued from page

Read and Understood By

MR MR
Signed

3/10/21
Date

Signed

3-11-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: 200-KV-150

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6O7	SVOA 8270	T. Metals	Anions/Alk			Charge Number
210310 1435C	3	A	X							XGMD
1436C (Dup)	3		X							
1437C (FB)	3		X							
1438C	1			X						
1439C	2				X					
1440C	2					X				
1441C	2						X			

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO2/NO3					Charge Number
210310 1442C	1	A	X							XGMD
1443C	1			X						
1444C	1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
MSG	3/10/21 @ 1530		[signature]	3-11-21 / 0900

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

3-22-21

PROJECT 200-A-253 WSIENV-0053 Notebook No. B32#119B 41

Continued from page N/A

Frank Gilleson & Robert Burrows present. Weather is clear and windy. This well will be purged and sampled using A dedicated bladder pump. Carboy "G-3".

Calibration — DW-Ionion

DO sensor - Cal in saturated air @ 640 mmHg
Cond sensor - Cal with 1413 uS/cm STD
Ph sensor - Cal with 2 std ocktan (7 & 10)
Turbo - #200 STD-5.75 LOG-5.78 LOT# 91017 Exp- 3/31/21

Receivers (Time)	Temp(°C)	Cond(uS/cm)	DO	ORP	pH	Turb(NTU)	DTW(ft)
210322 1000B	21.07°C	1.111	2.24	8	7.88	0.34	195.85
—— 1005B	21.10°C	1.110	2.21	10	7.92	0.36	195.85
—— 1010B	21.08°C	1.111	2.23	12	7.94	0.38	195.85

Samples

Sample #	Analysis / Sample ID	Pres	LOT#	LAB	CONT
210322/1320	VOA by 8260	ICE/HCl	2573-1	ALS	(3) 40 mL vial
—— 1321B	" (FB)	ICE	"	"	"
—— 1322B	NOMA/DMB 10 by 607	"	0/24201E	SWRI	(1) Lt amber
—— 1323B	Anions/AIK	"	N/A	ALS	(2) 125 mL poly
—— 1324B	Perchlorate	"	"	"	(1) 125 mL poly
	Landfill				
—— 1325B	VOA by 8260 LF	ICE/HCl		HCl	(3) 40 mL vial
—— 1327B	" (TB)	"		"	(2) 40 mL vial
—— 1328B	EDB/DBCP 504.1	ICE/Na2S2O3		"	(2) 40 mL vial
—— 1329B	" (TB)	"		"	(1) 40 mL vial
—— 1326B	VOA by 8260 LF (Dup)	ICE/HCl		"	(3) 40 mL vial
—— 1330B	SVOA by 8270 F	ICE		"	(4) Lt amber
—— 1331B	Phenols	ICE/H2SO4		"	(1) Lt amber glass
—— 1332B	Cyanide 335.4	ICE/NaOH		"	(1) 500 mL poly
—— 1333B	Metals	ICE/HNO3		"	(1) 250 mL poly
—— 1334B	RADCM	ICE/HNO3		"	(2) 1 Lt poly
—— 1335B	TOC 9060(W)	ICE/HCl		"	(2) 40 mL amber

Continued from page 42

Read and Understood By

Signed — Date 3-22-21 — Signed — Date 3-23-21

Samples cont

Sample #	Analysis	Pres	Cont #	Lab cont
210322101SB	Cl, F, SO4, NO3, NO2, PO4, Si, P, H, TIC, TOC, TN 3500	ICE	N/A	HCl (1) 500 mL poly
1016B	" (Dup)	"	"	"
1017B	Ammonia/Alkalinity/TKN SM4500	ICE/H2SO4	"	"

Continued from page N/A

Read and Understood By

Signed — Date 3-22-21

Signed — Date 3-23-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-21-22 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cl, F, SO4, Total Phosphate, pH, Alkalinity as CaCO3	Analytical Requirement: Ammonia/Nitrate, TKN, Total N						Charge Number
										X PCCC
210322 1015B	1	A	X							"
— 1016B (Dup)	1	A	X							"
— 1017B	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:
[signature]	3-22-22 (1030)			

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOAs by 8260	Volatiles/Semi Vols by 8270	Anions A11K	Perchlorate				Charge Number
										X GMD
210322 1320B	W	A	X							"
—— /321B (FB)	3	A	X							"
—— /322B	1	A		X						"
—— /323B	2	A			X					"
—— /324B	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:
	3-22-21 (1500)			3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-A-253

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA by 8260 LF	EDB/DBCP	SVOA by 8270D	Phenols				Charge Number
210322 1325 B	3	A	X							
— 1326B (Dup)	3	A	X							
— 1327B (TB)	2	A	X							
— 1328B	2	A		X						
— 1329B (TB)	1	A		X						
— 1330B	4	A			X					
— 1331B	1	A				X				

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cyanide	Metals	Radium	TOC				Charge Number
210322 1332B	1	A	X							
— 1333B	1	A		X						
— 1334B	2	A			X					
— 1335B	2	A				X				

Relinquished by	Date / Time:		Accepted by:	Date / Time:
	3-22-21 (1500)			

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

Robert Burrows & Tony Tibler present. The weather is clear & cool. This well will be purged & sampled using a dedicated Teflon Bladder pump. Samples will be collected with a Teflon discharge Tube. Parameters collected with a QED mp.20 flowcell water Analyzer. Carboy G-3

Calibrations

Do sensor Cal'd in 640 mm/Hg saturated air
CondSensor Cal'd in 1413 µs/cm standard.
pH sensor Cal'd using 4, 7, 10 buffers in a 3pt method
Turb #20 std = 5.75 Rdg = 5.64 LOT # 9/017 Exp = 3/31/21

Param's	Temp	CondO	Do	pH	ORP	Turb	DTW
1) 210323 0915B	20.23	1.384	3.61	8.84	25	0.17	~~178.74~~
2) —— 0916B	20.11	1.3.81	3.74	8.73	25	0.20	179.34
3) —— 0917B	20.22	1.388	3.65	8.74	25	0.35	179.34

Samples

Sample #	Analysis	Preserv	Cont	Lab
210323 0920B	8260	ICE/HCl	(3) 40 ml vials	~~HEAL~~
—— 0921B	" (FB)	" ~~ICE/H2SO4/Na2S2O3~~	"	"
—— 0922B	CoD	ICE	(1) ICT amber	SRL
—— 0923B	Anions/ALK	"	(2) 125ml poly	ANS
—— 0924B	Perchlorates	"	(1) 125ml poly	"
—— 0925B	8260 LF	ICE/HCl	(3) 40 ml vials	HEAL
—— 0926B	EDB/DBCP	ICE/$Na_2S_2O_3$	(2) 40 ml vials	"
—— 0927B	SVOA Atrazine PAH's PCB's Pentachlorophenol BEHP	ICE	(4) ICT Amber	"
—— 0928B	" (Dup)	"	(2) ICT Amber	"
—— 0929B	Phenols	ICE/H_2SO_4	(1) ICT Amber	"
—— 0930B	Cyanide	ICE/NaOH	(1) 500ml poly	"
—— 0931B	Metals	ICE/HNO_3	(1) 250ml poly	"
—— 0932B	" (Dup)	"	(1) 250ml poly	"
—— 0933B	Ra 226/228	ICE/HNO_3	(2) ICT Poly	"
—— 0934B	TOC	ICE/HCl	(2) 40 ml vials	"
—— 0935B	Cl, F, SO4 Total phosphate pH, NO_3 as N NO_2 as N	ICE	(1) 500ml poly	"
—— 0936B	Ammonia, NO_2/NO_3, TKN Total N	ICE/H_2SO_4	(1) 500ml poly	"
~~—— 0937B~~	"			

Continued from page

Read and Understood By

F. D. Signed — 3.23.21 Date — Jon M Munch Signed — 3-23-21 Date

Samples Cont.	Analysis	Preserv	Cont	Lab
210323	Ammonia NO_2/NO_3 TKN TON	Ice/H_2SO_4	(1) 500ml poly	Heal

Trip Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0800B	8260	Ice/Hcl	(2) 40ml vials	Heal
— 0801B	EDB/DBCP	Ice/$Na_2S_2O_4$	(1) 40ml vial	Heal

Field Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0802B	8260	Ice/Hcl	(3) 40ml vials	Heal
— 0803B	EDB/DBCP	Ice/Na_2S	(2) 40ml vials	"
— 0804B	SVOA ATRAZINE PAH's BEHP PENTACHLOROPHENOL PCB's	Ice	(4) 1LT AMBERS	"
— 0805B	Phenols	Ice/H_2SO_4	(1) 1LT AMBER	"
— 0806B	Cyanide	Ice/NaOH	(1) 500ml poly	"
— 0807B	Metals	Ice/HNO_3	(1) 250ml poly	"
— 0808B	Ra226/228	"	(2) 1LT poly	"
— 0809B	Toc	Ice/Hcl	(2) 40ml vial	"
— 0810B	Cl F SO_4 Total Phosphate NO_2NO_3 TDS	Ice	(1) 500ml poly	Heal
— 0811B	Ammonia NO_2/NO_3/TKN ASN	Ice/H_2SO_4	(1) 500ml poly	"

Trip Blanks

Sample #	Analysis	Preserv	Cont	Lab
210323 0900B	8260	Ice/Hcl	(2) 40ml vials	Heal
— 0901B	EDB/DBCP	Ice/$Na_2S_2O_4$	(1) 40ml vials	Heal

Continued from page

Read and Understood By

T. [signature] Signed — 3-23-21 Date — [signature] Signed — 3-23-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 1 of 2

Sample Location: 700-D-186

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260	6010	8270 - 0725 / DRX	PERCHLORATE	8260 SR	EDB / DBCP		Charge Number
210323 0920B		3	A	X							XGMD / XPCC
0921B		3		X							(FB)
0922B		1			X						
0923B		2				X					
0924B		1					X				
0925B		3						X			
0926B		2							X		

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	SVOA, ATTAINABLE PAH, PESTICHLOROPHENOL, PCB's, BEHP	PHENOLS	CYANIDE	METALS	RA226/228			Charge Number
0927B		4	A	X							
0928B		2		X							(Dup)
0929B		1			X						
0930B		1				X					
0931B		1					X				
0932B		1					X				~~(Dup)~~
0933B		2						X			

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. Dg	3/23/21 / 1100		[signature]	3-24-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 2 of 3

Sample Location: 700.D.186

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TOC	Cl F SO4 Total phosphate pH NO3 NO2 TDS	Ammonia NO2/NO3 TKN Total N	8260	EB DBCP			Charge Number
										XGMD/XPCC
210323 0934 B	2	A	X							
0935 B	1	1		X						
0936 B	1	1			X					
0900 B						X				Trip Blanks
0901 B							X			Trip Blanks

Sample Location:

Pertinent Notes (if any)

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Tony Torrez	3/23/21 1100			3-24-21 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-23-21 Page 3 of 3

Sample Location: 700-D-186

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	TOC	BTEX/OLF	EDB/DBCP	NO3/NO2	VOA/ABOA	Atrazine Pentachloronitrobenzene PAH's, PCB's, RCRA	Phenols	Charge Number
Pertinent Notes (if any)										XGMD/XPCC
210323	2	A	X							~~Trip Blanks~~ **
0800B	2			X						Trip Blanks
0801B	1				X					Trip Blanks
0802B	3					X				Field Blanks
0803B	2						X			Field Blanks
0804B	4							X		Field Blanks
0805B	1	+							X	Field Blanks

Sample Location:

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	Cyanide	Metals	Ra226/228	TOC	Cl, F, SO4 Total Phos NO2/NO3 TDS	Ammonia NO2/NO3 TKN Total N		Charge Number
Pertinent Notes (if any)										
0806B	1	A	X							Field Blanks
0807B	1			X						Field Blanks
0808B	2				X					Field Blanks
0809B	2					X				Field Blanks
0810B	1						X			Field Blanks
0811B	1						*	X		Field Blanks

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Tony Torrez	3/23/21/1100			3-24-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1325Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1326Y					QC

Initial Parameters
Time - 210322 1355Y
PH - 8.81
Temp - 20.9°C
Cond - 638 us/cm
Turb - 3.16 NTU's
pHpre - 7.10 / 10.06 (17.1°C)
pHpost - 7.13 / 10.07
DTW - 255.27 ft.
Atmos - 12.32 psia

Final
Time - 210323 1035Y
PH - 8.70
Temp - 19.5°C
Cond - 657 us/cm
Turb - 2.26 NTU's
pHpre - 7.10 / 10.14 (16.4°C)
pHpost - 7.13 / 10.11
DTW - 255.44 ft.
Atmos - 12.30 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Extreme dusty conditions during sampling.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1415Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1416Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
1440Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1441Y	VOA/MTBE/1,2,4,Tri.(TB)	ice / HCL	(2) 40ml vials	4118110	HEAL
1442Y	" 8260 (LF)	"	(3) "	0303101F	"
1443Y QC	SVOA/ATR/Pent./PAH	ice	(2) 1L Ambers	101920-1DK	"
210323 1010Y	PCBs/BEHP				

Runs	1)	2)	3)	4)	5)
	137.60	137.50	137.45	137.42	137.38
	144.35	144.33	144.29	144.31	144.28
	144.32	144.29	144.31	144.27	144.26
	137.52	137.49	137.43	137.45	137.35

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/23/21 — Date
Jon Munch — Signed — 3-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-535

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Perchlorate	VOA/MTBE				Charge Number
210322132 5Y (EB)	3	A	✓							XGMD
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1441Y (TB)	2	A				✓				"
1442Y	3	A				✓				"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelToro	3/22/21 1550 hrs.		[signature]	3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page 2 of 2

Sample Location: 700-H-535

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: SVOA/BEHP							Charge Number
2103231010Y	2	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	3/23/21 1115hrs		[signature]	3-24-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210323 1400y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

Initial Parameters
Time - 210323 1440y
PH - 8.85
Temp - 21.3°c
Cond - 858 us/cm
Turb - 0.73 NTU's
pHpre - 7.04 / 10.07 (21.0°c)
pHpost - 7.03 / 10.09
DTW - 255.44 ft.
Atmos - 12.27 psia

Final
Time - 210324 1315y
PH - 8.67
Temp - 20.8°c
Cond - 874 us/cm
Turb - 0.60 NTU's
pHpre - 7.16 / 10.19 (12.4°c)
pHpost - 7.14 / 10.20
DTW - 255.63 ft.
Atmos - 12.31 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" std - 4.60
" rdg - 4.48
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210323 1505y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1506y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1535y	Anions/Alk.	"	(2) 125ml polys	N/A	ALS
——— 1536y	Perchlorate by 6850	"	(1) 125ml poly	"	"

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210324 0815y	VOA+MTBE+1,2,4 Tri. (TB)	ice/HCL	(2) 40ml vials	59072	HEAL
——— 0817y	"	"	(3) "	"	"
——— 0818y	" (Dupl)	"	(3) "	"	"
——— 0816y	EDB ~~(Dupl)~~ DBCP (TB)	ice/SoTh	(1) 40ml vial	000021393	"
——— 0819y	EDB/DBCP 504.1 LF	"	(2) 40ml vials	"	"
——— 0820y	SVOA/ATR/PAH/PCB/BEHP Pentachlorophenol	ice	(4) 1L Ambers	N/A	"

Continued ~~from~~ page 75

Read and Understood By

Craig Del Ferraro — Signed — 3/24/21 — Date

Lori Munch — Signed — 3-25-21 — Date

Sample	Analysis	Preservative	Container	Lot	Lab
210324 0940Y	Phenols/9067W	ice/H_2SO_4	(1) 1L Amber	N/A	HEAL
1005Y	Cyanide/335.4	ice/NaOH	(1) 500ml poly	"	"
1030Y	Metals/200.7/200.8 245.1	ice/HNO_3	(1) 250ml poly	"	"
1031Y	Ra-226/228/903.1 904.0	ice/HNO_3	(2) 1L Poly's	N/A	"
1120Y	TOC/9060W	ice/HCL	(2) 40ml vials	59072	"
210323 1115Y	Cl, F, SO_4, PH, TDS Nitrate/Nitrite/Alk.	ice	(1) 500ml poly	N/A	"
210323 1116Y	Ammonia, NO_2/NO_3 TKN, total N	ice/H_2SO_4	(1) 500ml poly	N/A	"

Runs

1)	2)	3)	4)	5)
56.77	56.74	56.77	56.74	56.74
64.56	64.61	64.56	64.54	64.57
64.60	64.58	64.51	64.48	64.48
56.84	56.81	56.78	56.75	56.72

6)	7)	8)	9)	10)
56.85	56.82	56.86	56.75	56.73
64.67	64.65	64.64	64.62	64.62
64.65	64.66	64.64	64.61	64.60
56.78	56.75	56.74	56.71	56.70

11)	12)
56.71	56.68
64.61	64.61
64.64	64.64
56.68	56.68

Continued from page

Read and Understood By

Craig Del Terme — Signed — 3/24/21 — Date

Peri Munch — Signed — 3-29-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cl, F, SO4 / TDS / Alk.	Analytical Requirement: TKN / NO2 / NO3	Charge Number
210323 1115Y	1	A	✓		XPCC
1116Y	1	A		✓	4

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 Leftwich	3/23/21 1115hrs	[signature]	3-23-21 / 1130

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page _____ of _____

Sample Location: 700-H-350

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Anions / Alk.	Perchlorate				Charge Number
210323 1400Y (EB)	3	A	✓							XGMD
1505Y	3	A	✓							"
1506Y	1	A		✓						"
1535Y	2	A			✓					"
1536Y	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	3/23/21 1605 hrs.		Jon Mundt	3-24-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/24/21 Page _____ of _____

Sample Location: 700-H-350

Sample Number	# of Containers	Sample Matrix*	8260+MTBE	EDB	SVOA	Phenolics				Charge Number
Pertinent Notes (if any)										
210324 0815y (TB)	2	A	✓							XPCC
—— 0817y	3	A	✓							u
—— 0818y (Dupl.)	3	A	✓							u
—— 0816y (TB)	1	A		✓						u
—— 0819y	2	A		✓						u
—— 0820y	4	A			✓					u
—— 0940y	1	A				✓				u

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Cyanide	Metals	Ra-226/228	TOC				Charge Number
Pertinent Notes (if any)										
210324 1005y	1	A	✓							XPCC
—— 1030y	1	A		✓						u
—— 1031y	2	A			✓					u
—— 1120y	2	A				✓				u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	3/24/21 1135hrs.		Jori Munch	3-25-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & windy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1325Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1326Y					QC

Initial Parameters
Time - 210322 1355Y
PH - 8.81
Temp - 20.9°C
Cond - 638 us/cm
Turb - 3.16 NTU's
pHpre - 7.10 / 10.06 (17.1°C)
pHpost - 7.13 / 10.07
DTW - 255.27 ft.
Atmos - 12.32 psia

Final
Time - 210323 1035Y
PH - 8.70
Temp - 19.5°C
Cond - 657 us/cm
Turb - 2.26 NTU's
pHpre - 7.10 / 10.14 (16.4°C)
pHpost - 7.13 / 10.11
DTW - 255.44 ft.
Atmos - 12.30 psia
IDW - ½ gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Extreme dusty conditions during sampling.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1415Y	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
1416Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
1440Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1441Y	VOA/MTBE/1,2,4,Tri.(TB)	ice / HCL	(2) 40ml vials	4118110	HEAL
1442Y	" 8260 (LF)	"	(3) "	0303101F	"
1443Y QC	SVOA/ATR/Pent./PAH	ice	(2) 1L Ambers	101920-1DK	"
210323 1010Y	PCBs/BEHP				

Runs	1)	2)	3)	4)	5)
	137.60	137.50	137.45	137.42	137.38
	144.35	144.33	144.29	144.31	144.28
	144.32	144.29	144.31	144.27	144.26
	137.52	137.49	137.43	137.45	137.35

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/23/21 — Date
Jon Munch — Signed — 3-24-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-535

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Perchlorate	VOA/MTBE				Charge Number
210322132 5Y (EB)	3	A	✓							XGMD
1415Y	3	A	✓							"
1416Y	1	A		✓						"
1440Y	1	A			✓					"
1441Y (TB)	2	A				✓				"
1442Y	3	A				✓				"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelToro	3/22/21 1550 hrs.		[signature]	3-23-21 / 0915

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/23/21 Page 2 of 2

Sample Location: 700-H-535

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: SVOA/BEHP							Charge Number
2103231010Y	2	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	3/23/21 1115hrs		[signature]	3-24-21 / 0900

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

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. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210322 0745Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

30 Min. Equipment Blanks - Carboy G.5

Sample	Analysis	Preservative	Container	Lot	Lab
210322 0845Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0846Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI

Initial Parameters
Time - 210322 0950Y
PH - 8.67
Temp - 19.5°C
Cond - 714 us/cm
Turb - 2.67 NTU's
pHpre - 7.14/10.10 (14.0°C)
pHpost - 7.16/10.11
DTW - 255.10 ft.
Atmos - 12.33 psia

Final
Time - 210322 1110Y
PH - 8.51
Temp - 19.8°C
Cond - 730 us/cm
Turb - 1.80 NTU's
pHpre - 7.11/10.08 (15.0°C
pHpost - 7.13/10.07
DTW - 255.27 Ft.
Atmos - 12.31 psia
IDW - ½ gal.

Meter ID
pH/Cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.54
" lot - 91017
" Exp - 5/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1015Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1016Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI
——— 1040Y	Perchlorate by 6850	"	(1) 125ml poly	N/A	ALS

Landfill Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210322 1041Y	VOA/MTBE/1,2,4Tri.(TB)	ice/HCL	(2) 40ml vials	411810	HEAL
——— 1042Y	" 8260 LF	"	(3) 40ml vials	0303101F	"
——— 1043Y	SVOA/Atr/Pent./PAH/PCB's BEHP	ice	(2) 1L Ambers	101920-1DK	"

Continued ~~from~~ page 72

Read and Understood By

Craig Del Ferro — Signed — 3/22/21 — Date

Jen Munch — Signed — 3-23-21 — Date

PROJECT 700-H-670 WII ENV-0020

Notebook No. D64 #127 (Y)

Continued from page 71

Runs	1)	2)	3)	4)
	196.57	196.54	196.42	196.29
	202.55	202.56	202.56	202.53
	202.53	202.38	202.54	202.39
	196.55	196.49	196.35	196.25

Continued from page

Read and Understood By

Craig DeFreese — Signed — 3/22/21 — Date

Jon Munck — Signed — 3-23-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/22/21 Page 1 of 1

Sample Location: 700-H-670

Sample Number	# of Containers	Sample Matrix*	8260	607	Perch/orate	8260/MTBE				Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210322 0745Y (TB)	3	A	✓							XGMD
0845Y (EB)	3	A	✓							〃
0846Y (EB)	1	A		✓						〃
1015Y	3	A	✓							〃
1016Y	1	A		✓						〃
1040Y	1	A			✓					〃
1041Y (TB)	2	A				✓				XPCC

Sample Location:

Sample Number	# of Containers	Sample Matrix*	8260/MTBE	8270/SVOA						Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210322 1042Y	3	A	✓							XPCC
1043Y	2	A		✓						〃

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/22/21 1125hrs		[signature]	3-23-21 0915

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

Frank Gallegos & Robert Burrows present. Weather is clear and windy. This well will be purged and sampled with a dedicated bladder pump. Samples will be taken first from the XGMD and the rest for landfill.

Carboy "G-3" 25-Gallons - DDW

Calibrations

DO sensor - Cal in Saturated Air @ 640 mm/Hg

Cond sensor - CAL with 1413 us/cm STD

Ph sensor - using Oakton Buffers (7 & 10)

Turbmeter - #200 STD-5.75 RDG-5.78 Lot#191017 Exp. 3/31/21

Parameters (Time)	Temp (°C)	Cond (ms/cm)	DO	ORP	Ph	Turb (NTU)	DTW
210322 0840B	20.83	1.275	4.94	40	7.77	0.57	121.84
—— 0845B	20.76	1.278	4.92	38	7.74	0.64	"
—— 0850B	20.80	1.274	4.91	39	7.76	0.48	"

Samples

Sample #	Analysis	Pres	Lot #	Lab Cont
210322 0900B	VOAs by 8260 (FB)	ICE/HCl	2573-1	VIALS (3) 40mL vial
—— 0901B	" (FB)	"	"	" "
—— 0907B	NDMA/DMN/Bromide by 607	ICE	01242018	500mL (1) Cl+ amber
—— 0903B	Anions/Alk	"	N/A	ALS (1) - 125mL poly
—— 0904B	Perchlorate	"	"	(1) 125mL poly
—— @		Landfill		
—— 0905B	VOAs + MTBE + 1,4 (8260LF)	ICE/HCl	N/A	VIALS (3) 40mL vial
—— 0906B	" (TB)	"	"	" (2) 40mL vial
—— 0908B	EDB/DBCP (504.1)	ICE/Na2SO3	"	" (2) 40mL vial
—— 0908B	" (Dup)	"	"	" (2) " "
—— 0909B	" (TB)	"	"	" (1) " "
—— 0910B	VOAs (8260LF) + 8310LF + 8082LF	ICE	"	" (4) 1 Liter Amber
—— 0911B	Phenols 9067M	ICE/H2SO4	"	" (1) Liter Amber
—— 0912B	Cyanide 335.4	ICE/NaOH	"	" (1) 500mL poly
—— 0913B	Metals 200.8/6020A/200.7/6010B/245.1/7470A/903.1/904.0	ICE/HNO3	"	" (1) 250mL poly
—— 0914B	Radium (Ra-226/228)	ICE/HNO3	"	" (2) 1 Liter poly
—— 0915B	TOC 9060M	ICE/HCl	"	" (2) 40mL amber w/ HCl

Continued from page 40

Read and Understood By

Signed — Date — Signed — Date

3-22-21 — 3-23-21

3-22-21

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PROJECT 7000-J-2000 WJSIENV-0053 Notebook No. DJ2-#1198
Continued from page 39.

46 hours samples

Samp ext	Analysis	Prep	LOTH	LAB CONT
210322 0916B	Cl, F, SO4 NO3AsN NO2AsN 300.0 CE TDS/Alkalinity 310.1CE 2540C		N/A	HALL (1) 500 mL poly
—— 0917B	Ammonia/NO3/NO2, TKN, TOTALN 350.1CE/353.2CE/351.2CE/H2SO4		..	HALL (1) 500 mL poly
—— 0918B	.. (Dup)		..	.. ..

Continued from page N/A

Read and Understood By

Signed — Date 3-23-21

Signed — Date 3-23-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 7-22-21 Page 1 of 1

Sample Location: 700-J-200

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	JOA by 8260	Fluoride (SM) Br, by 9607	Anions/ A1C	Perchlorate				Charge Number
210327090003	3	A	X							x BMD
— 0901B (FB)	3	A	X							"
— 0902B	1	A		X						"
— 0903B	2	A			X					"
— 0904B	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:
[signature]	3-22-21 (1030)		[signature]	3-23-21 / 0914

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-22-21 Page 1 of 1

Sample Location: 700-J-200

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA + MTBE 1,2,4 Trichlor	EDB/DBCP 504.1	5034	Phenols				Charge Number
										XPCC
210322 0905B	3	A	X							
0906B (TB)	2	A	X							
0907B	2	A		X						
0908B (Dup)	2	A		X						
0909B (TB)	1	A		X						
0910B	4	A			X					
0911B	1	A				X				

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Cyanide	metals	Redcm	TOC	Cl, F, SO4, PH, Total Phosphate, NO2 As, NO3 TBS, ASP	Ammonia/NO2/NO3 TKN, TOTAL N		Charge Number
										X PCC
210322 0912B	1	A	X							
0913B	1	A		X						
0914B	2	A			X					
0915B	2	A				X				
0916B	1	A					X			
0917B	1	A						X		
0918B (Dup)	1	A						X		

Relinquished by:	Date / Time:		Accepted by:	Date / Time:

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

Tim Moore present. Samples will be collected from the dedicated sample port located on the EFFluent side of the system. The sample port will be purged for five minutes prior to parameters and sample collection. Code by "RFI" used for Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 210305 0520	pH/Cond #	7	4002 G91	8/22
pH 8.16	Turb #	10	4001 D05	9/22
Temp 24.7 C	" STD 9.67 NTU			
Cond 1095 uS/cm	" Rdg			
Turb 0.18 NTU	" Lot			
DO mg/L 7.00-10.00 (18.5 C)	" Exp			
pH Port				

Sample #	Analysis	Sample Preserv.	Container	Lot	Lab
210305 0525	VOCs by 8260 LC	Ice/HCl	(3) 40 ml Vials	2583	ALS
— 0526	" FB	"	"	"	"
— 0527	NDMA/Benz/Phenols by 607	Ice	(1) 1 LT Amb	810650 F	SW
— 0528	Low Level NDMA	"	"	"	"
— 0529	" FB	"	"	"	"

Continued from page

Read and Understood By

Signed — Date: 5 Mar 2021

Signed — Date: 3-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page 1 of 1

Sample Location: B50-EFF-1

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMN/BROMACIL 607	Low Level NDMA	Total Metals	Anions/Alk	TDS SM2540C	Charge Number
2103050525	3	A		X						XGMD
0526 FB	3			X						
0527	1				X					
0528	1					X				
0529 FB	1					X				

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO_2/NO_3 353.2						Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Tim Moore present. Samples will be Collected From The Dedicated Sample port located on The Influent side of The System. The Sample port will be purged For One Minute prior To Parameters And Sample Collection. Code "PFI" used For Field Blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 2103 0530 0548	pH/Cond	7	4002691	6/22
pH 7.32	Turb	10	4002D05	6/22
Temp 24.0°C	" STD 9.67 NTU			
Cond 1103 us/cm	" Rdg 9.69 NTU			
Turb 0.53 NTU	" Lot A0334			
pH Pre 6.99-10.00 (21.8°C)	" Exp 3/31/2021			
pH Post				

Samples

Sample #	Analysis	Preserv.	Container	Lot	Lab
210305 0534	VOA by 8260	Ice/HCL	(3) 40 ml Vials	22583	ALS
—— 0555	" Dup	"	"	"	"
—— 0556	" FB	"	"	"	"
—— 0557	NDMA/1,4 dioxane/Bromide/1,4 by 607	Ice	(1) 1 Lt Amb	0108501F	SWRI
—— 0558	" Dup	"	"		"

Continued from page

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WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 Mar 2021 Page 1 of 1

Sample Location: B650 - Inf-1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607 LOW LEVEL NDMA	TOTAL METALS	ANIONS / ALK	TDS SM2540C	Charge Number
210305 0554		3	A	X						XGMD
0555	DUP	3		X						
0556	FB	3		X						
0557		1				X				
0558	DUP	1				X				

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: PERCHLORATE 6850	NO_2/NO_3 353.2	Charge Number
						XGMD

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
	5 MAR 2021 0910		3-8-21 / 0915

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

WSTF 381C (05/2016)

OJECT D655-EFF-2

Notebook No. PFTS #9

Continued from page _____

Tim Moore present. Samples will be collected from the indicated sample port located on the Effluent side of the system. The sample port will be purged for one minute prior to parameters and sample collection. Cooler "EFT" used for field blanks.

Parameters	Meter ID	Buffer	Lot	Exp
Time: 2103050701	pH/cond	7	4002691	8/22
pH 8.47	Turb	10	4001305	8/22
Cond 23.4 ic	" STD 9.67 NTU			
Turb 0.26 NTU	" Lot 9.65 NTU A033			
DO/Temp 7.00-10.00 (19.5 ic)	" Exp 5/31/2021			
ORP	" Adj 9.65 NTU			
Post				

Sample #	Analysis	Samples Preserv	Container	Lot	Lab
2103050707	VOA by 8260LC	Ice/HCl	(3) 40mL Vials	2383	ALS
——— 0708	" FB	"	"	"	"
——— 0709	NBMA/BMA/Bromacil by 607	Ice	(1) 1LT Amb	0108501F	SGS
——— 0710	Low Level NBMA	"	"	"	"
——— 0711	" FB	"	"	"	"

Continued from page

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Signed

5 MAR 2021
Date

Signed

3-8-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page _____ of _____

Sample Location: B655-EFF-2

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMN/ BROMACIL 607	LOW LEVEL NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	Charge Number
2103050707	3	A		X						XGMD
0708 FB	3			X						
0709	1				X					
0710	1					X				
0711 FB	1					X				

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO_2/NO_3 353.2						Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Tim Moore present. Samples will be Collected From The Dedicated Sample port located on The Influent Side of The System. The Sample port will be Eff. Purged for One Minute prior To parameters and Sample Collection. Cooler "PFT" used For Field Blanks.

Parameters		Meter ID		Buffer	Lot	Exp
Time:	2103050801	pH/cond		7	4002@91	8/22
pH	7.03	Turb		10	4001 Dos	6/22
Temp	22.9°C	"STD	9.67 NTU			
Cond	1096 uS/CM	"Rdg	9.68 NTU			
Turb	0.33 NTU	"Lot	A0334			
pH Cal	7.01-10.00 (20.5°C)	"Exp	3/31/2021			
pH Post						

Samples

Sample #	Analysis	Preserve	Containers	Lot	Lab
2103050806	VOA by 8260	Ice/HCL	(3) 40 mL Vials	2583	ALS
—— 0807	" FB	"	"	"	"
—— 0808	NDMA/Bmm/Bromate/1,4 Dioxane by 607	Ice	(1) 1LT Amb	0108501F	SWET

Continued from page

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Signed — Date: 3-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 5 MAR 2021 Page 1 of 1

Sample Location: B655 - Inf-2

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOA 8260	LL-VOA 8260LL	NDMA/DMNJ/BROMACIL 607 Low Level NDMA	TOTAL METALS	ANIONS/ALK	TDS SM2540C	Charge Number
2103050806		3	A	X						XGMD
0807	FD	3	A	X						
0808		1	A			X				

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	PERCHLORATE 6850	NO2/NO3 353.2					Charge Number
										XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	5 MAR 2021 0910			3-8-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy, this well will be purged using a dedicated bladder pump. Samples will be collected using teflon discharge hose. Parameters will be monitored using a standard PH/Cond. meter (#61). No QED flow cell available – ORP & DO will not be monitored. Carboy G5 in use.

Turbidity meter #7 std-4.60 rdg-4.65 lot-91017 Exp-3/31/21
precal -7.04/10.07(19.9°C) postcal-7.04/10.09

Parameters (time)	temp (°C)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210315 1335B	20.6	~~7.84~~ 1.061	7.84	0.64	509.05
2) ——— 1338B	20.7	1.053	7.81	0.60	509.05
3) ——— 1341B	20.7	1.050	7.79	0.56	509.05

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210315 1345B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1346B	" (Dupl.)	"	"	"	"
——— 1347B	" (FB)	"	"	"	"
——— 1348B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1349B	" (Dupl.)	"	"	"	"
——— 1350B	Anions/Alk.	"	(2) 125ml poly's	N/A	ALS
——— 1351B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1352B	Perchlorate by 6850	"	"	"	"
——— 1353B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 509.05ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro Signed 3/15/21 Date

Lori Wunder Signed 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/21 Page 1 of 1

Sample Location: BLM-5-527

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Anions / Alk.	TDS				Charge Number
210315 1345 B		3	A	✓							XGMD
1346B (Dupl.)		3	A	✓							"
1347B (FB)		3	A	✓							"
1348B		1	A		✓						"
1349B (Dupl.)		1	A		✓						"
1350B		2	A			✓					"
1351B		1	A				✓				"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Perchlorate	NO_2 / NO_3						Charge Number
210315 1352 B		1	A	✓							XGMD
1353B		1	A		✓						"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	3/15/21 1430hrs.		[signature]	3-16-21 / 0910

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

Al monitored by Dan Halvorsen 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. Carboy #1 in use.

Calibrations:
Initial DTW: 495.57 ft.
Final " 495.71 ft.
TDW: 2 gal.
Do Sensor: In saturated air at 694 mm/Hg.
pH sensor = using a 3 pt. (4, 7, 10) Buffer method.
Conductivity: using a 1413 µS/cm STD. Solution.
Turbidity meter: #20 STD = 5.75 RDG = 5.59 LOT #: 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	Do	pH	ORP	Turb	DTW (ft.)
2103010930 C	20.52	1144	3.89	8.46	34	0.68	495.71
0932 C	20.51	1141	3.86	8.41	33	0.63	495.71
0934 C	20.52	1143	3.88	8.40	33	0.62	495.71

SAMPLES

Sample #	Analysis	Preserve	Container	Lot	Lab
2103010940 C	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	25733.2	ALS
0941 C	" " (FB)	"	"	"	"
0942 C	NDMA/NDMA Bromacil by 607	Ice	(1) 1L Amber	108501	SRL
0943 C	NDMA LL	"	"	"	"
0944 C	" " (FB)	"	"	"	"
0945 C	Total metals	Ice/HNO3	(2) 125 ml Poly	20.07.07	ALS
0946 C	Anions/Alk	Ice	(2) "	N/A	"
0947 C	TDS by SM2540C	"	(1) "	N/A	"
0948 C	Perchlorate by 6850	"	(1) "	"	"
0949 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

Read and Understood By

Signed — Date: 3-1-2021
Signed — Date: 3-2-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-1-2021 Page 1 of 1

Sample Location: BLM-7-509

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOC	607	UOM & LL	Metals	Anions / Alk			Charge Number
				Analytical Requirement							XGMD
210301 0940 C		3	A	X							
0941 C	FB	3		X							
0942 C		1			X						
0943 C		1				X					
0944 C	FB	1				X					
0945 C		2					X				
0946 C		2						X			

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	TDS	Perchlorate	NO2/NO3					Charge Number
				Analytical Requirement							
210301 0947 C		1	A	X							
0948 C		1			X						
0949 C		1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-1-2021 1100			3-2-21 0930

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

AT MW-53 3 DAY HALLOWEEN PRESENT. WEATHER IS COLD AND BREEZY. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A TEFLON DISCHARGE TUBE. PARAMETERS WILL BE MONITORED WITH A QED MP-20 FLOW CELL. CARBOY C-1

CALIBRATIONS
DO - SAT AIR @ 643 mm/Hg
PH - 3PT (4,7,10) BUFFERS
COND - W/ 1413 us/cm STD SOLUTION
TURB MTR. 21 STD - 66.5 NTU RDG - 63.8 NTU LOT# - 9101 EXP - 3/21

INITIAL DTW → 378.18 FT
IDW → 2 gal

PARAMETERS	TEMP C	COND	DO	PH	ORP	TURB	DTW (FT)
210302 1310 c	20.10	0.998 ms/cm	5.20	8.69	-58	2.82	378.39 FT
1315 c	19.76	0.993	5.31	8.76	-59	2.76	378.36
1320 c	19.80	0.999	5.01	8.90	-60	2.42	378.39

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210302 1330 c	VOA 8260	ICE HCL	3-40 mL VIALS	2573.2	ALS
1331 c	" " (FB)	" "	"	"	"
1335 c	NDMA-DMN-BLD-607	ICE	1 LT AMBER	108501	SEL
1336 c	" " " " (DUP)	"	"	"	"
1337 c	ANIONS/ALK	ICE-D HEAD	2-125 Poly	NA	ALS
1338 c	TDS	ICE	"	"	"
1339 c	PERCHLORATE	ICE 2/3 FULL	"	"	"
1340 c	NO_2 NO_3	ICE H_2SO_4	250 mL Poly	20.11.27	"

* NITROGEN RAN OUT IN A.M. - RE STOCKED
* FLOW CELL BATTERIES DIED IN P.M.

Continued from page NA

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Signed — Date 3.2.21
Signed — Date 3-4-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3·2·21 Page 1 of 1

Sample Location: BW.9.419

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	VOA 8260	NDMA.607	AN-22S.ALK	TDS	PERCHLORATE			Charge Number
			Analytical Requirement							XGMD
210302 1330c	3	A	X							
1331c (FB)	3	A	X							
1335c	1	A		X						
1336c (DUP)	1	A		X						
1337c	2	A			X					
1338c	1	A				X				
1339c	1	A					X			

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	2022 03							Charge Number
			Analytical Requirement							
210302 1340c	1	A	X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3·2·21 11AM			3-3-21 0945

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

Dan Halvorsen & Robert Burrows 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 a QED MP-20 flowcell and water analyzer. Cartridge G1 in use.

Calibrations:

Initial DTW = 247.89 ft.
Final " = 248.42 ft.
IDW = 1.5 gal.

DO Sensor = In saturated air @ 644 mm/Hg.
pH Sensor = using a 3pt (4,7,10) Buffer method.
Conductivity = using a 1413 us/cm STD. Solution.
Turbidity Meter # 21 STD = 66.5 RDG = 67.2 LOT = 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb	DTW (Ft.)
210304 0900 C	20.12	1283	5.74	8.10	+32	0.24	248.39
—— 0902 C	20.15	1280	5.76	8.09	+31	0.27	248.39
—— 0904 C	20.11	1281	5.75	8.11	+31	0.26	248.39

SAMPLES

Sample #	Analysis	Preserve	Container	LOT	LAB
210304 0910 C	VOA by 8260	Ice/HCl	(3) 40 ml Vial	25773-2	ALS
—— 0911 C	" " (FB)	"	"	~~108501~~	"
—— 0912 C	NDMA/DMP Bromacil by 607	Ice	(1) 1L Amber	108501	SRL
—— 0913 C	NDMA LL	"	"	"	"
—— 0914 C	" " (FB)	"	"	"	"
—— 0915 C	SVOA by 8270 D	"	(2) "		ALS
—— 0916 C	Total Metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	"
—— 0917 C	" " (Dup)	"	(2) "	"	"
—— 0918 C	Anions/Alk	Ice	(2) "	NULA	"
—— 0919 C	TDS by SM2540 C	"	(1) "	"	"
—— 0920 C	GRO by 8015 D	Ice/HCl	(3) 40 ml Vial	25773-2	"
—— 0921 C	DRO by 8015 D	Ice	(1) 1L Amber	NULA	"
—— 0922 C	Perchlorate by 6850	"	(1) 125 ml Poly	"	"
—— 0923 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

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Signed — 3-4-2021 Date — Signed — 3-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-2021 Page 1 of 1

Sample Location: BLM 13-300

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOC	607	NDMA LL	SUB	metals			Charge Number
2103040910 C		3	A	X							XGMO
0911 C		3		X							
0912 C		1			X						
0913 C		1				X					
0914 C		1				X					
0915 C		2					X				
0916 C		2						X			

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	metals	Anions 9212	TOS	GRO	DRO	Perchlorate	NO2/NO3	Charge Number
2103040917 C		2	A	X							
0918 C		2			X						
0919 C		1				X					
0920 C		1					X				
0921 C		1						X			
0922 C		1							X		
0923 C		1								X	

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-4-2021 1600			3-8-21 0915

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

AC MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WINDY. THIS ~~WEATHER~~ WELL WILL BE PURGED & SAMPLED USING A DEDICATED TEFLON BLADDER PUMP. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. WATER QUALITY PARAM'S TAKEN WITH A QED MP·20 FLOWCELL. CARBOY B-3

~~PARAM'S~~ CALIBRATIONS

DO SENSOR cal'd in Collomm Hg SATURATED AIR

COND SENSOR 14.13 ms/cm STANDARD cal'd SENSOR

pH SENSOR 4, 7, 10 BUFFERS USED IN A 3pT CAL METHOD

TURB METER # ~~B-3~~ 20 STD = 5.75 Rdg = 5.69 LOT# = 91017 EXP = 3/31/21

PARAM'S	TEMP	COND	DO	pH	ORP	TURB	DTW
210315 1500c	20.31	1.328	6.25	8.85	-25	3.03	277.95 ft
— 1501c	20.27	1.330	5.80	8.85	-25	2.95	277.95
— 1502c	20.38	1.337	5.72	8.87	-25	2.87	277.95

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT#	CONT	LAB
210315 1503c	8260	ICE/HCl	2753-2	(3) 40ml vials	ALS
— 1504c	" (FB)	"	"	"	"
— 1505c	607	ICE	108501	(1) 1 Amber	SMI
— 1506c	TOTAL METALS	ICE/HNO3	200707	(2) 125ml poly	ALS

Continued from page

Read and Understood By

J. [signature] Signed — 3-15-21 Date

[signature] Signed — 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ~~FH~~ 3-15-21 Page 1 of 1

Sample Location: Blm-14-327

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260	6007	TOTAL METALS					Charge Number
										X6MD
210315-1503c	3	A	X							
1504c (FB)	3		X							
1505c	1			X						
1506c	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:
[signature]	3/15/21 / 1600		[signature]	3-16-21 / 0910

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

b Tufts & Craig Del Ferraro present. Weather is clear & cool. This well will be rg-ed using a dedicated bladder pump. Samples will be collected using a teflon scharge hose. Water quality parameters will be monitored using a QED P-20 flow cell and water analyzer. Carboy GS in use.
*Packer pressure prior to sampling @ 15psi — 28psi for sampling.

alibrations
O - calibrated in saturated air @ 640 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
l - calibrated using Fisher buffers (7-10).
rbidity meter #7 std - 4.60 rdg - 4.68 lot - 91017 Exp - 3/31/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
2103100700B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0701B	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

arameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
2103100850B	20.38	0.649	3.71	62	8.04	0.51
——— 0855B	20.47	0.645	3.63	61	8.01	0.53
——— 0859B	20.55	0.638	3.50	62	7.96	0.44

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2103100900B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0901B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 0902B	Low Level NDMA	"	"	"	"
——— 0903B	SVOA by 8270D	"	(2) 1L Ambers	N/A	ALS
——— 0904B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 0905B	Anions/A/K.	ice	"	N/A	"
——— 0906B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0907B	Perchlorate by 6850	"	"	"	"
——— 0908B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"
——— 0909B	VOA by 8260 LL (FB)	ice/HCL	(3) 40ml vials	2573-2	"
——— 0910B	Low Level NDMA (FB)	ice	(1) 1L Amber	0124201E	SRI

No depth available. Packer holding @ 28psi. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro Signed 3/10/21 Date

Jori Munck Signed 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: BLM-42-569

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	SVOA	Total Metals			Charge Number
210310 0700B (TB)	3	A	✓							XGMD
0701B (TB)	1	A			✓					"
0900B	3	A	✓							"
0901B	1	A		✓						"
0902B	1	A			✓					"
0903B	2	A				✓				"
0904B	2	A					✓			"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Anions / Alk.	TDS	Perchlorate	NO2/NO3	8260 LL	LL NDMA		Charge Number
210310 0905B	2	A	✓							XGMD
0906B	1	A		✓						"
0907B	1	A			✓					"
0908B	1	A				✓				"
0909B (FB)	3	A					✓			"
0910B (FB)	1	A						✓		"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fiume	3/10/21 1120hrs.		[signature]	3-11-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. 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 YSI 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 Fisher butters (7-10).
Turbidity meter #7 std-4.60 rdg-4.68 lot-91017 Exp-3/3/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
1) 210310 1020B	20.90	0.655	3.36	34	8.34	0.30
2) ——— 1024B	21.06	0.659	3.30	34	8.32	0.26
3) ——— 1028B	21.13	0.664	3.20	32	8.31	0.32

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210310 1030B	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2583	ALS
——— 1031B	" (FB)	"	"	"	"
——— 1032B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRL
——— 1033B	Low Level NDMA	"	"	"	"
——— 1034B	" (FB)	"	"	"	"
——— 1035B	SVOA by 8270D	"	(2) 1L Ambers	N/A	ALS
——— 1036B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1037B	Anions/Alk.	ice	"	N/A	"
——— 1038B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1039B	Perchlorate by 6850	"	"	"	"
——— 1040B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

* No depth available Total gallons purged - 3

* Packer holding steady @ 28psi. Initial packer reading prior to sampling was 15psi. Packer inflated to 28psi for sample collection.

Continued from page

Read and Understood By

Craig Del Ferraro Signed 3/10/21 Date

Signed 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/10/21 Page 1 of 1

Sample Location: BLM-42-709

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	SVOA	Total Metals			Charge Number
210310 1030B ~~FF~~		3	A	✓							XGMD
1031B (FB)		3	A	✓							"
1032B		1	A		✓						"
1033B		1	A			✓					"
1034B (FB)		1	A			✓					"
1035B		2	A				✓				"
1036B		2	A					✓			"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3				Charge Number
210310 1037B		2	A	✓							XGMD
1038B		1	A		✓						"
1039B		1	A			✓					"
1040B		1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/10/21 1120hrs.		Jon Munch	3-11-21 /0900

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

Bob Tufts & Craig DelFerraro present. Weather is clear, warm, & windy. 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 GS.

Modified Sampling Event

Calibrations

DO - calibrated in saturated air @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #7 std - 4.60 rdg - 4.71 lot-91017 Exp - 3/31/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTUs)	DTW (ft)
1) 210309 1310B	21.89	1.389	5.31	122	6.93	6.06	168.75
2) ——— 1312B	22.02	1.382	5.12	121	6.98	5.13	168.85
3) ——— 1314B	22.08	1.370	4.94	120	7.04	4.60	168.96

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210309 1316B	VOA by 8260	ice/HCl	(3) 40ml vials	2573-2	ALS
——— 1317B	" (FB)	"	"	"	"
——— 1318B	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
——— 1319B	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1320B	Anions/Alk.	ice	"	N/A	"
——— 1321B	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1322B	Perchlorate by 6850	"	"	"	"
——— 1323B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	"

Initial DTW - 168.70ft.

Total gallons purged - 1/4 gal.

Continued from page

Read and Understood By

Craig DelFerraro 3/9/21
Signed Date

Signed 3-10-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21

Sample Location: BW-1-268

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk.	TDS	Perchlorate		Charge Number
~~210308~~CO 210309 1316B	3	A	✓							XGMD
1317B (FB)	3	A	✓							"
1318B	1	A		✓						"
1319B	2	A			✓					"
1320B	2	A				✓				"
1321B	1	A					✓			"
1322B	1	A						✓		"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	NO_2/NO_3							Charge Number
210309 1323B	1	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTerzo	3/9/21 1400 hrs.			3-10-21 / 0930

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

4
ROJECT BW-6-355 WI 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 Teflon discharge hose. Water quality parameters will be monitored using ~~QED M~~ a standard PH/cond. meter. No QED flow cell available - no DO or ORP will be monitored. Carboy G5 in use.

Parameters (time)	temp (°c)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210311 1025B	19.1	1022	8.30	0.76	246.12
2) ——— 1028B	19.1	1029	8.26	0.72	246.12
3) ——— 1031B	19.3	1033	8.24	0.63	246.12

* pre cal - 7.06/10.12 (17.6°c) * Post cal - 7.08/10.10

Sample	Analysis	Samples Preservative	Container	Lot	Lab
210311 1035B	VOA by 8260	ice/HCL	(3) 40ml vials	2583	ALS
——— 1036B	" (FB)	"	"	"	"
——— 1037B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRL

Initial DTW - 245.30ft. Total gallons purged - 2

* Turbidity meter #7 std-4.60 rdg-4.54 lot-91017 Exp-3/31/21
* PH/Cond. meter #61
* Smith regulator was replaced with a new Victor regulator prior to sampling. Model # for Victor - SR4F / S/N for Smith - 824. the ~~Smith~~ Victor regulator did not creep or sway from the original set pressure of 260psi at any time during the sampling event.

Continued from page

Read and Understood By

Craig Del Ferraro 3/11/21 Date
Signed Peter Munch 3-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: BW-6-355

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210311 1035B	3	A	✓							XGMD
1036B (FB)	3	A	✓							u
1037B	1	A		✓						u

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 McFerrand	3/11/21 1115hrs		[signature]	3-15-21 / 0920

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

Marcus Angles & Robert Burrows present. Weather is clear & cool. This
all will be purged using a dedicated bladder pump. Samples will be collected
sing of new teflon discharge tube. Water quality parameters will be
nitored using a QED MP-20 flow cell & water analyzer. Calibrated 6.3

Trip Blanks

mple #	Analysis	Preserve	Container	lot	lab
2103170730B	Low Level NOMA	Ice	(1) 1L Amber	01242016	SRI

rameters (time)	Temp (°C)	Cond (mS/cm)	DO	ORP	PH	Turb (NTU)
2103170855B	17.42	0.999	4.10	8	7.92	0.86
— 0857B	17.45	1.000	4.05	7	7.93	0.49
— 0859B	17.37	1.004	4.12	7	7.90	0.58

libration
- Cal in saturated air @ 637 mm/Hg
nductivity - Cal in ~~saturated~~ 1413 µS/cm STD
- Cal using Oakton Buffers (4.7, 10)

Samples

mple #	Analysis	Preserve	Container	lot	lab
2103170905B	VOA by 8260LL	HCl/Ice	(3) 40ml vials	25781	ALS
— 0906B	" (FB)	"	"	"	"
— 0907B	Low Level NOMA	Ice	(1) 1L Amber	01242016	SRI
— 0908B	" (FB)	"	"	"	"
— 0909B	Total Metals	HNO3/Ice	(2) 125 ml poly	200107	ALS

Initial DTW - 125.65' Final DTW - 125.80'

Turbidity Meter - #20 STD - 5.75 NTU RDG - 6.04 NTU Lot - 91017 Exp - 3/31/21

Continued from page

Read and Understood By

3/17/21 3-17-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/17/21 Page _____ of _____

Sample Location: Nasa 3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 77	LL NDMA	T. Mehls					Charge Number
210317073013 (TB)	1	A		X						XGMD
0905B	3		X							
0906B (FB)	3		X							
0907B	1			X						
0908B (FB)	1			X						
0909B	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:
[signature]	3/17/21 @ 0940		[signature]	3-17-21 / 1000

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

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. Parameters will be monitored using a standard PH/Cond meter (#61). No QED Flow cell available - no ORP or DO will be available Carboy G5 in use.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210315 0830B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

Parameters (time)	temp (°c)	cond (ms/cm)	PH	Turb (NTU's)	DTW (ft.)
1) 210315 0945B	17.2	1.011	8.54	2.09	477.26
2) ——— 0948B	17.3	1.006	8.52	1.99	477.26
3) ——— 0951B	17.3	1.009	8.51	1.75	477.26

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210315 0955B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0956B	" (FB)	"	"	"	"
——— 0957B	607/Bromacil	ice	(1) 1L Amber	0124201E	SRS

Turbidity meter #7 std - 4.60 rdg - 4.65 lot - 91017 Exp - 3/3/21

precal - 7.13/10.11 (16.0°c) postcal - 7.14 / 10.09

Initial DTW - 477.17 ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro Signed — 3/15/21 Date — Signed — 3-16-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/15/21 Page 1 of 1

Sample Location: PL-2-504

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607						Charge Number
210315 0830B (TB)	3	A	✓							XGMD
0955B	3	A	✓							4
0956B (FB)	3	A	✓							4
0957B	1	A		✓						4

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 M Foard	3/15/21 1100hrs.		Jon M Jumah	3-16-21 / 0910

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

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 tube. Water quality parameters will be monitored using a QED MP.20 flow cell & water analyzer. Calibrations

DTW- 447.82'

DO- Cal in saturated air @ 686 mm/Hg.
pH- Cal using Oakton Buffers (4,7,10)
Conductivity- Cal using 1413 uS/cm STD solution
Turbidity Meter- #21 STD- 666.5 NTU 120A- Lot- 9117 Exp- 3/21

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
210311070 0c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
— 0701c	Low Level NDMA	Ice	(1) 1L Amber	108501	SRI

Parameters (time)	Temp(°C)	Cond(mS/cm)	DO	pH	ORP	Turb (NTU)	DTW(ft)
1) 210311 0935c	18.69	1.103	5.70	8.63	24	0.35	447.90'
2) — 0937c	18.61	1.112	5.68	8.64	21	0.36	"
3) — 0939c	18.64	1.110	5.59	8.64	22	0.42	"

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
210311 0945c	VOA by 8260	HCl/Ice	(3) 40 ml vials	25732	ALS
— 0946c	" (~~MS~~ Dup)	"	"	"	"
— 0947c	" (FB)	"	"	"	"
— 0948c	607/Bromacil	Ice	(1) 1L Amber	108501	SRI
— 0949c	Low Level NDMA	"	"	"	"
— 0950c	" (Dup)	"	"	"	"
— 0951c	" (FB)	"	"	"	"
— 0952c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS

Blind Controls

Sample #	Analysis	Preserve	Container	Lot	Lab
210311 0936c	Low Level NDMA	Ice	(1) 1L Amber	108501	SRI

Continued from page

Read and Understood By

Signed — 3/11/21 Date — Signed — 3-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/11/21 Page 1 of 1

Sample Location: Pl. 4.464

Sample Number	# of Containers	Sample Matrix*	8260	607	LL DNA					Charge Number
210311070C	3	A	X							XGMD
0701C	1	↓			X					↓
0945C	3		X							
0946C (Dup)	3		X							
0947C (FB)	3		X							
0948C	1			X						
0949C	1	↓			X					↓

Sample Location:

Sample Number	# of Containers	Sample Matrix*	LL DNA	T. Metals						Charge Number
210311095OC (Dup)	1	A	X							XGMD
0951C (FB)	1	↓	X							↓
0952C	2			X						
1030C (TBC)	1	↓	X							↓

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3/11/21 @ 1030		[signature]	3-19-21 / 0920

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

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 #2167. Surface checks performed on probe prior to sampling.

Trip Blanks – Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210304 0725Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0726Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks – Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210304 0915Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0916Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time – 2103040935Y
PH – 8.50
Temp – 21.0°c
Cond – 874 us/cm
Turb – 0.82 NTU's
pH pre – 7.10 / 10.13 (16.0°c)
pH post – 7.08 / 10.14
DTW – 436.02 ft.
Atmos – 12.62 psia

Final
Time – 2103041131Y
PH – 8.38
Temp – 20.8°c
Cond – 890 us/cm
Turb – 0.76 NTU's
pH pre – 7.12 / 10.08 (16.6°c)
pH post – 7.11 / 10.06
DTW – 436.12 ft.
Atmos – 12.61 psia
IDW – ½ gal.

Meter ID
pH/cond – 61
Turb – 7
" std – 4.60
" rdg – 4.67
" lot – 9/017
" Exp – 3/31/21

Buffers	Lot	Exp
7	4002091	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210304 1025Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1026Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI
——— 1100Y	1,4 Dioxane by 8270D	"	(1) 250ml amb.	051820-1BMC	ALS
——— 1130Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Runs	1)	2)	3)	4)
	24.85	24.82	24.79	24.76
	23.37	23.33	23.35	23.39
	23.35	23.35	23.36	23.36
	24.81	24.82	24.78	24.78

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/4/21 — Date

Jeri Munch — Signed — 3-5-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/4/21 Page 1 of 1

Sample Location: PL-8-455

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Dioxane					Charge Number
210304 0725Y (TB)	3	A	✓							XGMD
0726Y (TB)	1	A		✓						4
0915Y (EB)	3	A	✓							4
0916Y (EB)	1	A		✓						4
1025Y	3	A	✓							4
1026Y	1	A		✓						4
1100Y	1	A			✓					4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals							Charge Number
210304 1130Y	2	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fernd	3/4/21 1145 hrs.		Jon W Jmuch	3-8-21 / 0915

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. this zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Ben. in use. Probe #2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210303 0830Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0831Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210303 0930Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 0931Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters

Time - 210303 1010Y
PH - 8.42
Temp - 22.2°C
Cond - 1062 us/cm
Turb - 1.39 NTU's
pHpre - 7.15/10.13 (14.0°C)
pHpost - 7.16/10.11
DTW - 435.65 ft.
Atmos - 12.67 psia

Samples were a bit aerated.

Final

Time - 210303 1113Y
PH - 8.38
Temp - 22.0°C
Cond - 1071 us/cm
Turb - 1.14 NTU's
pHpre - 7.07/10.11 (16.5°C)
pHpost - 7.05/10.12
DTW - 435.79 ft.
Atmos - 12.69 psia
IDW - 1/2 gal.

Meter ID

PH/Cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.65
" Lot - 9107
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1040Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
——— 1041Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL
——— 1110Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	051820-18mc	ALS
——— 1111Y	* " (M.S.) *	"	"	"	"
——— 1112Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"

Runs 1) 90.66 88.25 2) 90.58 88.28 3) 90.51 88.61
88.30 90.64 88.31 90.54 88.28 90.51

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/3/21 — Date
Lori Wunch — Signed — 3-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/21 Page 1 of 1

Sample Location: PL-8-605

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL UDMH	Dioxane	Total Metals				Charge Number
210303 0830Y (TB)		3	A	✓							XGMD
0831Y (TB)		1	A		✓						4
0930Y (EB)		3	A	✓							4
0931Y (EB)		1	A		✓						4
1040Y		3	A	✓							4
1041Y		1	A		✓						4
1110Y		1	A			✓					4

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: Dioxane	Total Metals						Charge Number
210303 1111Y (MS)		1	A	✓							XGMD
1112Y		2	A		✓						4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	3/3/21 1130hrs.		[signature]	3-4-21 /0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. this zone will be sampled using 5 triple rinsed, stainless steel sample tubes, Gen. in use. Probe# 2167. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210308 0815y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 0816y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210308 0910y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0911y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210308 0955y
PH - 8.25
Temp - 23.4°c
Cond - 920us/cm
Turb - 2.16 NTU's
pH pre - 7.08 / 10.05 (18.4°c)
pH post - 7.10 / 10.04
DTW - 436.12ft.
Atmos - 12.73psia

Final

Time - 210308 1314y
PH - 8.31
Temp - 23.0°c
Cond - 937us/cm
Turb - 1.40 NTU's
pH pre - 7.02 / 9.98 (26.0°c)
pH post - 7.04 / 9.97
DTW - 436.30ft.
Atmos - 12.69 psia
IDW - ½ gals.

Meter ID

pH/Cond - 61
Turb - 7
" std - 4.60
" rdg - 4.74
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210308 1020y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1021y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1022y	Low Level NDMA	"	"	"	"
——— 1055y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1310y	Anions / Alk.	ice	"	N/A	"
——— 1311y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1312y	Perchlorate by 6850	"	"	"	"
——— 1313y	NO_2/NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Continued ~~from~~ on page 70

Read and Understood By

Craig Del Ferraro — Signed — 3/8/21 — Date

Lori Munck — Signed — 3-9-21 — Date

PROJECT PL-8-780 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page 69

Runs

1)	2)	3)	4)
166.27	166.25	166.12	165.99
164.26	164.26	164.28	164.25
164.24	164.25	164.27	164.21
166.24	166.21	166.12	165.97

Continued from page

Read and Understood By

Craig Del Favero — Signed — 3/8/21 — Date

Tori Mundt — Signed — 3-9-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page 1 of 1

Sample Location: PL-8-780

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA					Charge Number
210308 0815Y (TB)	3	A	✓							XGMD
0816Y (TB)	1	A			✓					u
0910Y (EB)	3	A	✓							u
0911Y (EB)	1	A			✓					u
1020Y	3	A	✓							u
1021Y	1	A		✓						u
1022Y	1	A			✓					u

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Total Metals	Anions/AHK	TDS	Perchlorate	NO_2/NO_3			Charge Number
210308 1055Y	2	A	✓							XGMD
1310Y	2	A		✓						u
1311Y	1	A			✓					u
1312Y	1	A				✓				u
1313Y	1	A					✓			u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	3/8/21 1345hrs.			3-9-21 / 0900

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

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 # 2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1330Y	VOA by 8260 LL	ice / HCl	(3) 40ml vials	2573-2	ALS
——— 1331Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters
Time - 210303 1420Y
PH - 8.57
Temp - 25.0°C
Cond - 848us/cm
Turb - 2.87 NTU's
pHpre - 7.03/9.97 (27.0°C)
pHpost - 7.02/9.95
DTW - 435.79ft.
Atmos - 12.63psia

Final
Time - 210303 1522Y
PH - 8.40
Temp - 24.6°C
Cond - 842us/cm
Turb - 1.90 NTU's
pHpre - 6.99/9.99 (27.6°C)
pHpost - 7.01/9.95
DTW - 436.02ft.
Atmos - 12.61psia
IDW - 1/2 gal.

Meter ID
pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.65
" lot - 910/7
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210303 1450Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1451Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1520Y	Low Level NDMA	"	"	"	"
——— 1521Y	Total Metals	ice / HNO_3	(2) (25ml) poly's	20-07-07	ALS

Runs	1)	2)	3)
	247.08	247.02	246.96
	244.51	244.51	244.52
	244.50	244.48	244.51
	247.06	247.04	246.94

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/3/21 — Date
Jon Munch — Signed — 3-4-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/3/21 Page 1 of 1

Sample Location: PL-8-965

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals			Charge Number
Pertinent Notes (if any)			Analytical Requirement						
210303133OY (EB)	3	A	✓						XGMD
1331Y (EB)	1	A			✓				"
1450Y	3	A	✓						"
1451Y	1	A		✓					"
1520Y	1	A			✓				"
1521Y	2	A				✓			"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelFrend	3/3/21 1545hrs		[signature]	3-4-21 0900

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

0
ROJECT PC-11-470

Notebook No. D32 #120 (A)
Continued from page _____

Marcus Avalos & Tony Torrez present. The weather is clear & cool. This zone will be purged & sampled with a flute system. This zone will be purged a min of 4 times. Samples collected from a dedicated Teflon discharge tube Purge pressure set @ 22 psi & sample pressure set @ 20 psi. Flow meter set @ 3 psi Bubbler stable @ 8 psi. The first 350 mls will be discharge will be discarded. Carboy 0-5

	Initial	Final
	210302 1015A	210302 1301 A
pH	8.13	7.27
Temp	15.0 °c	19.8 °c
Cond	1137 µs/cm	1158 µs/cm
Turb	0.24 NTUs	0.58 NTUs
µpmp	6.95 / 9.99 (16.6 °c	7.15 / 10.10 (19.8 °)
µpos	7.05 / 9.99	7.12 / 10.11
IDW		

Meter ID's
pH/cond = 12
Turb = 20
" Std = 5.75
" Rdg = 5.60
" Lot # = 91017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210302 1016A	8260 all	ice/HCl	2573-2	(3) 40 ml vials	ALS
—— 1017A	" (FB)	"	"	"	"
—— 1018A	CLNOMA	ice	108501	(1) 1L amber	SRL
—— 1019A	" (FB)	"	"	"	"
—— 1300A	SVOA Sim	ice	N/A	(1) 250ml amber	ALS

Purged 2 times prior to sampling since 1st purge had a bad smell.

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-2-21 — Date

[illegible] — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: P1-11-470

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260LC	LCMSA	SIMSUOA					Charge Number
										X6MD
210302 1046A	3	A	X							
— 1047A (F3)	3		X							
— 1048A	1			X						
— 1049A F3	1			X						
— 1300A	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	3-2-21 1600		[signature]	3-3-21 0945

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

Marcus Avalos & Tony Tovar present. The weather is clear & cool. This zone will be purged & sampled with a Flute system. This zone will be purged a min of 4 times. Samples will be collected from a dedicated Teflon discharge tube. Purge pressure set @ 22 psi & sample pressure @ 20 psi. Flow meter set @ 3 psi & Bubbler stable @ 8 psi. The first 350mls of discharge will be discarded prior to sampling. Carboy G-5

	Initial	Final
	210302 1030A	210302 1313A
pH	8.17	7.15
Temp	16.7 c	18.0
Cond	1133 µs/cm	1136
Turb	0.84 NTUs	0.66
phpre	7.05 / 10.03 (16.7 c)	7.00 / 10.00 (20.5 c)
phpost	7.04 / 10.03	7.03 / 10.00
IDW		

Meter ID's

pH/Cond = 12

Turb # - 20

" Std = 5.75

" Rdg = 5.65

" Lot # = 91017

" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210302 1031A	8260 (11)	ICE/HCl	2573-2	(3) 40ml vials	ALS
—— 1032A	" (FB)	"	"	"	"
—— 1033A	CLVOmm	ICE	108501	(1) 1L amber	SRI
—— 1034A	" (FB)	"	"	"	"
—— 1311A	SVOA-Sim	ICE	N/A	(1) 250ml amber	ALS
—— 1312A	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] — Signed — 3-2-21 — Date

[signature] — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: PL-11-530

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 (	(1,2,3-TCP)	SIM 504					Charge Number
											X6MD
210302 1031A				X							
1032A (FB)				X							
1033A					X						
1034A (FB)					X						
1311A						X					
1312A (Dup)						X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	3-2-21 / 1600		[signature]	3-3-21 / 0945

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

MARCUS AVALOS & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 PSI SAMPLE PRESSURE SET @ 20 PSI. FLOW METER SET @ 3 PSI & BUBBLER STABLE @ 8 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-5

	INITIAL	FINAL
	210302 1045A	210302 1331A
pH	7.88	7.27
Temp	16.4°C	19.8°C
Cond	1141 µs/cm	1168 µs/cm
Turb	0.44	0.38 NTU's
phpre	7.06 / 10.03 (16.6)	7.17 / 10.11 (18.7°)
phpost	7.06 / 10.05	7.12 / 10.10
IDW		

METER ID's
pH/cond = 12
Turb # 20
" STD = 5.75
" Rdg = 5.65
" LOT # = 91017
" Exp = 3/31/21

Samples Preserved

Sample #	Analysis	Preserv	LOT #	CONT	Lab
210302 1046A	8260D(L)	ICE/HCl	2573-2	(3) 40mL VOA's	ALS
1047A	" (FB)	"	"	"	"
1048A	LL NO3 A	ICE	108561	(1) 1L Amber	SRI
1049A	"	"	"	"	"
1330A	5VOA-SIM	"	NA	(1) 250mL Amber	ALS

Continued from page

Read and Understood By

T. [signature] — Signed
3-2-21 — Date
[signature] — Signed
3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-2-21 Page 1 of 1

Sample Location: P1-11-710

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	CrZnP4	SIM 5004					Charge Number: X6m0
210302 1046A		3	A	X							
— 1047A (FB)		3		X							
— 1048A		1			X						
— 1049A (FB)		1			X						
— 1330A		1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	3-2-21 1600		[illegible] Munch	3-3-21 0945

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

AL Montes & Tony Tovar present. The weather is clear & cool. This zone will be purged & sampled using a Flute System. This zone will be purged a min of 4 times with 30 mins between purges. Samples collected from a dedicated Teflon discharge hose. Purge pressure set @ 22 psi & Sample pressure set @ 20 psi flow meter set @ 3 psi & Bubbler stable @ 8 psi. The first 350 mls will be discarded prior to sampling. Carboy 6.

Initial	Final
210304~~0845~~ 0846A	210304 0826A
pH 7.39	7.43
Temp 17.3	17.4
Cond 1049	1046 µs/cm
Turb 0.48	0.37 NTU's
phpre 7.03/10.01/14.8	7.00/10.01 (14.8)
pHpost 7.06/10.03	7.01/10.02

Meter ID's
pH/cond = 12
Turb # 20
" Std = 5.75 NTU's
" Rdg = 5.69 NTU's
" Lot # = 9/017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210304 0846A	8260 LL	ICE/HCl	2573-2	(3) 40ml vials	ALS
0847A	" (FB)	"	"	"	"
0848A	LCNOMA	ICE	108501	(1) 1LT Amber	SRL
0849A	" (FB)	"	"	"	"
~~T1 0925 0850A~~ T1 0925A	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 3-4-21 Date

Lori Munch Signed — 3-8-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-21 Page 1 of 1

Sample Location: PC-11-820

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 87606-1	Analytical Requirement: CLNDM9						Charge Number: X6MS
210304 0846A	3		X							
0847A	3		X							
0848A	1			X						
0849A (F3)	1			X						
0925A (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:
T-D	3/4/21/1100		Jon W Munch	3-8-21 / 0915

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

PROJECT PI-11-~~DEC~~ IT 980

Notebook No. D32#120(A)

Continued from page _____

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM THE DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE IS SET @ 22 PSI & SAMPLE PRESSURE SET @ 20.5 PSI. FLOWMETER SET @ 3 PSI & BUBBLER STABLE @ 8 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING Carboy 6-

INITIAL	FINAL
210304 0900A	210304 0905A
pH 8.21	8.23
TEMP 17.5°C	17.6
COND 977	977 µS/cm
TURB 0.30 NTUs	0.32 NTU's
ph pre 7.00/9.99 (14.4°C)	7.00/9.99 (14.8°C)
ph post 7.01/10.03	7.01/10.00

METER ID's
pH/Cond = 12
Turb # 20
" STD = 5.75 NTUs
" Rdg = 5.69 NTU's
" LOT # = 91017
" EXP = 3/31/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210304 0901A	8260 (1)	ICE/HCl	2573-2	(3) VOA VIALS	ALS
" 0902A	" (FB)	"	"	"	"
" 0903A	LL NDMA	ICE	108501	(1) L AMBER	SRL
" 0904A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-4-21 — Date

[illegible] — Signed — 3-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-4-21 Page _____ of _____

Sample Location: PI-11-980

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	LCNDMA						Charge Number: X6MD
210304 0901 A	3	A	X							
0902 A (FB)	3		X							
0903 A	1			X						
0904 (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.	3/4/21/1100			3-8-21 / 0915

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

PROJECT ST-4-481 ENV-0053

Dan Heussner + Al montes 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. Carboy #1 in use.

Calibrations:

Initial DTW = 456.80 ft
Final DTW = 456.96
EOW =

DO sensor: In saturated air @ 644 mm/Hg.
pH sensor: using a 3 pt. (4,7,10) Buffer method.
Conductivity: using a 1413 µS/cm STD. Solution.
Turbidity meter # STD: ROS: LOT # Exp:

Parameters (Time)	Temp	Cond.	DO	pH	ORP	Turb	DTW (ft.)
1030 0948 C	20.28	1071	6.31	9.23	-15	0.416	456.96
0950 C	20.25	1074	6.35	9.18	-16	0.48	456.96
0952 C	20.27	1070	6.30	9.21	-16	0.47	456.96

SAMPLES

SAMPLE #	Analysis	Preserve	Container	LOT	LAB
1030 0955 C	VOA by 8260 LL	Ice/HCl	(3) 40 ml Vial	2573-2	ALS
0956 C	" " (FB)	"	"	"	"
0957 C	NDMA LL	Ice	(1) 1L Amber	108501	SRL
0958 C	" " (FB)	"	"	"	"
0959 C	Total metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	ALS
1000 C	" " (DUP)	"	"	N/A	"
1001 C	Anions/NH3	Ice	"	"	"
1002 C	TDS by SM2540C	"	(1) "	"	"
1003 C	Perchlorate by 6850	"	(1) "	"	"
1004 C	NO2/NO3 by 353.2	Ice/H2SO4	(1) 250 ml Poly	"	"

Continued from page

Read and Understood By

Signed — 3-3-2021 Date

Signed — 3-4-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-3-2021 Page 1 of 1

Sample Location: ST-4-481

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	VOA	VOA <4	Total Metals	Anions/DIC				Charge Number
											XGMD
2103030955C		3	A	Y							
0956C	FB	3		Y							
0957C		1			Y						
0958C	FB	1			Y						
0959C		2				Y					
1000C	DUP	2				Y					
1001C		2					Y				

Sample Location:

Analytical Requirement

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	TDS	Perchlorate	NO3/NO2					Charge Number
2103031002C		1	A	Y							
1003C		1			Y						
1004C		1				Y					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3-3-2021 1100			3-4-21 /0900

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

PROJECT ST-4-690 ENV.0053

Notebook No. D32#118

Continued from page NA

A/ MONTES & DAN HACKORSEN PRESENT. WEATHER IS SUNNY AND BREEZY. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL BE TAKEN FROM A NEW TEFLON DISCHARGE TUBE. PARAMETERS WILL BE MONITORED WITH A QED MP20 FLOWCELL. CARBOY G-1

CALIBRATIONS

DTW - 455.66 FT

DO - SATURATED AIR @ 643 mm/Hg — IDW - 2 gal

PH - 3PT BUFFER (4, 7, 10)

COND - W/ 1413 us/cm Sol. STD

TURBMTR - 20 STD - 66.5 NTU RDG - 63.8 NTU LOT# - 91017 EXP - 3-21

PARAMETERS	TEMP °C	COND us/cm	DO	PH	ORP	TURB NTU	DTW FT
210302 1450 c	20.05	0.853	4.91	9.10	-36	1.74	455.70
1455 c	20.01	0.847	4.60	9.11	-36	1.59	455.70
1500 C	19.92	0.851	4.69	9.19	-36	1.62	455.70

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
210302 1501 c	LL VOA 8260	ICE, HCL	3-40 mL VIALS	2573.2	ALS
1502 c	" (FB)	"	"	"	"
1503 c	NDMA-DMD-BROOT	ICE	1LT AMBER	108501	SRL
1504 c	LL NDMA	"	"	"	"
1505 c	" (FB)	"	"	"	"
1506 c	TOTAL METAL	ICE-HNO3	2-125 mL Poly		ALS
1507 c	ANIONS/ALK	ICE-0 HEAD	125 mL Poly	NA	"
1508 c	TDS	ICE	"	"	"
1509 c	PERCHLORATE	ICE-2/3 FULL	"	"	"
1510 c	NO_2NO_3	ICE-H_2SO_4	250 mL Poly	20-11-27	"

Continued from page NA

Signed

3-2-21

Date

Read and Understood By

Signed

3-4-21

Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3·2·21 Page 1 of 1

Sample Location: ST.4.650

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	VOA-8021B	2MA 607	LC 2MA	T METALS	ANIONS			Charge Number
										XGMD
210302 1501C	3	A	X							
1502C FB	3	A	X							
1503C	1	A		X						
1504C	1	A			X					
1505C FB	1	A			X					
1506C	2	A				X				
1507C	2	A					X			

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	TDS	PERCHLORATE	300.0					Charge Number
210302 1508C	1	A	X							
1509C	1	A		X						
1510C	1	A			X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	3.2.21 4pm			3-3-21 / 0945

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

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THE ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE IS SET @ 22 ~~8~~ psi SAMPLE PRESSURE SET @ 20 ~~7~~ psi. FLOW METER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 350 mls will be discarded prior to sampling. carboy 6-~~1~~

	INITIAL	FINAL
	210309 0955A	210309 1051A
pH	~~7.24~~ 8.04	8.03
Temp	~~20.0~~ °C 18.0°c	19.7
Cond	~~1355~~ 1347	1343
Turb	~~1445~~ 0960NTUs	0.77
ph pre	6.99/10.01(22.2°)	7.01/10.02(21.0°)
ph post	7.00/10.00	7.00/1000

METER ID's

pH / Cond = 13

Turb # 21

" std = 66.5

" rdg = 58.3

" Lot # = 91017

" Exp = 3/31/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210309 0956A	8260DLL	ICE/HCl	257732	(3) 40mL VIALS	ALS
— 0957A	" (FB)	"	"	"	"
— 0958A	LCMSMSA	ICE	108501	(1) LITER AMBER	SVL
— 0959A	" (FB)	"	"	"	"
— 1030A	SVOA-SIM	"	N/A	(1) 250mL AMBER	ALS

Continued from page

Read and Understood By

T. [illegible] — Signed — 3-9-21 — Date

[illegible] — Signed — 3-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page 1 of 1

Sample Location: ST-6.528

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8260C	1,1-DMA	SW0A5,M					Charge Number
										XGMD
210309 0956A	3	A	X							
0957A (FB)	3		X							
0958A	1			X						
0959A (FB)	1			X						
1030A					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	3-9-21 / 1100		Jon Munch	3-10-21 / 0930

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

PROJECT ST. 6 ~~824~~ TI 568

Notebook No. D57#120(A)

Continued from page _____

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED USING A FLATE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE WILL BE SET @ 22psi & SAMPLE PRESSURE SET @ 20psi. FLOWMETER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLING. Carboy 6-1

	Initial	Final
	210309 0925A	210309 1008A
pH	8.03	8.03
Temp	19.4°C	19.8
cond	1251 µs/cm	1255 µs/cm
Turb	0.87 NTU's	0.78
pH/pre	7.00/10.01(20.1)	7.00/10.00(21.2)
pH post	7.01/10.03	7.01/10.03

METER ID's
pH/cond = 13
Turb # 21
" std = 66.5
" Rdg = 58.3
" Lot # = 91017
" Exp = 3/31/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210309 0926A	8260 II	Ice/HCl	2573-2	(3) 40ml Vials	ALS
0927A	" (FB)	"	"	"	"
0928A	" NDMA	Ice	108501	(1) 1LT Amber	SRI
0929A	" (FB)	"	"	"	"
1005A	" (Dup)	"	"	"	"
1006A	SW04-Sim	"	N/A	(1) 250ml Amber	ALS
1007A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. P. — Signed — 3-9-21 Date

Lori Munck — Signed — 3-10-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page 1 of 1

Sample Location: ST-6-568

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	R601C	LINDA	SU0454					Charge Number
										X6MS
210309 0926A	3	A	X							
0927A FB	3		X							
0928A	1			X						
0929A FB	1			X						
1005A Dup	1			X						
1006A	1				X					
1007A 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:
T. [illegible]	3-9-21 / 1100		[signature] Lunch	3-10-21 / 0930

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

PROJECT ST-6-678

Continued from page

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & COOL. THIS ZONE WILL BE PURGED & SAMPLED WITH A FLUTE SYSTEM. THIS ZONE WILL BE PURGED 4-6 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED WITH A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 psi & SAMPLE PRESSURE SET @ 20 psi. FLOW METER SET @ 3 psi & BUBBLER STABLE @ 7 psi. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-1

INITIAL		FINAL	METER ID's
210309 0944A		210309 1046A	pH/cond 13
pH	8.03	8.08	Turb # 21
Temp	19.4	21.9°c	" STD = CoCo.5
Cond	1251 µs/cm	1255 µs/cm	" RDG = 58.3
Turb	0.77	0.73	" LOT # = 9101
pH PRE	7.00/10.10	7.01/10.03 (21.8	" EXP = 3/31/21
pH POST	7.00/10.03	7.02/10.01	

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210309 0945A	8260(L)	HCl/HCl	2573-2	(3) 40ml VIALS	ALS
— 0946A	" (F3)	"	"	"	"
— 0947A	LL/NAA	HCl	108501	(1) LT AMBER	SRL
— 0948A	" (F3)	"	"	"	"
— 1045A	5030A SIM	"	N/A	(1) 250ml AMBER	ALS

Continued from page

Read and Understood By

T. D. — Signed — 3-9-21 — Date

Lori Mundt — Signed — 3-10-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-9-21 Page _____ of _____

Sample Location: ST. 6.678

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	8260	CLXSMA	SO4 S					Charge Number
											XGMD
210309 0945A		3	A	X							
0946A FB		3		X							
0947A		1			X						
0948A FB		1			X						
1045A		1				X					

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. Dg	3/9/21 / 1100		[signature]	3-10-21 / 0930

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

AL MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 PSI SAMPLE PRESSURE SET @ 20 PSI. FLOW METER SET @ 3 PSI & BUBBLER STABLE @ 7 PSI. THE FIRST 350 mls will BE DISCARDED PRIOR TO SAMPLING. Carboy G-

INITIAL		FINAL	
	210311 0940A		210311 1015A
pH	8.56		8.58
TEMP	18.5		18.7
COND	1127		1125
TURB	0.38 NTU's		0.43 NTU's
pH pre	7.00/10.00 (17.6°C)		7.02/10.01
pH post	7.00/10.01		7.00/10.01

METER ID's
pH/cond = 12
Turb # 20
" STD = 5.75
" RDG = 5.89
" LOT # = 91017
" Exp = 7/31/21

Trip Blanks

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 0700A	8260 (L	ICE/HCl	2573-2	(3) 40ml VIALS	ALS
— 0701A	(LNOMA	ICE	108501	(1) 1LT AMBER	SRT

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 0941A	8260 (L	ICE/HCl	2573-2	(3) 40ml VIALS	ALS
— 0942A	" (FB)	"	"	"	"
— 0943A	(LNOMA	ICE	108501	(1) 1LT AMBER	SRT
— 0944A	" (FB	"	"	"	"

Continued from page

Read and Understood By

Signed — Date 3-11-21

Signed — Date 3-15-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-11-21 Page 1 of 1

Sample Location: ST-6-824

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	8260C	1,1-DM						Charge Number
										X6MD
210311070004 (TB)	3	A	X							
0701A (TB)	1		X	X						
0941A	3		X							
0942A (FB)	3		X							
0943A	1			X						
0944A (FB)	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:
	3-11-21 / 1100			3-15-21 / 0920

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

WSTF 381C (05/2016)

AL MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 psi & SAMPLE PRESSURE SET @ 20 psi. FLOWMETER SET @ 3psi & BUBBLER STABLE @ 7psi. THE FIRST 3 TO 4 L/S WILL BE DISCARDED PRIOR TO SAMPLING. CARBOY 6-

	INITIAL	FINAL	METER ID's
	210311 1000 A	210311 1030A	pH/COND = 12
pH	8.64	8.68	TURB #20
TEMP	17.7°C	18.1	" STD = 5.75
COND	1063	1048	" RDG = 5.89
TURB	3.08	2.73	" CAL # = 91017
phpre	7.05/10.02 (19.2°C)	7.05/10.05 (19.7°)	" EXP = 3/31/21
phpost	7.05/10.01	7.03/10.01	

SAMPLES

SAMPLE#	ANALYSIS	PRESERV	LOT #	CONT	LAB
210311 1001A	8260D(	ICE/HCl	2[illegible]32	(3) 40 mL VIALS	ALS
1002A	"	"	"	"	"
1003A	1,4 DIOXANE	ICE	108501	(1) 1LT AMBER	SRI
1004A	"	"	"	"	"

Continued from page

Read and Understood By

T. [signature] — Signed — 3-1-21 — Date

[signature] — Signed — 3-16-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-11-21 Page 1 of 1

Sample Location: ST-6-970

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 97601	Analytical Requirement: NDMA						Charge Number: XGMD
210311 1001A		3	A	X							
1002A (FB)		3		X							
1003A		1			X						
1004A (FB)		1	—		X						

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T-Zz	3/11/21 1100		Jon M Lunch	3-15-21 0920

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

Dan Halvorsen + DI monitors present. Weather is partly cloudy 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. Corday G-1 in use.

Initial DTW = 420.92 ft.
Final " = 421.11
IDW = 2 gal.

Calibrations:
DO Sensor: In saturated air @ 644 mm/Hg.
pH Sensor: using a 3pt. (4,7,10) Buffer method.
Conductivity: using a 1413 us/cm STD. Solution.
Turbidity meter: # 20 STD = 5.75 ROG = 5.59 Lot # 91017 Exp = 3/21

Parameters (Time)	Temp	Cond	DO	pH	ORP	Turb.	DTW (ft)
210301 1400 c	20.91	1091	4.75	9.16	-23	0.21	421.11
——— 1402 c	20.90	1089	4.71	9.10	-22	0.23	421.11
——— 1404 c	20.90	1087	4.72	9.13	-23	0.22	421.11

SAMPLES

Sample #	Analysis	Preservative	Container	Lot	Lab
210301 1410 c	VOAs by 8260 LL	Ice/HCl	(3) 40 ml VOA	2573-2	NLS
——— 1411 c	" " (MS)	"	"	"	"
——— 1412 c	" " (FB)	"	"	"	"
——— 1413 c	Bromacil by 6007	Ice	(1) 1L Amber	108501	SRL
——— 1414 c	" " (MS)	"	"	"	"
——— 1415 c	NDMA LL	"	"	"	"
——— 1416 c	" " (MS)	"	"	"	"
——— 1417 c	" " (MSD)	"	"	"	"
——— 1418 c	" " (FB)	"	"	"	"
——— 1419 c	Total Metals	Ice/HNO3	(2) 125 ml Poly	20-07-07	NLS

Continued from page

Read and Understood By

Signed — 3-1-2021 Date — Signed — 3-2-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3-1-2021 Page 1 of 1

Sample Location: WW-1-452

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOC	607	200.8 LL					Charge Number
										XGMD
2103011410	3	A	X							
1411 (MS)	3	|	X							
1412 (FB)	3	|	X							
1413	1	|		X						
1414 (MS)	1	|		X						
1415	1	|			X					
1416 (MS)	1	|			X					

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 200.8 LL	Metals						Charge Number
2103011417C (MSD)	1	A	X							
1418C (FB)	1	|	X							
1419C	2	|		X						

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3-1-2021 1600		[signature]	3-2-21 / 0930

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

PROJECT WW. 2.489 WJI ENV. 0053

Notebook No. 032 # 121 (C)

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 tube. Water quality parameters will be monitored using a QED MP.20 flow cell & water analyzer. Packer inflated to 25 psi. Carboy Gr. 1 in use.

Calibrations

DO - Cal in saturated air @ 616 mm/Hg

PH - Cal using Oakton Buffers (4,7,10)

Conductivity - Cal using 1413 uS/cm STD solutions.

Turbidity Meter - #21 STD - 66.5 NTU RDG - 59.7 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond ( )	DO (mg/L)	PH	ORP	Turb (NTU)	DTW (ft)
1) 210308 0950c	20.09	1.001	3.04	7.28	118	2.27	N/A
2) —— 0952c	20.19	1.113	3.51	7.11	120	3.21	"
3) —— 0954c	20.21	1.031	3.68	7.23	122	3.34	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210308 1000c	VOA by 8260LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1001c	" (FB)	"	"	"	"
—— 1002c	607/Bromacil	Ice	(1) 1L Amber	108501	SPL
—— 1003c	Low Level NDMA	"	"	"	"
—— 1004c	" (FB)	"	"	"	"
—— 1005c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS
—— 1006c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1007c	TDS by SM2540C	Ice	(1) "	"	"
—— 1008c	Perchlorate by 6850	Ice/1/3 HS	"	"	"
—— 1009c	NO2, NO3 by 353.2	H2SO4/Ice	(1) 250 ml poly		"

IDW - 2.5 gal

Continued from page

Read and Understood By

Signed — Date 3/8/21

Signed — Date 3-9-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page 1 of 1

Sample Location: WW-2-489

Analytical Requirement: 8260LL | 607 | LL NDMA | T. Metals | Anions/AK

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260LL	607	LL NDMA	T. Metals	Anions/AK			Charge Number
2103081000C	3	A	X							XGMD
1001C (FB)	3		X							
1002C	1			X						
1003C	1				X					
1004C (FB)	1				X					
1005C	2					X				
1006C	2						X			

Sample Location:

Analytical Requirement: TDS | Perchlorate | NO2, NO3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO2, NO3					Charge Number
2103081007C	1	A	X							XGMD
1008C	1			X						
1009C	1				X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
[signature]	3/8/21 @ 1110		[signature]	3-9-21 / 0900

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

Marcus Anables & Robert Burrows present. Weather is breezy & 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 QED MP·20 flow cell & water analyzer. Packer inflated to 25 psi. Carboy G·1 in use.

Calibrations

DO - Cal in saturated air @ 616 mm/Hg.

pH · Cal using Oakton Buffers (4,7,10)

Conductivity - Cal using 1413 us/cm STD solutions

Turbidity Meter - #21 STD - 66.5 NTU RDG - 59.7 NTU Lot - 91017 Exp - 3/21

Parameters (time)	Temp (°C)	Cond (ms/cm)	DO (mg/L)	pH	ORP	Turb (NTU)	DTW (ft)
1) 210308 1510c	21.10	0.963	3.07	8.03	100	2.76	NA
2) —— 1512c	21.05	0.969	2.89	7.97	102	1.97	"
3) —— 1514c	21.40	0.974	2.95	8.04	99	1.78	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210308 1520c	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25732	ALS
—— 1521c	" (FB)	"	"	"	"
—— 1522c	607/Biomacil	Ice	(1) 1L Amber	108501	SRI
—— 1523c	Low Level NDMA	"	"	"	"
—— 1524c	" (FB)	"	"	"	"
—— 1525c	Total Metals	HNO3/Ice	(2) 125 ml poly	200707	ALS
—— 1526c	Anions/Alk	Ice/ZeroHS	"	"	"
—— 1527c	TDS by SM2540c	Ice	(1) "	"	"
—— 1528c	Perchlorate 6850	Ice/1/3 HS	"	"	"
—— 1529c	NO2, NO3 353.2	H2SO4/Ice	(1) 250 ml poly		"

IDW - 3 gal

Continued from page

Read and Understood By

Signed — Date 3/8/21

Signed — Date 3-9-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/8/21 Page _____ of _____

Sample Location: WW. 2-664

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	607	EL NONA	T. Metals	Anions/Alk			Charge Number
210308\520C	3	A	X							
1521C (FB)	3	|	X							
1522C	1	|		X						
1523C	1	|			X					
1524C (FB)	1	|			X					
1525C	2	|				X				
1526C	2	|					X			

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO2 NO3					Charge Number
210308\527C	1	A	X							
1528C	1	|		X						
1529C	1	|			X					
		|								
		|								
		|								
		|								

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
MJ CW	3/8/21 1600		John W Jumah	3-9-21 / 0900

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

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 # 4955. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210302 0810y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0811y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210302 0905y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0906y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210302 0950y
PH - 7.85
Temp - 20.6°c
Cond - 1118 us/cm
Turb - 0.95 NTU's
pH pre - 7.13 / 10.18 (13.3°c)
pH post - 7.13 / 10.19
DTW - 407.94 ft.
Atmos - 12.40 psia

Final

Time - 210302 1111y
PH - 7.95
Temp - 21.0°c
Cond - 1127 us/cm
Turb - 0.83 NTU's
pH pre - 7.06 / 10.10 (16.7°c)
pH post - 7.04 / 10.11
DTW - 408.13 ft.
Atmos - 12.38 psia
IDW - 1 gal.

Meter ID

pH/cond - 61
Turb - 7
" Std - 4.60
" rdg - 4.70
" lot - 9/017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210302 1015y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1016y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1017y	Low Level NDMA	"	"	"	"
——— 1045y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1046y	Anions/Alk.	ice	"	N/A	"
——— 1047y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1048y	Perchlorate by 6850	"	"	"	"
——— 1110y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Continued ~~from~~ on page 64

Read and Understood By

Craig Del Ferro — Signed — 3/2/21 — Date

Ron Munch — Signed — 3-3-21 — Date

PROJECT WW-3-469 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page 63

Runs	1) 41.81	2) 41.52	3) 41.35	4) 41.32
	39.59	39.55	39.57	39.53
	39.56	39.54	39.55	39.54
	41.44	41.26	40.91	40.98

Continued from page

Craig Del Zenno — Signed — 3/2/21 Date

Read and Understood By

Signed — 3-3-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/21 Page 1 of 1

Sample Location: WW-3-469

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
210302 0810Y (TB)	3	A	✓							XGMD
——— 0811Y (TB)	1	A			✓					"
——— 0905Y (EB)	3	A	✓							"
——— 0906Y (EB)	1	A			✓					"
——— 1015Y	3	A	✓							"
——— 1016Y	1	A		✓						"
——— 1017Y	1	A			✓					"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions / Alk.	TDS	Perchlorate	NO_2 / NO_3			Charge Number
210302 1045Y	2	A	✓							XGMD
——— 1046Y	2	A		✓						"
——— 1047Y	1	A			✓					"
——— 1048Y	1	A				✓				"
——— 1110Y	1	A					✓			"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig McFarland	3/2/21 1130hrs.		[signature]	3-3-21 /0945

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 2 steam cleaned & triple rinsed, stainless steel Sample tubes. Gen. in use. Probe #4955. Surface checks performed on probe prior to sampling. Entire Carboy #3 was triple rinsed due to potential contamination.

Trip Blanks – Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210301 0825Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0826Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

30 Min. Equipment Blanks – Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210301 0920Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 0921Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI
——— 0922Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial Parameters

Time – 210301 1000Y
PH – 8.09
Temp – 20.8°C
Cond – 1100 us/cm
Turb – 0.80 NTU's
pH pre – 7.16 / 10.13 (14.7°C)
pH post – 7.17 / 10.11
DTW – 407.64 ft.
Atmos – 12.40 psia

Final

Time – 210301 1056Y
PH – 8.14
Temp – 21.1°C
Cond – 1093 us/cm
Turb – 0.74 NTU's
pH pre – 7.08 / 10.10 (16.2°C)
pH post – 7.10 / 10.07
DTW – 407.79 ft.
Atmos – 12.41 psia
IDW – 1 gal.

Meter ID

pH/cond – 61
Turb – 7
" Std – 4.60
" rdg – 4.68
" lot – 9/017
" Exp – 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1025Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1026Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1027Y	Low Level NDMA	"	"	"	"
——— 1055Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)		2)		3)	
	85.13	82.92	84.87	82.85	84.71	82.84
	82.90	85.02	82.85	84.62	82.86	84.50

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/1/21 — Date

Lori W Mumch — Signed — 3-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/21 Page 1 of 1

Sample Location: WW-3-569

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210301082SY (TB)	3	A	✓							XGMD
0826Y (TB)	1	A			✓					4
0920Y (EB)	3	A	✓							4
0921Y (EB)	1	A			✓					4
0922Y (EB)	2	A				✓				4
1025Y	3	A	✓							4
1026Y	1	A		✓						4

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL NDMA	Total Metals						Charge Number
210301102TY	1	A	✓							XGMD
1055Y	2	A		✓						4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DelTorro	3/1/21 1115hrs		Jon Munch	3-2-21 0930

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

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 #4955. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G3

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1300Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
—— 1301Y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRL

Initial Parameters
Time - 210301 1340Y
pH - 8.18
Temp - 22.7°C
Cond - 1019 us/cm
Turb - 2.47 NTU's
pHpre - 7.08/10.04 (17.7°C)
pHpost - 7.10/10.03
DTW - 407.79 ft.
Atmos - 12.37 psia.

Final
Time - 210301 1441Y
PH - 8.03
Temp - 22.5°C
Cond - 1012 us/cm
Turb - 1.64 NTU's
pHpre - 7.08/10.05 (18.2°C)
pHpost - 7.05/10.07
DTW - 407.94 ft.
Atmos - 12.39 psia
IDW - 1 gal.

Meter ID
pH/Cond - 61
Turb - 7
u std - 4.60
u rdg - 4.68
u lot - 91017
u Exp - 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210301 1405Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-2	ALS
—— 1406Y	607/Bromacil	ice	(1) 1L Amber	0108501F	SRL
—— 1407Y	Low Level NDMA	u	u	u	u
—— 1435Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 1436Y	*u (M,S)*	u	u	u	u
—— 1437Y	Anions/Alk.	ice	u	N/A	u
—— 1438Y	TDS by SM2540C	u	(1) 125ml poly	u	u
—— 1439Y	Perchlorate by 6850	u	u	u	u
—— 1440Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	20-11-27	u

Runs	1)	2)	3)
	146.04	145.78	145.58
	143.74	143.71	143.72
	143.74	143.71	143.71
	145.67	145.40	145.40

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 3/1/21 — Date

Tom Murdock — Signed — 3-2-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/1/21 Page 1 of 1

Sample Location: WW-3-710

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals				Charge Number
210301 1300Y (EB)	3	A	✓							XGMD
1301Y (EB)	1	A			✓					"
1405Y	3	A	✓							"
1406Y	1	A		✓						"
1407Y	1	A			✓					"
1435Y	2	A				✓				"
1436Y (MS)	2	A				✓				"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Anions/NH4	TDS	Perchlorate	NO2/NO3				Charge Number
210301 1437Y	2	A	✓							XGMD
1438Y	1	A		✓						"
1439Y	1	A			✓					"
1440Y	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeTemo	3/1/21 1530hrs.			3-2-21 / 0930

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 2 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
210302 1325y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1326y	Low Level NDMA	ice	(1) 1L Amber	0108501F	SRI

Initial Parameters

Time - 210302 1405y
PH - 8.34
Temp - 23.5 °c
Cond - 1068 us/cm
Turb - 3.54 NTU's
pHpre - 7.01 / 10.04 (20.7 °c)
pHpost - 7.03 / 10.04
DTW - 408.13 ft.
Atmos - 12.30 psia

Final

Time - 210302 1515y
PH - 8.16
Temp - 23.1 °c
Cond - 1045 us/cm
Turb - 2.27 NTU's
pHpre - 7.06 / 10.04 (21.2 °c)
pHpost - 7.07 / 10.03
DTW - 408.30 ft.
Atmos - 12.28 psia
IDW - 1 gal.

Meter ID

pH/cond - 61
Turb - 7
" std - 4.60
" rdg - 4.70
" lot - 91017
" Exp - 3/31/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001005	6/21

* Samples were very aerated.

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210302 1440y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-2	ALS
——— 1441y	607 / Bromacil	ice	(1) 1L Amber	0108501F	SRI
——— 1442y	Low Level NDMA	"	"	"	"
——— 1510y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1511y	Anions / Alk.	ice	"	N/A	"
——— 1512y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1513y	Perchlorate by 6850	"	"	"	"
——— 1514y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)
	261.28	260.76	260.70
	261.11	260.72	260.71
	260.02	259.64	259.58
	260.00	259.63	259.55

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 3/2/21 — Date

Jeri W Munch — Signed — 3-3-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 3/2/21 Page 1 of 1

Sample Location: WW-3-978

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA	Total Metals	Anions/Alk			Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210302 1325Y (EB)	3	A	✓							XGMD
1326Y (EB)	1	A			✓					u
1440Y	3	A	✓							u
1441Y	1	A		✓						u
1442Y	1	A			✓					u
1510Y	2	A				✓				u
1511Y	2	A					✓			u

Sample Location:

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210302 1512Y	1	A	✓							XGMD
1513Y	1	A		✓						u
1514Y	1	A			✓					u

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terzo	3/2/21 1540hrs			3-3-21 /0945

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

b Tufts & Craig Del Ferraro present. Weather is clear, cool, & breezy. This ll will be purged using a dedicated bladder pump. Samples will be collected ing a dedicated tygon discharge hose. Water quality parameters will be onitored using a QED MP-20 flow cell and water analyzer. Carboy G3.

alibrations
O - calibrated in saturated air @ 638 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
t - calibrated using Oakton buffers (7-10).
rbidity meter #20 std - 5.71 rdg - 5.62 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
210421 0815C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS

rameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (Ft.)
210421 0925C	18.95	1.51	3.13	113	8.46	2.15	130.50
——— 0928C	19.07	1.50	2.81	109	8.50	1.92	130.55
——— 0931C	19.21	1.53	2.57	107	8.53	1.78	130.61

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210421 0935C	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0936C	" (FB)	"	"	"	"

Initial DTW - 130.00 Ft. Total gallons purged - 1/2 gal.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/21/21 Date

Jen Miranda — Signed — 4-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/21/21 Page 1 of 1

Sample Location: 400-FV-131

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210421081SC (TB)	3	A	✓							XGMD
0935C	3	A	✓							"
0936C (FB)	3	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	4/21/21 1115 hrs.		[signature]	4-22-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy.. this well will be purged using a dedicated bladder pump. Samples will be collected using a dedicated tygon 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 @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std- 5.71 rdg-5.62 lot-91017 Exp-4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210421 1400C	21.95	1.96	2.07	+7	9.05	0.90	140.40
2) ——— 1403C	22.02	1.98	1.98	-4	9.05	0.84	140.43
3) ——— 1406C	22.09	1.98	1.92	-3	9.08	0.82	140.49

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210421 1410C	VOA by 8260	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1411C	" (FB)	"	"	"	"

Initial DTW = 139.84ft. Total gallons purged = 1/2 gallon

Continued from page

Read and Understood By

Craig Del Ferraro Signed 4/21/21 Date

Lori Munch Signed 4-22-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/21/21 Page 1 of 1

Sample Location: 400-HV-147

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260							Charge Number
210421 1410C	3	A	✓							XGMD
1411C (FB)	3	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	4/21/21 1430hrs.		Ron Mund	4-22-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This well will be purged dry prior to sampling. Samples will be collected using a teflon bailer after recovery. Carboy G3 in use.

Total depth - 148.40ft.
Initial DTW - 145.00ft.
Start purge - 0640 hrs.
Stop purge - 0648 hrs.
Total gallons purged - .7
Final DTW - 145.61ft.

Meter ID	Buffers	Lot	Exp
pH/Cond - 13	7	4002A91	8/21
Turb - 20	10	4001D05	6/21
" Std - 5.71			
" rdg - 5.83			
" lot - 91017			
" Exp - 4/30/21			

Initial Parameters
Time - 210427 0810B
pH - 7.76
Temp - 20.1°C
Cond - 2.42 ms/cm
Turb - 17.6 NTU's
pH pre - 7.11 / 10.08 (18.1°)
pH post - 7.09 / 10.10
DTW - 145.36ft.

Final
Time - 210427 0840B
pH - 7.68
Temp - 19.8°C
Cond - 2.44 ~~uS~~ ms/cm
Turb - 8.75 NTU's
pH pre - 7.12 / 10.06 (17.6°C)
pH post - 7.11 / 10.09
~~DTW~~ ——— cd

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210427 0815B	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 0816B	" (FB)	"	"	"	"
—— 0817B	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
—— 0818B	" (FB)	"	"	"	"
—— 0819B	Chloride by 300.0	"	(1) 125ml poly	"	ALS
—— 0820B	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210427 0730B	VOA by 8260	ice/HCL	(3) 40ml vials	21EH118A	ALS
—— 0731B	607/Bromacil	ice	(1) 1L Amber	21EH118B	SRI

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/27/21 — Date

Jon Munch — Signed — 4-27-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/27/21 Page 1 of 1

Sample Location: 600-G-138

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Chloride					Charge Number
Pertinent Notes (if any)										
210427 0730B (BC)	3	A	✓							XGMD
0731B (BC)	1	A		✓						"
0815B	3	A	✓							"
0816B (FB)	3	A	✓							"
0817B	1	A		✓						"
0818B (FB)	1	A		✓						"
0819B	1	A			✓					"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: NO_2/NO_3							Charge Number
Pertinent Notes (if any)										
210427 0820B	1	A	✓							XGMD

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/27/21 0920 hrs.		[signature]	4-27-21 /0900

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

50
PROJECT B050 - EFF. 1

Notebook No. PFTS #9
Continued from page _____

AL MONTES & TONY TORREZ PRESENT. SAMPLES WILL BE COLLECTED FROM A DEDICATED SAMPLE PORT ON THE EFFLUENT SIDE. THE SAMPLE PORT WILL BE PURGED FOR 1 MIN. PRIOR TO SAMPLING. CARBOY

PARAM'S

pH	8.69
TEMP	25.6°C
COND	1085 µs/cm
TURB	1.75
pH PRE	7.04 / 9.98 (22.5°)
pH POST	7.04 / 10.01
210414 1405	

METER ID'S

pH/COND	12
TURB #	21
" SAL	570
" RDG	555
" LOT #	91017
" EXP	4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210414 1406	8260DLL	ICE/HCl	2573	(3) 40ml VIALS	ALS
1407	" (FB)	"	"	"	"
1408	6007	ICE	108501	(1) 1L AMBER	SAL
1409	CNDMA	"	"	"	"
1410	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. D. Signed — 4-14-21 Date — Jon Munch Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page _____ of _____

Sample Location: B650 - Eff-1

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260LL	607	LLNMA					Charge Number: X6mD
210414 1406	3	A	X							
1407 FB	3		X							
1408	1			X						
1409 FB	1				X					
1410	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. Dy	4-14-21 1600		Jon W Lynch	4-15-21 0900

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

AL MONTES & TONY TORRES PRESENT. SAMPLES WILL BE COLLECTED FROM A DEDICATED SAMPLE PORT ON THE INFLUENT SIDE OF THE SYSTEM. SAMPLE PORT WILL BE PURGED FOR 1 MIN OFF PRIOR TO SAMPLING. Carboy

Param's	
pH	7.41
Temp	25.5
Cond	1080 µs/cm
Turb	2.79
pH pre	7.04/9.96 (22.6°C)
pH post	7.02/10.00

210414 1415

METER ID's

pH/Cond 12
Turb # 21
" STD = 57.0
" Rdg = 55.5
" Lot # = 91017
" Exp = 4/30/21

SAMPLES

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210414 1416	82600	1/2 HCl	2573	(3) 40ml VIALS	ALS
" 1417	" (FB)	"	"	"	"
" 1418	" (Dup)	"	108501	"	"
" 1419	6010	ICE	"	(1) LT amber	SRL

Continued from page

Read and Understood By

T. D. — Signed — 4-14-21 Date

Pam Munch — Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page 1 of 1

Sample Location: B66-INF-1

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6097	Charge Number
210414 1416		3	A	X		XGMA
— 1417 FB		3		X		
— 1418		3		X		
— 1419		1			X	

Sample Location:

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

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T-Dz	4/14/21/1600	[signature]	4-15-21 / 0900

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

PROJECT B655-Eff-2

Notebook No. PFTS #9

Continued from page ____

AL Montes & Tony Torrez present. Samples will be collected from a dedicated sample port. Located @ the effluent side of the system. The sample ports will be purged for 1 mine prior to sample collection. Gaiboy #

Params	
210414/1325	
pH	8.76
Temp	24.5
Cond	~~10.7~~ 1124 µs/cm
Turb	0.71 NTU's
pH pre	7.02/10.01 (22.3°C)
pH post	7.02/10.01

Meter I.D's	
pH/cond	12
Turb #	21
" Std	= 5720
" Rdg	= 55.5
" Lot #	= 91017
" Exp	= 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210414/1326	8260LL	ICE/HCl	2573-2	(3) 40ml vials	ACS
1327	" (FB)	"	"	"	"
1328	6007	ICE	108501	(1) 1LT Amber	SRI
1329	LLNOMA	"	"	"	"
1330	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. D. — Signed — 4-14-21 Date

Jon W Munch — Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21 Page 1 of 1

Sample Location: B655-Eff-2

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607	4302					Charge Number
										X6mD
210414 1326	3	A	X							
— 1327 (FB)	3		X							
— 1328	1			X						
— 1329	1				X					
— 1330 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. Dg	TG 4/14/21/1600		[signature]	4-15-21 / 0900

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

AC Montes & Tony Torrez present. Samples will be collected from a dedicated sample port on the influent side of the system. The sample port will be purged for 1 min prior to sampling. Carboy #

Params

2/04/14 1345

pH	7.61
Temp	24.5
Cond	1143 µs/cm
Turb	0.89 NTU's
pH pre	7.02 / 10.00 (22.3)
pH post	7.01 / 10.01

Meter ID's

pH/Cond = 12
Turb # 21
" Rdg = 55.5
" Std = 57.0
" Lot # 91017
" Exp = 4/30/21

Samples

Sample #		Analysis	Preserv	Lot #	Cont	Lab
2/04/14	1346	8260	1:1 HCl	2573	(3) 40mL VOAs	ALS
"	1347	" (F,B)	"	"	"	"
"	1348	Cl07	1:1	108501	(1) 1LT Amb Gl	SRI

Continued from page

Read and Understood By

T. [signature] Signed — 4-14-21 Date

[signature] Signed — 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-14-21

Sample Location: B655-INF. 2

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 607	Charge Number
210414 1346		3	A	X		XGMD
1347 FB		3		X		
1348		1			X	

Sample Location:

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

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
T. Day	4-14-21 1600	[signature]	4-15-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & windy. 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.

Calibrations
DO - calibrated in saturated air @ 640 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.79 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210414 1415C	21.01	1.52	3.19	~~98~~ -30	8.42	1.68	360.10
2) ——— 1418C	21.13	1.53	3.03	-34	8.41	1.58	360.10
3) ——— 1421C	21.19	1.58	2.89	-39	8.38	1.47	360.10

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210414 1425C	VOA by 8260 ~~Low~~	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1426C	" (FB)	"	"	"	"
——— 1427C	Low Level NDMA	ice	(1) 1L Amber	N/A	SPI
——— 1428C	" (FB)	"	"	"	"

Initial DTW - 360.04 ft Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro 4/14/21 Date Signed Pete Munch 4-15-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/21 Page 1 of 1

Sample Location: BLM-6-488

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: LL NDMA						Charge Number
Pertinent Notes (if any)										
210414 1425C	3	A	✓							XGMD
1426C (FB)	3	A	✓							"
1427C	1	A		✓						"
1428C (FB)	1	A		✓						"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fenno	4/14/21 1510hrs.		[signature]	4-15-21 /0900

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

Marcus Avalos & Robert Burrows present. Weather is breezy & cool. This well will be purged 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 analyzers.

DTW - 494.90'

Trip Blanks

Sample #	Analysis	Preserve	Container	lot	lab
210401124513	VOA by 8260 LL	HCl/Ice	(3) 40 ml vials	25731	A|S
—— 12463	Low Level NOMA	Ice	(1) 1L Amber	0124201E	JRI

Parameters (time)	Temp(°C)	Cond (ms/cm)	DO	ORP	PH	Turb(NTU)	DTW(ft)
1) 210401 1340B	20.12	1.119	4.82	170	6.97	2.17	494.92
2) —— 1342B	20.19	1.123	4.78	173	6.95	0.68	"
3) —— 1344B	20.14	1.119	4.82	170	6.98	1.27	"

Calibrations

DO - Cal in saturated air @ 645 mm/Hg.

Conductivity - Cal using 1413 uS/cm STD

PH - Cal using Oakton Buffers (4,7,10)

Turbidity Meter - #20 STD - 5.71 NTU RDG - 5.62 NTU lot - 91017 Exp - 4/30/21

Samples

Sample #	Analysis	Preserve	Container	lot	lab
210401 1350	VOA by 8260	HCl/Ice	(3) 40ml vials	25731	A|S
—— 1351	" (FB)	"	"	"	"
—— 1352	Low Level NOMA	Ice	(1) 1L Amber	0124201E	JRI
—— 1353	" (FB)	"	"	"	"

TDW - 2 3/4 gal

Continued from page

Read and Understood By

Signed — Date 4/1/21

Signed — Date 4-5-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/21 Page 1 of 1

Sample Location: BIM-10-517

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA	Charge Number
210401124SB (TB)	3	A	X		XGMD
1246B (TB)	1			X	
1350B	3		X		
1351B (FB)	3		X		
1352B	1			X	
1353B (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:
[signature]	4/1/21 @ 1530	[signature]	4-6-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, and breezy. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Chen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1330Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1331Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI

Initial Parameters	Final	Meter ID	
Time - 210407 1405Y	Time - 210407 1501Y	pH/cond - 61	
PH - 8.33	PH - 8.39	Turb - 7	
Temp - ~~24.3°C~~ CD 23.4°C	Temp - 23.7°C	u std - 6.27	
Cond - 1139 us/cm	Cond - 1127 us/cm	u rdg - 6.22	
Turb - 4.68 NTU's	Turb - 3.31 NTU's	u lot - 91017	
pH pre - 7.01/9.98 (28.6°C)	pH pre - 6.96/9.93 (30.5°C)	u Exp - 4/30/21	
pH post - 6.99/9.98	pH post - 6.97/9.93		
DTW - 368.25ft.	DTW - 368.33ft.	Buffers Lot	Exp
Atmos - 12.24psia	Atmos - 12.21 psia	7 4002991	8/21
	IDW - 1/2 gal.	10 400IDO5	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1430Y	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1431Y	607/Bromacil	ice	(1) 1L Amber	012420IE	SRI
——— 1500Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)
	23.89	23.80	23.79
	25.06	25.08	25.10
	24.98	24.97	25,01
	23.85	23.81	23.82

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/7/21 — Date

Lori Munda — Signed — 4-8-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/7/21 Page 1 of 1

Sample Location: BLM-39-385

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals				Charge Number
210407133oy (EB)	3	A	✓						XGMD
1331y (EB)	1	A		✓					"
1430y	3	A	✓						"
1431y	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 DeFerno	4/7/21 1525 hrs.		[signature]	4-8-21 / 0845

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Hen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210407090oy	VOA by 8260	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0901y	Total Metals	ice/HNO_3	(2)125ml poly's	20-07-07	"

Initial Parameters	Final	Meter ID
Time - 2104070945y	Time - 2104071050y	pH/Cond - 61
PH - 8.23	PH - 8.12	Turb - 7
Temp - 21.3	Temp - 21.5°c	" Std - 6.27
Cond - 694 us/cm	Cond - 680 us/cm	" rdg - 6.22
Turb - 2.06 NTU's	Turb - 1.60 NTU's	" lot - 9107
pHpre - 7.13/10.09 (16.4°c)	pHpre - 7.06/10.04 (19.0°c)	" Exp - 4/30/21
pHpost - 7.13/10.08	pHpost - 7.07/10.02	
DTW - 368.10ft.	DTW - 368.25ft.	Buffers Lot Exp
Atmos - 12.20 psia	Atmos - 12.21 psia	7 4002G91 8/21
	IDW - ½ gal.	10 4001D05 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210407 1015y	VOA by 8260	ice/HCL	(3)40ml vials	2573-1	ALS
——— 1016y	" (Dupl.)	"	"	"	"
——— 1017y	607/Bromacil	ice	(1)1L Amber	0124201E	SRI
——— 1045y	Total Metals	ice/HNO_3	(2)125ml poly's	20-07-07	ALS
——— 1046y	Anions/Alk.	ice	"	N/A	"
——— 1047y	TDS by SM2540C	"	(1)125ml poly	"	"
——— 1048y	Perchlorate by 6850	"	"	"	"
——— 1049y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1)250ml poly	21-03-03	"

Runs	1)	2)	3)	4)
	100.04	99.99	99.95	N/A
	97.35	97.17	97.04	
	97.30	97.13	96.96	
	100.06	100.00	99.97	

Continued from page

Read and Understood By

Craig Del Ferraro 4/7/21 Dan Mumah 4-8-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/7/21 Page 1 of 1

Sample Location: BLM-39-560

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals	Anions / Alk				Charge Number
210407090 0Y (EB)		3	A	✓							XGMD
0901Y (EB)		2	A			✓					"
1015Y		3	A	✓							"
1016Y (Dupl.)		3	A	✓							"
1017Y		1	A		✓						"
1045Y		2	A			✓					"
1046Y		2	A				✓				"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO_2/NO_3					Charge Number
210407104 7Y		1	A	✓							XGMD
1048Y		1	A		✓						"
1049Y		1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeFerro	4/7/21 1120hrs.		[signature]	4-8-21 /0845

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

JJ MONTES & TONY TORREZ PRESENT. WEATHER IS VERY WINDY & COOL. THIS WELL WILL BE SAMPLED USING A DEDICATED BLADDER PUMP. SAMPLES WILL TAKEN FROM A TEFLON DISCHARGE TUBE. CARBOY G-1

METER ID

COND/PH MTR - 12

TURB MTR. - 21

" ST 0. - 57.0 NTU

" RDG - 56.1 NTU

" LOT# - 91017

" EXP - 4.30.21

1DW - 2gal

DTW - 523.70 FT

PARAMETERS	TEMP (°C)	COND (µS/cm)	PH	TURB (NTU)	DTW ft
210401 1020c	10.5°C	957	8.71	0.80	523.65 ft
——— 1025c	10.8°C	957	8.63	0.92	"
——— 1030c	10.9°C	958	8.50	0.84	"

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT#	LAB
210401 1031c	VOA LL 8260	ICE · HCL	3 · 40ML VIALS	25737-2	ALS
——— 1032c	" (FB)	"	"	"	"
——— 1033c	NDMA · DMN · 8270 SIM	ICE	1LT AMBER	108501	SKL
——— 1034c	LL NDMA	"	"	208501	"
——— 1035c	" (FB)	"	"	"	"
——— 1036c	TOTAL METALS	ICE · HNO_3	2 · 125mL Poly	200707	ALS
——— 1037c	ANIONS · ALK	ICE · 0 HEAD	125mL Poly	NA	"
——— 1038c	TDS	ICE	"	"	"
——— 1039c	PERCHLORATE	ICE · 2/3 FULL	"	"	"
——— 1040c	NO_2 NO_3	ICE · H_2SO_4	"	2	"

Continued from page NA

Read and Understood By

Signed — Date 4.1.21

Signed — Date 4.5.21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.1.21 Page 1 of 1

Sample Location: BLM.40.517

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	VOA LL	607	LL NDMA	TOT MET.	PFAS 537 A-K			Charge Number
										XGMO
210401 1031C	3	A	X							
1032C (FB)	3		X							
1033C	1			X						
1034C	1				X					
1035C (FB)	1				X					
1036C	2					X				
1037C	2						X			

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	PEACH.	N02 N03					Charge Number
210401 1038C	1	A	X							
1039C	1	A		X						
1040C	1	A			X					

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
	4.1.21 11:10			4-5-21 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. This well will be purged using a dedicated bladder pump. Samples will be collected using a Teflon discharge tube. Water quality parameters will be monitored using a QED MP-20 flow cell and water analyzer. Carboy GS in use.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210412 1245C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1246C	Low Level NOMA	ice	(1) 1L Amber	N/A	SRI

Calibrations

DO - calibrated ~~using~~ in saturated air @ 639 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.80 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
1) 210412 1400C	20.95	0.619	4.80	~~7.1~~	7.96	0.61	522.73
2) ——— 1403C	20.85	0.617	4.50	33	7.99	0.63	522.73
5) ——— 1406C	20.89	0.613	4.34	33 34	8.01	0.50	522.73

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210412 1410C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1411C	" (FB)	"	"	"	"
——— 1412C	Low Level NOMA	ice	(1) 1L Amber	N/A	SRI
——— 1413C	" (FB)	"	"	"	"
——— 1414C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 1415C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1416C	Perchlorate by 6850	"	"	"	"
——— 1417C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 521.73ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/12/21 — Date

Lori Munch — Signed — 4-13-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/12/21 Page 1 of 1

Sample Location: BLM-40-595

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Anions/Alk.					Charge Number
210412 1245C	(TB)	3	A	✓							XGMD
" 1246C	(TB)	1	A		✓						"
" 1410C		3	A	✓							"
" 1411C	(FB)	3	A	✓							"
" 1412C		1	A		✓						"
" 1413C	(FB)	1	A		✓						"
" 1414C		2	A			✓					"

Sample Location:

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: TDS	Perchlorate	NO_2/NO_3					Charge Number
210412 1415C		1	A	✓							XGMD
" 1416C		1	A		✓						"
" 1417C		1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig McFarland	4/12/21 1520 hrs.		[signature]	4-13-21 / 0915

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

OJECT BLM-40-688 WJI ENV-0053 Notebook No. D32 # 121(c)
Continued from page

ob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. is well will be purged using a dedicated bladder pump. Samples will collected using a teflon discharge hose. Water quality parameters will monitored using a QED MP20 flow cell and water analyer. Carboy G3.

alibrations
O - calibrated in saturated air @ 640 mm/Hg.
onductivity - calibrated using 1413 us/cm std. solution.
H - calibrated using Fisher buffers (7-10).
urbidity meter #20 std - 5.71 rdg - 5.79 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

ample	Analysis	Preservative	Container	Lot	Lab
210414 1000C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1001C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI

rameters (time)	temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft)
210414 1055C	20.80	0.800	3.98	1	8.21	0.81	510.21
—— 1058C	20.86	0.794	3.80	0	8.17	0.78	510.21
—— 1101C	20.93	0.788	3.64	-2	8.15	0.72	510.21

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210414 1105C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1106C	" (FB)	"	"	"	"
—— 1107C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
—— 1108C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
—— 1109C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 1110C	Perchlorate by 6850	"	"	"	"
—— 1111C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"
—— 1112C	Low Level NDMA (FB)	ice	(1) 1L Amber	N/A	SRI

Initial DTW - 509.96ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

4/14/21
Date

Signed

4-15-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/14/21 Page 1 of 1

Sample Location: BLM-40-688

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA						Charge Number
Pertinent Notes (if any)										
210414 1000C (TB)	3	A	✓							XGMD
1001C (TB)	1	A		✓						"
1105C	3	A	✓							"
1106C (FB)	3	A	✓							"
1107C	1	A		✓						"
1112C (FB)	1	A		✓						"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perch/orate	NO_2/NO_3				Charge Number
Pertinent Notes (if any)										
210414 1108C	2	A	✓							XGMD
1109C	1	A		✓						"
1110C	1	A			✓					"
1111C	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Torro	4/14/21 1135 hrs.		[signature]	4-15-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & breezy. 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 @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.64 lot - 91017 Exp - 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
1) 210420 1410C	21.83	1.119	3.56	68	8.92	1.59	353.90
2) ——— 1413C	21.91	1.108	3.38	67	8.95	1.28	353.90
3) ——— 1416C	22.03	1.102	3.22	64	8.96	1.23	353.90

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210420 1420C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1421C	" (FB)	"	"	"	"
——— 1422C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRL
——— 1423C	" (Dupl.)	"	"	"	"
——— 1424C	" (FB)	"	"	"	"
——— 1425C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 1426C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1427C	Perchlorate by 6850	"	"	"	"
——— 1428C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 353.04ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/20/21 — Date

Ron Munch — Signed — 4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: BLM-41-420

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Anions/AIK	TDS				Charge Number
210420 1420C	3	A	✓							XGMD
1421C (FB)	3	A	✓							4
1422C	1	A		✓						4
1423C (Dupl.)	1	A		✓						4
1424C (FB)	1	A		✓						4
1425C	2	A			✓					4
1426C	1	A				✓				4

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
210420 1427C	1	A	✓							XGMD
1428C	1	A		✓						4

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig M Foard	4/20/21 1530hrs.	Jon Munch	4-21-21 / 0910

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

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 YSI MP-20 flow cell and water analyzer. Carboy G3 in use.

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 #20 std - 5.71 rdg - 5.64 lot - 910/7 Exp - 4/30/21

Parameters (time)	Temp (°C)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (ft.)
210420 0915C	20.81	1.056	2.29	-398	8.44	4.46	392.66
——— 0918C	20.87	1.051	2.11	-400	8.49	3.82	392.66
——— 0921C	20.94	1.043	2.00	-403	8.53	3.18	392.66

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210420 0925C	VOA by 8260 LL	ice/HCl	(3) 40ml vials	2573-1	ALS
——— 0926C	" (FB)	"	"	"	"
——— 0927C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRL
——— 0928C	" (Dupl.)	"	"	"	"
——— 0929C	" (FB)	"	"	"	"
——— 0930C	Anions/Alk.	"	(2) 125ml poly's	"	ALS
——— 0931C	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0932C	Perchlorate by 6850	"	"	"	"
——— 0933C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(2) 250ml poly	21-03-03	"

Blind Controls

Sample	Analysis	Preservative	Container	Lot	Lab
210420 1120C	Low Level NDMA	ice	(1) 1L Amber	21EH117A	SRL

Initial DTW - 392.31 ft.

Total gallons purged - 3

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/20/21 — Date

Geri Nunch — Signed — 4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: BLM-41-670

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Anions/Alk	TDS				Charge Number
210420 0925C	3	A	✓							XGMD
0926C (FB)	3	A	✓							"
0927C	1	A		✓						"
0928C (Dupl.)	1	A		✓						"
0929C (FB)	1	A		✓						"
0930C	2	A			✓					"
0931C	1	A				✓				"

Sample Location:

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Perchlorate	NO_2/NO_3	LL NDMA					Charge Number
210420 0932C	1	A	✓							XGMD
0933C	1	A		✓						"
1120C (BC)	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terro	4/20/21 1130hrs.		[signature]	4-21-21 /0910

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

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. Carboy #3 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 #20 std - 5.71 rdg - 5.67 lot-91017 Exp 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	pH	Turb (NTU's)	DTW (ft)
210419 0940c	20.65	2.37	2.44	0	8.36	46.2	173.60
——— 0943c	20.71	2.42	2.31	-3	8.39	41.8	173.68
——— 0946c	20.74	2.44	2.23	-5	8.41	35.0	173.76

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210419 0950c	VOA by 8260	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0951c	" (FB)	"	"	"	"
——— 0952c	607/Bromacil	ice	(1) 1L Amber	0124201E	SPL
——— 0953c	Total Metals	ice/HNO_3	(2) 125ml poly's	19-11-29	ALS
——— 0954c	" (Dup.)	"	"	"	"
——— 0955c	Anions/A/K	ice	"	N/A	"
——— 0956c	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0957c	Perchlorate by 6850	"	"	"	"
——— 0958c	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial DTW - 172.50 ft. Total gallons purged - 4

Water was very turbid - crew purged the well until turbidity began to lower from 70 NTU's.

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/19/21 — Date

Signed — 4-20-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/19/21 Page 1 of 1

Sample Location: BW-3-180

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions/Alk	TDS			Charge Number
210419 0950C	3	A	✓							XGMD
0951C (FB)	3	A	✓							"
0952C	1	A		✓						"
0953C	2	A			✓					"
0954C (Dupl.)	2	A			✓					"
0955C	2	A				✓				"
0956C	1	A					✓			"

Pertinent Notes (if any)

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Perchlorate	NO_2/NO_3						Charge Number
210419 0957C	1	A	✓							XGMD
0958C	1	A		✓						"

Pertinent Notes (if any)

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig DeFreno	4/19/21 1120hrs.		[signature]	4-20-21 /0900

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

WSTF 381C (05/2016)

DAN HALVORSEN & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED WITH A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 2YB psi & SAMPLE PRESSURE SET @ 227psi. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3psi & STABLE 5psi

	INITIAL	FINAL
	210408 0830A	210408 0845A
pH	8.45	8.47
TEMP	19.2°C	19.3°C
COND	1310 µs/cm	1310 µs/cm
TURB	0.44 NTUs	0.59 NTUs
PHPRE	7.02/19.95 (18.3°C)	7.02/19.95 (19.1)
PHPOST	7.03/19.98	7.02/19.95

METER ID's
pH/COND = 73
TURB # 20
" STD = 5.71
" RDG = 5.59
" LOT # = 9/017
" EXP = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0831A	8260LL	ICE/HCl	(3) 40ml VIALS	2573-2	ALS
0832A	" (FB)	"	"	"	"
0833A	LLNOMA	ICE	(1) LT AMBER	108501	SRL
0834A	" (FB)	"	"	"	"
0835A	SVOA-SIM	"	(1) 250ml AMBER	N/A	ALS

TRIP BLANKS

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0700A	8260LL	ICE/HCl	(3) 40ml VIALS	2573-2	ALS
0701A	LLNOMA	ICE	(1) LT AMBER	108501	SRL

* ADDED 3.5 GALLONS TO INSIDE OF THE FLUTE PRIOR TO PURGING DUE TO BUBBLER STABALIZING @ 1.5 psi & NOT ABOVE THE 3psi THAT FLUTE SUGGESTS.

Continued from page

Read and Understood By

T. [signature] — Signed — 4-8-21 — Date

[signature] — Signed — 4-12-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 Page 1 of 1

Sample Location: JER-1-483

Sample Number	# of Containers	Sample Matrix*	8260	LVOA	SVOA SIM					Charge Number
Pertinent Notes (if any)										X6MD
210408831A	3	A	X							
0832A (FB)	3		X							
0833A	1			X						
0834A (FB)	1			X						
0835A	1				X					
0700A	3		X							
0701A	1			X						

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. [illegible]	4/8/21 / 1100		[illegible]	4-12-21 / 0900

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

DAN HALVORSEN & TONY TOCCA PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 24 PSI & SAMPLE PRESSURE SET @ 22 PSI THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3 PSI & STABLE @ 5 PSI

INITIAL		FINAL	METER ID's
210408 0850A		210408 0905A	pH/Cond = 73
pH	8.38	8.41	Turb # 20
TEMP	20.0°C	20.1°C)	" STD: 5.71
Cond	1382 µs/cm	1379 µs/cm	" adj: 5.59
Turb	0.29	0.21	" LOT #: 91017
pH pre	6.99/9.92 (19.8°C)	7.05/9.98 (19.6°C)	" EXP: 4/30/21
pH post	7.04/9.90	7.06/9.97	

Samples

Sample #	Analysis	Preserv	Cont	Lot #	Lab
210408 0851A	8260II	Ice/HCl	(3) 40ml vials	2573.2	ALS
—— 0852A	" (FB)	"	"	"	"
—— 0853A	LCNDMA	Ice	(1) LT Amber	108501	SRL
—— 0854A	" (FB)	"	"	"	"
—— 0855A	Sim-SVOA	"	(1) 250ml Amber	N/A	ALS
—— 0856A	" (Dup)	"	"		"

Continued from page

Read and Understood By

T. D. Signed — 4.8.21 Date — Signed — 4-12-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 Page 1 of 1

Sample Location: JER-1-563

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	CLNO3A	SUO4 SIM					Charge Number
210408 0851A		3	A	X							X6MD
0852A (FB)		3		X							
0853A		1			X						
0854A (FB)		1			X						
0855A		1				X					
0856A Dup		1	↓			X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
				4-12-21 / 0900

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

PROJECT JER-1-~~638~~ 683

Notebook No. D37#120(a)

Continued from page

DAN HALVORSEN & TONY TOFTEZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 248 PSI & SAMPLE PRESSURE SET @ 227 PSI THE FIRST 350 mls DISCARDED PRIOR TO SAMPLING. BUBBLER SET @ 3 PSI & STABLE @ 5 PSI

	INITIAL	FINAL
	210408 0910A	210408 0917A
pH	8.31	8.38
Temp	19.7°C	19.9°C
Cond	1381 µS/cm	1383 µS/cm
Turb	0.54 NTU's	0.43 NTU's
pH PRE	7.04/10.00 (21.0°)	7.02/9.97 (21.3°C)
pH POST	7.03/9.96	7.05/9.97

METER ID's

pH/cond = 73
Turb # 20
" std = 5.71
" rdg = 5.59
" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONT	LOT #	LAB
210408 0911A	8260 (11)	HCl to pH<2	(3) 40ml VIALS	2573-2	ALS
" 0912A	" (FB)	"	"	"	"
" 0913A	6010MA	HNO3 to pH<2	(1) 1LT AMBER	108501	SRL
" 0914A	" (FB)	"	"	"	"
" 0915A	SUOA-Sim	"	(1) 250ml AMBER	N/A	ALS

Continued from page

Read and Understood By

Signed — Date 4-8-21

Signed — Date 4-12-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-8-21 ✓ Page 1 of 1

Sample Location: JER-1-~~638~~ 683

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LC	LC XGMA	SUOA 5 m					Charge Number: XGmD
210408 0911A	3	A	X							
0912A (PB)	3		X							
0913A	1			X						
0914A (PB)	1			X						
0915A	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. [illegible]	4-8-21 / 1100		[illegible]	4-12-21 / 0900

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

Marcus Avalos & Tony Torres present. This well will be purged & sampled using a Flute sampling system. The weather is clear & warm This zone will be purged at least 4 Times prior to sampling. Purge pressure set @ 26.5 psi & Sample pressure set @ 24. Samples collected from A dedicated Teflon discharge Tube. Bubbler set @ 3psi & Stable @ 6.5 psi. Carboy 65

INITIAL	FINAL
210420 0950A	210420 1010A
pH 7.87	7.81
Temp 20.9°C	20.8°
Cond 1032 µs/cm	1034 µs/cm
Turb 084 NTU's	0.78
pHpre 7.01/10.00(17.9	7.04/10.03 (18.2)
pHpost 7.00/10.02	7.00/10.03

METER ID's
pH/Cond = 12
Turb # 21
" Std 57.0
" Rdg 57.0 NTU's
" Lot # 91017
" Exp 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 0951A	8260 11	Cool/HCl	~~B72~~ 2573	(3) VOA Vials	ALS
0952A	" (FB)	"	"	"	"
0953A	CLNDm4	ICE	108501	(1) 1LT Amber	SRL
0954A	" (FB)	"	"	"	"
0955A	5270A-SIM	"	N/A	(1) 250ml Amber	ALS

Continued from page

Read and Understood By

T. [signature] Signed — 4-20-21 Date

[signature] Signed — 4-21-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/20/21 Page 1 of 1

Sample Location: SER-2-534

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LC	LINDA	SU045 in					Charge Number
											X6MS
210420 0951A		3	A	X							
0952A (FB)		3		X							
0953A		1			X						
0954A (FB)		1			X						
0955A		1				X					

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
FD	4-20-21/1100		[signature]	4-21-21 /0910

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be purged & sampled using a Flute sample system. This zone will be purge at least 4 times prior to sampling. Purge Pressure set @ 265 psi & Sample pressure set @ 244. The bubblers was set @ 3psi & stable @ 6.5 psi. Carboy 65

	Initial	Final	Meter ID's
	210420/1015A	210420 1025A	pH/Cond = IR
pH	7.83	7.78	Turb II 21
Temp	21.4°C	21.6	" Std 57.0
Cond	1020	1017 µs/cm	" Rdg 57.6
Turb	0.86 NTU's	0.84 NTU's	" Lot# 91017
pH pre	7.01 / 10.04 (17.8:)	7.03 / 10.02 (17.9:)	" Exp 4/30/21
pH post	7.02 / 10.03	7.01 / 10.00	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 1016A	8260 II	1:1 HCl	2573-2	(3) 40 ml vials	ALS
1017A	" (FB)	"	"	"	"
1018A	UNMA	Ice	1085.1	(1) 1LT Amber	SRI
1019A	" (FB)	"	"	"	"
1020A	" (Dup)	"	"	"	"
1021A	SVOA-Sims	"	N/A	(1) 250 ml Amber	ALS

Continued from page

Read and Understood By

T. [signature] — Signed
4-20-21 — Date
[signature] — Signed
4-21-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-20-21 Page 1 of 1

Sample Location: JEN 2-584

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	8760	CINM4	SU045in					Charge Number
										X6mD
210420 1016A			X							
1017A (FB)			X							
1018A				X						
1019A (FS)				X						
1020A (Dup)				X						
1021A					X					
					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:
T. [illegible]	4-20-21 / 1100		[illegible]	4-21-21 / 0910

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

Marcus Avalos & Tony Torres present. The weather is clear & warm. This zone will be sampled & purged using a Flute sampling system. This zone will be purged at least 4 Times. Purge pressure set @ 865 psi & sample pressure set @ 244 psi. Samples collected from a Teflon discharge Tube. Bubbler set @ 3 psi & Stable @ 6.5 psi. Canopy OS

	Initial	Final	Meter ID's
	210420 1030A	210420 1045A	pH/cond 12
pH	7.79	7.75	Turb # 21
Temp	21.2°c	21.2°c	" STD = 57.0
Cond	1058 ms/cm	1061 ms/cm	" RDG = 57.6
Turb	0.72 NTU's	0.76 NTU's	" LOT # 9/1017
pH pre	7.00/10.01 (18.5)	7.02/10.03 (18.7)	" Exp 9/30/21
pH post	7.01/10.03	7.03/10.04	

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210420 1031A	8260 (11)	Ice/HCl	2573-2	(3) 40ml vials	ALS
1032A	" (FB)	"	"	"	"
1033A	(11) NDMA	Ice	108561	(1) 1L amber	SRL
1034A	" (FB)	"	"	"	"
1035A	SVOA-Sim	"	N/A	(1) 250ml amber	ALS
1036A	" (FB)	"	N/A	"	

Continued from page

Read and Understood By

T. [signature] Signed 4.20.21 Date

[signature] Signed 4-21-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-20-21 Page 1 of 1

Sample Location: JER-2-684

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA 8260	UNDMH	SVOA-SIM 8270					Charge Number
										X6MD
210420103IA	3		X							
1032A (FB)	3		X							
1033A ~~EFB~~	1			X						
1034A (FB)	1			X						
1035A	1				X					
1036A (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	4.20.21/1100		[signature]	4-21-21 / 0910

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, warm, & windy. this well will be purged using a dedicated bladder pump. Samples will be collected using a teflon discharge tube. 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 @ 641 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using fisher buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.82 lot - 91017 Exp - 4/30/21

Parameters (time)	Temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)	DTW (Ft.)
1) 210413 1350C	21.38	1.097	5.40	-4	8.50	0.51	411.82
2) ——— 1353C	21.45	1.083	5.25	-3	8.48	0.42	411.82
3) ——— 1356C	21.42	1.078	5.09	-3	8.48	0.33	411.82

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210413 1400C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1401C	" (FB)	"	"	"	"
——— 1402C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
——— 1403C	*" (M.S.)*	"	"	"	"
——— 1404C	*" (MSD)*	"	"	"	"
——— 1405C	" (FB)	"	"	"	"
——— 1406C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Initial DTW - 411.70ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/13/21 — Date

Jeri Munch — Signed — 4.14.21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/13/21 Page 1 of 1

Sample Location: JP-1-424

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Total Metals					Charge Number
210413 1400C	3	A	✓							XGMD
1401C (FB)	3	A	✓							"
1402C	1	A		✓						"
1403C (MS)	1	A		✓						"
1404C (MSD)	1	A		✓						"
1405C (FB)	1	A		✓						"
1406C	2	A			✓					"

Pertinent Notes (if any)

Sample Location:

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

Pertinent Notes (if any)

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Tenno	4/13/21 1520 hrs.			4-14-21 0900

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

ob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. This well ll be purged using a dedicated bladder pump. Samples will be collected using eflon discharge hose. Water quality parameters will be monitored ing a QED MP-20 flow cell and water analyzer. Carboy C3 in use.

alibrations
O - calibrated in saturated air @ 641 mm/Hg.
nductivity - calibrated using 1413 us/cm std. solution.
I - calibrated using Fisher buffers (7-10).
rbidity meter #20 std-5.71 rdg-5.82 lot-91017 Exp-4/30/21

rameters (time)	temp (°c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
210413 0950C	20.06	1.143	5.55	7.84	49	0.44	412.82
—— 0953C	20.14	1.138	5.16	7.85	49	0.40	412.82
—— 0956C	20.21	1.129	4.90	7.85	49	0.26	412.82

Samples

ample	Analysis	Preservative	Container	Lot	Lab
20413 1000C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
—— 1001C	" (FB)	"	"	"	"
—— 1002C	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
—— 1003C	* " (MS) *	"	"	"	"
—— 1004C	Low Level NDMA	"	"	"	"
—— 1005C	" (FB)	"	"	"	"
—— 1006C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 1007C	Anions/Alk.	ice	"	N/A	"
—— 1008C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 1009C	Perchlorate by 6850	"	"	"	"
—— 1010C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Initial ~~Parameter~~ cd
DTW — 412.77 Ft.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/13/21 Date

Jon Munch — Signed — 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/13/21 Page 1 of 1

Sample Location: JP-2-447

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
Pertinent Notes (if any)										
210413 1000C	3	A	✓							XGMD
1001C (FB)	3	A	✓							"
1002C	1	A		✓						"
1003C (MS)	1	A		✓						"
1004C	1	A			✓					"
1005C (FB)	1	A			✓					"
1006C	2	A				✓				"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk.	TDS	Perchlorate	NO_2/NO_3				Charge Number
Pertinent Notes (if any)										
210413 1007C	2	A	✓							XGMD
1008C	1	A		✓						"
1009C	1	A			✓					"
1010C	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Ferrel	4/13/21 1120hrs.		Jon Lunch	4-14-21 / 0900

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

Bob Tufts & Craig Del Ferraro 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 and water analyzer. Carboy G3 in use. Packer inflated and holding at 28psi.

Calibrations
DO - calibrated in saturated air @ 638 mm/Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std-5.71 rdg-5.81 lot-91017 Exp-4/30/21

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
104150750C	VOA by 8260 LL	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0751C	Low Level NDMA	ice	(1)1L Amber	N/A	SRI

Parameters (time)	temp(°C)	cond(ms/cm)	DO	PH	ORP	Turb(NTU's)
2104150855C	20.02	1.096	5.01	8.43	61	0.31
——— 0858C	20.14	1.101	4.91	8.40	61	0.29
——— 0901C	20.22	1.098	4.63	8.40	60	0.26

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
104150905C	VOA by 8260 LL	ice/HCL	(3)40ml vials	2573-1	ALS
——— 0906C	" (FB)	"	"	"	"
——— 0907C	Low Level NDMA	ice	(1)1L Amber	N/A	SRI
——— 0908C	" (FB)	"	"	"	"

No depth to water available.
Purging will be set on a long refill cycle to minimize drawdown.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/15/21 — Date — Signed — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/15/21 Page 1 of 1

Sample Location: JP-3-509

Sample Number	Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA	Charge Number
210415 0750C (TB)		3	A	✓		XGMD
0751C (TB)		1	A		✓	"
0905C		3	A	✓		"
0906C (FB)		3	A	✓		"
0907C		1	A		✓	"
0908C (FB)		1	A		✓	"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/15/21 1120 hrs.		[signature]	4-19-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy & 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 a QED MP-20 Flow cell and water analyzer. Carboy G3 in use. Packer inflated and holding at 28psi.

Calibrations

DO - calibrated in saturated air @ 638 mm Hg.
Conductivity - calibrated using 1413 us/cm std. solution.
PH - calibrated using Oakton buffers (7-10).
Turbidity meter #20 std - 5.71 rdg - 5.81 lot - 91017 Exp - 4/30/21

Parameters (time)	temp (°c)	cond (ms/cm)	DO	ORP	PH	Turb (NTU's)
1) 210415 1025C	20.42	0.678	5.97	23	8.75	0.62
2) ——— 1028C	20.54	0.689	5.43	24	8.71	0.55
3) ——— 1031C	20.62	0.693	5.12	24	8.68	0.47

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210415 1035C	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1036C	" (FB)	"	"	"	"
——— 1037C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI
——— 1038C	" (FB)	"	"	"	"

* No depth to water available. Purging will be set on a long refill cycle to minimize drawdown.

Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/15/21 — Date

Signed — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/15/21 Page 1 of 1

Sample Location: JP-3-689

Analytical Requirement: 8260 LL; LL NDMA

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Charge Number
210415 1035C	3	A	✓		XGMD
1036C (FB)	3	A	✓		4
1037C	1	A		✓	4
1038C (FB)	1	A		✓	4

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 Fermo	4/15/21 1120 hrs.			4-19-21 / 0900

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

WSTF 381C (05/2016)

Al Montes & Tony Tocce present. The well will be sampled from a dedicated sample port located next to the well head. Sample port will be purged for 1 min prior to sampling.

PARAMETERS

210415	1430
pH	7.76
Temp	26.8°c
Cond	1057
Turb	21.7 / 23.8 / 22.4
pH pre	7.04 / 10.05 (25.5°c)
pH post	7.05 / 10.04

METER ID's
pH/cond #12
Turb # 21
" STD = 57.0
" Rdg = 56.4
" LOT # = 910717
" Exp = 4-30-21

SAMPLES

SAMPLE #	Analysis	Preserv	LOT #	Cont	Lab
210415 1431	8260	Ice/HCl	2573-2	(3) 40ml vials	ALS
— 1432	"	"	"	"	"
— 1433	607	Ice	108501	(1) LT Amber	SVL
— 1434	Total metals	Ice/HNO_3	N/A	(2) 125ml p.b.	ALS
— 1435	Anions/Alk	Ice	"	" "	"
— 1436	TDS	"	"	(1) "	"
— 1437	Perchlorates	"	"	" "	"
— 1438	NO2/NO3	Ice/H_2SO_4	"	(1) 250ml p.b.	"
					"

Continued from page

Read and Understood By

T. [signature] Signed — 4.15.21 Date — [signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-2

Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: 8260	607	Total Metals	Anions / Alk	TDS	Perchlorates		Charge Number: XGMD
Sample Number										
210415 1431			X							
1432 FB			X							
1433				X						
1434					X					
1435						X				
1436							X			
1437								X		

Sample Location:

Pertinent Notes (if any)	# of Containers	Sample Matrix*	Analytical Requirement: NO2/NO3							Charge Number
Sample Number										
1438			X							

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4.15.21 / 1600			4-19-21 / 0900

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

AC montes + Tony Tower present. Samples will be collected from the dedicated sample port located next to well head. Sample port will be purged for 1 min prior to TB sampling. Carboy

PARAMETERS

~~tp~~ 210415 0925
pH 7.76
Temp 23.6
Cond 1158 µs/cm
Turb 0.92 NTU's
pH pre 7.05 / 10.01 (20.4°C
pH post

METER I.D's

pH/cond = 12
Turb #21
" std = 57.0 NTU's
" rdg = 56.4 NTU's
" LOT # 91017
" Exp: 4/30/21

SAMPLES

Sample #	Analysis	Preserv	LOT #	Cont	Lab
210415 0930	8260	HCl/HCl	2573	(3) 40ml vials	ALS
0931	" (FIB)	"	"	"	"
0932	6007	ICE	108501	(1) 1 LTAmber	SRL

Continued from page

Read and Understood By

T. D. — Signed — 4.15.21 Date

Jon Munch — Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-3

Pertinent Notes (if any)

Analytical Requirement: 8260, 6007

Charge Number: XGMD

Sample Number	# of Containers	Sample Matrix*	8260	6007						Charge Number
210415 0930	3	A	X							
0931 (FB)	3	A	X							
0932	1	A		X						

Sample Location:

Pertinent Notes (if any)

Analytical Requirement

Charge Number

Sample Number	# of Containers	Sample Matrix*								

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D.	4-15-21 / 1100		[signature]	4-19-21 / 0900

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

Al Montes & Tony Torres present. This well will be sampled from a dedicated sample port located next to the well head. Sample port will be purged for 1 min prior to sampling.

Parameters

210415-0949
pH 7.27
Cond 1100
Turb 11.3 NTU's
Temp 24.2
pH pre 7.03/10.01 (20.5°C)
pH post 7.04/10.00

Meter ID's

pH/Cond = 12
Turbo # 21
" Std = 57.0
" Rdg = 560.4
" Exp = 9/01/7
" Exp = 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210415-0950	8260	Iced	2573-7	(3) 40ml Vials	ALS
0951	" (FB)	"	"	"	"
0952	" (Dup)	"	"	"	"
0953	607	Ice	108507	(1) 1 Liter Amber	ALS
0954	" (Dup)	"		"	

Continued from page

Read and Understood By

T. [signature] Signed — 4-15-21 Date

[signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PTE-44

Analytical Requirement: 8260 | 607

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260	607						Charge Number
										XGmD
210415 0950	3	A	X							
0951 FB	3		X							
0952 Dup	3		X							
0953	1			X						
0954 Dup	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:
J. D	4/15/21/1100			4-19-21 /0900

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

AL MONTES & TONY TORRES PRESENT. THIS WELL WILL BE SAMPLED USING A SAMPLE PORT LOCATED @ THE WELL HEAD. THE SAMPLE PORT WILL BE PURGED FOR 1 min Carboy 6.

PARAMETERS

210415 1033
pH 7.75
COND 951
TEMP 25.3°C
TURB 2.56 NTU's
pH PRE 7.05/10.00 (21.8°C
pH POST 7.04/10.03

METER ID's

pH/COND = 12
TURB # 21
" STD = 5.7.0
" Rdg = 56.4
" LOT # = 91017
" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210415 1030	8260	ICE/HCl	2573-2	(3) 40ml VOAs	ALS
1031	"	"	"	~~(1) 1LT Amber~~ "	"
1032	607	ICE	108501	(1) 1LT Amber	SRL

Continued from page

Read and Understood By

T. [signature] 4.15.21
Signed Date

[signature] 4-19-21
Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-5

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	Analytical Requirement: 6007						Charge Number
Pertinent Notes (if any)										X6mS
210415 1030	3	A	X							
1031 FB	3		X							
1032	1	L		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-DB	4-15-21 / 1100		[signature]	4-19-21 / 0900

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

PROJECT Pfe-7

Notebook No. PFS #9

Continued from page _____

AL MONTES & TONY TORREZ PRESENT. SAMPLES COLLECTED FROM A DEDICATED SAMPLE PORT LOCATED NEAR THE WELL HEAD. SAMPLE PORT WILL BE PURGED FOR 1 MIN PRIOR TO SAMPLING

PARAMETERS	
210415	1315
pH	8.55
Temp	24.9 °C
Cond	1102 uS/cm
Turb	1.89 NTUs
pH pre	10.06 / 7.01 (24.5 °C)
pH post	7.04 / 10.05

METER ID's

pH / cond = 12

Turb # 21

" STD = 57.0

" Rdg = 56.4

" Lot # = 91017

" Exp = 4/30/21

SAMPLES

SAMPLE #	ANALYSIS		PRESERV	LOT #	CONT	LAB
210415	1320	8260	ICE HCl	2573-2	(3) 40 mL VIALS	ACS SRL
———	1321	" (FB)	"	"	"	"
———	1322	8011	ICE	108501	(1) LGT AMBER	"
———	1323	LL NAPHA	"	"	"	"
———	1324	" (FB)	"	"	"	"
———	1325	" (Dup)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 4-15-21 Date

[signature] Signed — 4-19-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-15-21 Page 1 of 1

Sample Location: PFE-7

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260	6007	1CW034					Charge Number
										XGMD
210415 1320	3	A	X							
1321 FB	3		X							
1322	1			X						
1323	1				X					
1324	1				X					
1325	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. Dy	4-15-21 / 1600		Jon W Lunch	4-19-21 / 0900

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

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 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 #20 std - 5.71 rdg - 5.67 lot - 91017 Exp - 4/30/21

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210419 1300C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1301C	Low Level NDMA	ice	(1) 1L Amber	N/A	SRI

Parameters (time)	temp (c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
1) 210419 1445C	21.67	1.024	6.19	8.87	8	1.13	486.20
2) ——— 1448C	21.78	1.016	5.95	8.84	10	0.95	486.20
3) ——— 1451C	21.90	1.012	5.70	8.80	13	0.91	486.20

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210419 1455C	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1456C	u (Dupl.)	u	u	u	u
——— 1457C	u (FB)	u	u	u	u
——— 1458C	607/Bromacil	ice	(1) 1L Amber	N/A	SRI
——— 1459C	Low Level NDMA	u	u	u	u
——— 1500C	u (FB)	u	u	u	u
——— 1501C	Total Metals	ice/HNO_3	(2) 125ml poly's	19-11-29	ALS
——— 1502C	Anions/Alk.	ice	u	N/A	u
——— 1503C	TDS by SM2540C	u	(1) 125ml poly	u	u
——— 1504C	Perchlorate by 6850	u	u	u	u
——— 1505C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	u

Initial DTW - 486.14ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferraro
Signed

4/19/21
Date

Jon Mundt
Signed

4-20-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/19/21 Page 1 of 1

Sample Location: PL-1-486

Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
Pertinent Notes (if any)										
210419 1300C (TB)	3	A	✓							XGMD
1301C (TB)	1	A			✓					"
1455C	3	A	✓							"
1456C (Dupl.)	3	A	✓							"
1457C (FB)	3	A	✓							"
1458C	1	A		✓						"
1459C	1	A			✓					"

Sample Location:

Sample Number	# of Containers	Sample Matrix*	LL NDMA	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3		Charge Number
Pertinent Notes (if any)										
210419 1500C (FB)	1	A	✓							XGMD
1501C	2	A		✓						"
1502C	2	A			✓					"
1503C	1	A				✓				"
1504C	1	A					✓			"
1505C	1	A						✓		"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Deltuno	4/19/21 1620hrs			4-20-21 / 0900

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

PROJECT PL-6-545 WJI ENV-0020

Notebook No. D64 #127(y)

Continued from page _____

Bob Tufts & Craig Del Ferraro present. Weather is clear & warm. This zone will be sampled using 5 triple rinsed, stainless steel sample tubes. Gen. in use Probe # 2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1335y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1336y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters

Time - 2104081407y
PH - 8.43
Temp - 24.8°c
Cond - 998 us/cm
Turb - 1.30 NTU's
pHpre - 6.97/10.01 (28.0°c)
pHpost - 6.95/9.99
DTW - 468.34 ft.
Atmos - 12.36 psia

Final

Time - 2104081525y
PH - 8.34
Temp - 24.5°c
Cond - 1009 us/cm
Turb - 0.88 NTU's
pHpre - 6.94/9.98 (29.7°c)
pHpost - 6.96/10.01
DTW - 468.45 ft.
Atmos - 12.38 psia
IDW - ½ gal.

Meter ID

pH/Cond - 61
Turb - 7
" Std - 6.27
" rdg - 6.26
" lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1435y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1436y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1500y	Low Level NDMA	"	"	"	"
——— 1501y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS

Runs	1)	2)	3)	4)
	49.33	49.35	49.34	49.25
	56.15	56.14	56.16	56.17
	56.13	56.14	56.16	56.13
	49.38	49.34	49.37	49.21

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/8/21 — Date

Signed — 4-12-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/8/21 Page 1 of 1

Sample Location: PL-6-545

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals				Charge Number
210408133 5y (EB)	3	A	✓							XGMD
1336y (EB)	1	A			✓					"
1435y	3	A	✓							"
1436y	1	A		✓						"
1500y	1	A			✓					"
1501y	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	4/8/21 1550hrs.			4-12-21 / 0900

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

Bob Tufts & Craig Del Ferraro present. Weather is clear & cool. This zone will be sampled using 5 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #2167. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210408 0925Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0926Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters	Final	Meter ID		
Time - 2104081000Y	Time - 2104081116Y	pH/cond - 61		
PH - 8.21	PH - 8.15	Turb - 7		
Temp - 23.5°C	Temp - 23.3°C	"	Std - 6.27	
Cond - 965 us/cm	Cond - 958 us/cm	"	rdg - 6.26	
Turb - 1.51 NTU's	Turb - 1.17 NTU's	"	lot - 91017	
pHpre - 7.06/10.10 (19.3°C)	pHpre - 7.01/10.06 (21.0°C)	"	Exp - 4/30/21	
pHpost - 7.03/10.11	pHpost - 7.01/10.04			
DTW - 468.15ft.	DTW - 468.34ft.	Buffers	Lot	Exp
Atmos - 12.28psia	Atmos - 12.25psia	7	4002G91	8/21
	IDW - 1/2 gal.	10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210408 1025Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1026Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1050Y	Low Level NDMA	"	"	"	"
——— 1051Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1115Y	" (Dupl.)	"	"	"	"

Runs	1)	2)	3)	4)
	128.04	127.99	127.95	127.94
	135.05	135.12	135.11	135.10
	135.04	135.12	135.10	135.12
	128.09	127.99	127.99	127.98

Continued from page

Read and Understood By

Craig Del Ferraro 4/8/21

Signed Date

Lori Munch 4-12-21

Signed Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/8/21 Page 1 of 1

Sample Location: PL-6-725

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA	Total Metals			Charge Number
Pertinent Notes (if any)									
210408 0925Y (EB)	3	A	✓						XGMD
0926Y (EB)	1	A			✓				"
1025Y	3	A	✓						"
1026Y	1	A		✓					"
1050Y	1	A			✓				"
1051Y	2	A				✓			"
1115Y (Dup.)	2	A				✓			"

Sample Location:

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig del Fierro	4/8/21 1135 hrs.		[signature]	4-12-21 / 0900

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

PROJECT PL-10-484 WJI ENV-0020 Notebook No. D64#127 (y)

Continued from page

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, cool, & breezy. This zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210406084 5Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0846Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters

Time - 2104060920Y
PH - 8.49
Temp - 22.1°C
Cond - 1102 us/cm
Turb - 0.88 NTU's
pHpre - 7.10/10.08 (16.9°C)
pHpost - 7.12/10.07
DTW - 463.61 ft.
Atmos - 12.44 psia

Final

Time - 2104061037Y
PH - 8.43
Temp - 22.5°C
Cond - 1085 us/cm
Turb - 0.80 NTU's
pHpre - 7.05/10.03 (19.1°C)
pHpost - 7.03/10.05
DTW - 463.69 ft.
Atmos - 12.42 psia
IDW - ½ gal.

Meter ID

pH/Cond - 61
Turb - 7
" std - 6.27
" rdg - 6.36
" lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002691	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2104060945Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0946Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI
——— 0947Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	901121-06	ALS
——— 1010Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1011Y	Anions/Alk.	ice	"	N/A	"
——— 1012Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1035Y	Perchlorate by 6850	"	"	"	"
——— 1036Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Runs	1)	2)	3)	4)
	24.37	24.39	24.37	24.36
	22.19	22.16	22.18	22.18
	22.16	22.15	22.16	22.20
	24.37	24.34	24.36	24.37

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/6/21 — Date

Jon Mundt — Signed — 4-7-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/6/21 Page 1 of 1

Sample Location: PL-10-484

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LL NDMA	Dioxane	Total Metals	Anions/Alk.			Charge Number
210406 0845Y (EB)	3	A	✓							XGMD
0846Y (EB)	1	A		✓						"
0945Y	3	A	✓							"
0946Y	1	A		✓						"
0947Y	1	A			✓					"
1010Y	2	A				✓				"
1011Y	2	A					✓			"

Sample Location:

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
210406 1012Y	1	A	✓							XGMD
1035Y	1	A		✓						"
1036Y	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Terme	4/6/21 1120hrs.		[signature]	4-7-21 /0900

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

Bob Tufts & Craig Del Ferraro present. Weather is cloudy, warm, & windy. this zone will be sampled using 2 triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling.

30 Min. Equipment Blanks- Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210405 1355Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1356Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters	Final	Meter ID	
Time- 2104051430Y	Time- 2104051524Y	pH/cond - 61	
PH - 8.25	PH - 8.36	Turb - 7	
Temp - 25.1°C	Temp - 24.8°C	" std - 6.27	
Cond - 1107us/cm	Cond - 1117us/cm	" rdg - 6.32	
Turb - 1.41 NTU's	Turb - 1.04 NTU's	" lot - 91017	
pHpre - 6.97/10.03 (28.1°C)	pHpre - 6.94/10.01 (28.8°C)	" Exp - 4/30/21	
pHpost - 6.99/10.03	pHpost - 6.96/10.03		
DTW - 463.48ft.	DTW - 463.61ft.	Buffers	Lot / Exp
Atmos - 12.48psia	Atmos - 12.49psia	7	4002691 / 8/21
	IDW - 1/2 gal.	10	4001D05 / 6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210405 1455Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1456Y	*" (MS)*	"	"	"	"
——— 1457Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI
——— 1458Y	1,4 Dioxane by 8270D	"	(1) 250ml amber	051820-18MC	ALS
——— 1459Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	"
——— 1520Y	Anions/ A/K.	ice	"	N/A	"
——— 1521Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1522Y	Perchlorate by 6850	"	"	"	"
——— 1523Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Runs	1)	2)	3)
	71.28	71.34	71.23
	69.02	69.09	69.03
	68.99	69.09	69.02
	71.33	71.32	71.18

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/5/21 — Date

Jon Munch — Signed — 4-6-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 1 of 1

Sample Location: PL-10-592

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	LL NDMA	Dioxane	Total Metals				Charge Number
210405 1355y (EB)	3	A	✓							XGMD
1356y (EB)	1	A		✓						"
1455y	3	A	✓							"
1456y (MS)	3	A	✓							"
1457y	1	A		✓						"
1458y	1	A			✓					"
1459y	2	A				✓				"

Sample Location:

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: Anions/Alk	TDS	Perchlorate	NO_2/NO_3				Charge Number
210405 1520y	2	A	✓							XGMD
1521y	1	A		✓						"
1522y	1	A			✓					"
1523y	1	A				✓				"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/5/21 1540hrs			4-6-21 / 0830

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

Bob Tufts & Craig Del Ferraro present. Weather is clear, cool, & windy. this zone will be sampled using 2 steam cleaned & triple rinsed, stainless steel sample tubes. Gen. in use. Probe #4951. Surface checks performed on probe prior to sampling. Sampling event delayed due to strong, gusty winds.

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210401 1415Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1416Y	Low Level NDMA	ice	(1) 1L Amber	01242015	SRI

Initial Parameters
Time - 210401 1450Y
PH - 8.47
Temp - 22.8°C
Cond - 1011 us/cm
Turb - 3.75 NTU's
pH pre - 7.04 / 10.09 (22.7°C)
pH post - 7.04 / 10.07
DTW - 462.95 ft.
Atmos - 12.42 psia

Final
Time - 210405 0900Y
PH - 8.53
Temp - 21.6°C
Cond - 1027 us/cm
Turb - 2.83 NTU's
pH pre - 7.06 / 10.09 (19.4°C)
pH post - 7.05 / 10.11
DTW - 463.26 ft.
Atmos - 12.45 psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 61
Turb - 7
" Std - 6.27
" rdg - 6.34
" Lot - 91017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001005	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
210401 1515Y	VOA by 8260 LL	ice / HCL	(3) 40ml vials	2573-1	ALS
——— 1516Y	607/Bromacil	ice	(1) 1L Amber	01242015	SRI
210405 0830Y	Low Level NDMA	"	"	"	"
——— 0831Y	Total Metals	ice / HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 0832Y	Anions / Alk.	ice	"	N/A	"
——— 0833Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 0834Y	Perchlorate by 6850	"	"	"	"
——— 0835Y	NO_2 / NO_3 by 353.2	ice / H_2SO_4	(1) 250ml poly	20-11-27	"

Runs	1)	2)	3)	4)
	167.45	167.44	167.37	167.34
	167.65	167.70	168.33	168.26
	167.61	167.69	168.29	168.21
	167.40	167.40	167.37	167.32

Continued from page

Read and Understood By

Craig Del Ferraro — Signed — 4/5/21 — Date

Jon Munch — Signed — 4-6-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/1/21 Page 1 of 2

Sample Location: PL-10-813

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	607	LL NDMA					Charge Number
210401141SY (EB)	3	A	✓							XGMD
1416Y (EB)	1	A			✓					u
1515Y	3	A	✓							u
1516Y	1	A		✓						u

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	4/1/21 ~~1335~~ CD 1535 hrs.		Jon Lund	4-6-21 / 0900

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

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 2 of 2

Sample Location: PL-10-813

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL UDMH	Total Metals	Anions/Alk.	TDS	Perchlorate	NO2/NO3	Charge Number
210405 0830Y	1	A	✓						XGMD
0831Y	2	A		✓					"
0832Y	2	A			✓				"
0833Y	1	A				✓			"
0834Y	1	A					✓		"
0835Y	1	A						✓	"

Pertinent Notes (if any)

Sample Location:

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

Pertinent Notes (if any)

Relinquished by:	Date / Time:	Accepted by:	Date / Time:
Craig Del Torro	4/5/21 1120 hrs.	Jon W Munch	4-6-21 / 0830

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

Bob Tufts & Craig Del Ferrero present. Weather is clear, warm, & breezy. this zone will be sampled using 2 triple rinsed, stainless steel sample tubes, Gen. in use. Probe#4951. Surface checks performed on probe prior to sampling.

Trip Blanks - Water Purification System

Sample	Analysis	Preservative	Container	Lot	Lab
210405 0740Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0741Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

30 Min. Equipment Blanks - Carboy G2

Sample	Analysis	Preservative	Container	Lot	Lab
210405 0940Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 0941Y	Low Level NDMA	ice	(1) 1L Amber	0124201E	SRI

Initial Parameters
Time - 2104051025Y
PH - 8.77
Temp - 24.4°C
Cond - 1014us/cm
Turb - 1.40 NTU's
pHpre - 7.04 / 10.06 (22.4°C)
pHpost - 7.01 / 10.05
DTW - 463.26ft.
Atmos - 12.42psia

Final
Time - 2104051310Y
PH - 8.67
Temp - 24.4°C
Cond - 1030 us/cm
Turb - 1.17 NTU's
pHpre - 6.98 / 10.02 (27.3°C)
pHpost - 6.95 / 10.03
DTW - 463.48 Ft.
Atmos - 12.40psia
IDW - 1/2 gal.

Meter ID
pH/Cond - 61
Turb - 7
" std - ~~4.60~~ 6.27 CO
" rdg - 6.32
" Lot - 9/017
" Exp - 4/30/21

Buffers	Lot	Exp
7	4002G91	8/21
10	4001D05	6/21

Samples

Sample	Analysis	Preservative	Container	Lot	Lab
2104051050Y	VOA by 8260 LL	ice/HCL	(3) 40ml vials	2573-1	ALS
——— 1051Y	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
——— 1052Y	Low Level NDMA	"	"	"	"
——— 1305Y	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
——— 1306Y	Anions/Alk.	ice	"	N/A	"
——— 1307Y	TDS by SM2540C	"	(1) 125ml poly	"	"
——— 1308Y	Perchlorate by 6850	"	"	"	"
——— 1309Y	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/5/21 — Date

Peter Munch — Signed — 4-6-21 — Date

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PROJECT PL-10-962 WJF ENV-0020

Notebook No. D64 # 127(4)

Continued from page 77

Runs

1)	2)	3)
231.91	231.89	231.86
239.09	239.07	239.09
239.09	239.06	239.08
231.89	231.92	231.83

Continued from page

Read and Understood By

Craig Del Zenno
Signed

4/5/21
Date

Signed

4-6-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/5/21 Page 1 of 1

Sample Location: PL-10-962

Analytical Requirement: 8260 LL | 607 | LL NDMA

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	607	LL NDMA					Charge Number
210405 0740Y (TB)	3	A	✓							XGMD
0741Y (TB)	1	A			✓					4
0940Y (EB)	3	A	✓							4
0941Y (EB)	1	A			✓					4
1050Y	3	A	✓							4
1051Y	1	A		✓						4
1052Y	1	A			✓					4

Sample Location:

Analytical Requirement: Total Metals | Anions/Alk. | TDS | Perchlorate | NO_2/NO_3

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Total Metals	Anions/Alk.	TDS	Perchlorate	NO_2/NO_3			Charge Number
210405 1305Y	2	A	✓							XGMD
1306Y	2	A		✓						4
1307Y	1	A			✓					4
1308Y	1	A				✓				4
1309Y	1	A					✓			4

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Fierro	4/5/21 1540hrs.		[signature]	4-6-21 /0830

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

OJECT ST-1-473 WJI ENV-0053

Notebook No. D32 #121 (c)

Continued from page _____

ob Tufts & Craig Del Ferraro present. Weather is cloudy & cool. This well ill be purged using a dedicated bladder pump. Samples will be collected sing a Teflon discharge tube. 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 @ 639mm/Hg.
onductivity - calibrated using 1413 us/cm std. Solution.
H - calibrated using Fisher buffers (7-10).
urbidity meter #20 std - 5.71 rdg - 5.80 lot-91017 Exp-4/30/21

rameters (time)	temp (°c)	cond (ms/cm)	DO	PH	ORP	Turb (NTU's)	DTW (ft.)
210412 0920C	20.22	1.138	5.13	7.82	36	0.81	470.63
—— 0923C	20.34	1.150	4.98	7.83	36	0.70	470.63
—— 0926C	20.39	1.156	4.72	7.82	35	0.66	470.63

Samples

ample	Analysis	Preservative	Container	Lot	Lab
210412 0930C	VOA by 8260	ice/HCl	(3) 40ml vials	2573-1	ALS
—— 0931C	" (Dupl.)	"	"	"	"
—— 0932C	" (FB)	"	"	"	"
—— 0933C	607/Bromacil	ice	(1) 1L Amber	0124201E	SRI
—— 0934C	" (Dupl.)	"	"	"	"
—— 0935C	Total Metals	ice/HNO_3	(2) 125ml poly's	20-07-07	ALS
—— 0936C	Anions/Alk.	ice	"	N/A	"
—— 0937C	TDS by SM2540C	"	(1) 125ml poly	"	"
—— 0938C	Perchlorate by 6850	"	"	"	"
—— 0939C	NO_2/NO_3 by 353.2	ice/H_2SO_4	(1) 250ml poly	21-03-03	"

nitial DTW - 470.60ft. Total gallons purged - 2

Continued from page

Read and Understood By

Craig Del Ferro — Signed — 4/12/21 — Date

Signed — 4-13-21 — Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4/12/21 Page 1 of 1

Sample Location: ST-1-473

Sample Number	# of Containers	Sample Matrix*	8260	607	Total Metals	Anions / Alk				Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210412 0930C	3	A	✓							XGMD
0931C (Dupl.)	3	A	✓							"
0932C (FB)	3	A	✓							"
0933C	1	A		✓						"
0934C (Dupl.)	1	A		✓						"
0935C	2	A			✓					"
0936C	2	A				✓				"

Sample Location: ·

Sample Number	# of Containers	Sample Matrix*	TDS	Perchlorate	NO_2/NO_3					Charge Number
Pertinent Notes (if any)			Analytical Requirement							
210412 0937C	1	A	✓							XGMD
0938C	1	A		✓						"
0939C	1	A			✓					"

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
Craig Del Ferro	4/12/21 1120 hrs.		[signature]	4-13-21 / 0915

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

OJECT ST-7.453 ENV.0000 TJ

Notebook No. D32#120(A)

Continued from page _____

AM HALVORSEN & TONY TORAER PRESENT. THE WEATHER IS CLEAR & HOT. THIS ZONE WILL BE SAMPLED & PURGED USING A FLATE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22Bpsi & SAMPLE PRESSURE @ 20psi. BUBBLER SET @ 3psi & STABLE @ 8psi. THE FIRST 350 ml's OF SAMPLE WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION.

	INITIAL	FINAL
	210406 ~~0915A~~ 0915A	210406 0930A
pH	~~8.65~~ 8.67	8.65
Temp	18.8	18.7
Cond	1304 µs/cm	1301 µs/cm
Turb	~~+0.2~~ 0.58 NTU's	0.65
pH pre	7.08 / 9.98 (19.6)	7.10 / 10.03 (19.9°C)
pH post	7.10 / 10.03	7.09 / 10.01

METER ID's
pH / Cond = 73
Turb # 20
" std = 5.71
" adj = 5.65
" Lot # = 91017
" Exp = 4/30/21

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210406 0916A	8260 full	ICE/HCl	2573-2	(3) 40 ml VOA's	ALS
0917A	" (FB)	"	"	"	"
0918A	" MDMA	ICE	108501	(1) LT Amber	SRL
0919A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T-D
Signed

4-6-21
Date

Ron Munch
Signed

4-7-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: ~~ST-7-453~~ 4/6/21 Page 1 of 1

Sample Location: ST-7-453

Pertinent Notes (if any)

Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260C	LLNDMA						Charge Number
										XGMD
210406 0916A	3	A	X							
0917A (f3)	3	A	X							
0918A	1	A		X						
0919A f3	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-Dg	4/6/21 / 1100		John M Munch	4-7-21 / 0900

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

DAN HALVORSEN & TONY TORCH PRESENT. THE WEATHER IS CLEAR & HOT. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES. SAMPLES WILL BE COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 22 8psi & SAMPLE PRESSURE SET @ 20 7psi. BUBBLER SET @ 3psi & STABLE @ 8psi. THE ~~FIVE~~ FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION.

	INITIAL	FINAL
	210406 0855A	210406 0840A
pH	8.62	8.63
TEMP	18.0°C	18.4°C
COND	1286 µs/cm	1288 µs/cm
TURB	1.02 NTU's	0.96 NTU's
pH PRE	7.02 / 9.99 (19.2)	7.10 / 10.05 (19.6)
pH POST	7.03 / 10.00	7.08 / 10.05

METER ID's

pH/COND 73

TURB # 20

" STD 5.71

" RDG 5.65

" LOT # 91017

" EXP 4/30/21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210406 0835A	8260 (11)	HCl	2573-2	(3) 40ml VIALS	ALS
— 0836A	" (FB)	"	"	"	"
— 0837A	6010A	HNO3	108501	(1) 1LT AMBER	SAI
— 0838A	" (FB)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 4.6.21 Date

[signature] Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST. 7-544

Analytical Requirement: 8260 (C), (C) NDMA

Charge Number: XGMD

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 (C)	(C) NDMA						
210406 0935A	3	A	X							
0936A (F.B)	3		X							
0937A	1			X						
0938A (F.B)	1			X						

Sample Location:

Analytical Requirement

Charge Number

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

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D.	4/6/21 / 1100			4-7-21 / 0900

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

PROJECT ST-7-779

Notebook No. D32#120 (A)

Continued from page _____

DAN HALVERSON & TONY TORR PRESENT, THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE SAMPLED WITH A DEDICATED TEFLON DISCHARGE TUBE. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. PURGE PRESSURE SET @ 22 PSI & SAMPLE PRESSURE SET @ 20 PSI. THE FIRST 350 mls WILL BE DISCARDED PRIOR TO SAMPLING.

INITIAL	FINAL
210406 0905A	210406 0955A
pH 8.85	8.86
Temp 18.9°c	18.8°c
Cond 1143 µs/cm	1140 µs/cm
Turb 1.27 NTU's	1.33 NTU's
pHpre 7.02/9.95 (19.6°c)	7.01/10.00 (19.7)
phpost 7.02/10.01	7.00/10.01

METER ID's
pH/Cond = 73
Turb # 20
" STD = 5.71
" Adj = 5.65
" CAL # = 9/0/17
" Exp = 4/30/21

SAMPLES

SAMPLE #	Analysis	PRESERV	LOT #	CONT	Lab
~~2HCl~~ 210406 0945A	8260d(1	ICE/HCl	2573-2	(3) 40ml VOA's	ALS
0946A	" (FB)	"	"	"	"
0947A	(1 NAOH A	ICE	108501	(1) 1LT Amber	SR#
0948A	" (FB)	"	"	"	

Continued from page

Read and Understood By

T. [signature] Signed — 4-6-21 Date

[signature] Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST-7-779

Sample Number	# of Containers	Sample Matrix*	8260C	LCN34						Charge Number
Pertinent Notes (if any)										X6mD
210466 0945A	3	A								
0946A (FB)	3	A								
0947A	1	A								
0948A (FB)	1	A								

Sample Location:

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

Analytical Requirement

Relinquished by:	Date / Time:		Accepted by:	Date / Time:
T. D	4-6-21 / 1100			4-7-21 / 0900

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

DAN HALVORSEN & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS WELL WILL BE PURGED & SAMPLED USING A FLUTE SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. THE SAMPLES WILL BE COLLECTED FROM A TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 228 psi & SAMPLE PRESSURE SET @ 207 psi. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLING.

	INITIAL	FINAL
	210406 0911A	210406 1008A
pH	8.76	8.77
TEMP	17.4°C	17.8°C
COND	1033 µs/cm	1035 µs/cm
TURB	0.73 NTU's	0.65
pH PRE	7.08/10.04 (19.5°C)	7.03/9.98 (19.6°C)
pH POST	7.10/10.02	7.02/10.01

METER ID's
pH/COND 73
Turb # 80
" STD 5.71
" Adj 5.65
" LOT# 91017
" EXP 4/30/21

SAMPLES

SAMPLE#	ANALYSIS		PRESERV	LOT #	CONT	LAB
210406 1000A	8260011		ICE/HCl	2573-2	(3) 40ml VIAL	ALS
" 1001A	"	(FB)	"	"	"	"
" 1002A	11 NDMA		ICE	108501	(1) LT AMBER	SRL
" 1003A	"	(FB)	"	"	"	"

Continued from page

Read and Understood By

T. [signature] Signed — 4-6-21 Date

Dan Halvorsen Signed — 4-7-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4-6-21 Page 1 of 1

Sample Location: ST-7-570

Analytical Requirement

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	8260 LL	LCXMA						Charge Number
										XGMD
210406 1000A	3	A	X							
1001A (FB)	3	A	X							
1002A	1	A		X						
1003A (FB)	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:
T.	4-6-21 / 1100			4-7-21 / 0900

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

A(MONTES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON TUBE. PURGE PRESSURE SET @ 224PSI & SAMPLE PRESSURE SET @ 203PSI. THE FIRST 350mls WILL BE DISCARDED PRIOR TO SAMPLE COLLECTION. BUBBLER SET @ 3PSI & STABLE @ 4PSI, CARBOY 6.5 KIM KOODY PRESENT ON 4.13.21.

	INITIAL	FINAL
	210413085SA	210413091SA
pH	8.84	8.84
Temp	18.9°C	18.9°C
Cond	1149 us/cm	1150 us/cm
Turb	0.95 NTU	0.97 NTU
ph pre	6.91 - 9.89 (18.5°)	6.92 - 9.90 (18.9°C)
ph post	6.95 - 9.91	6.93 - 9.99

METER ID's
pH/cond = 12
Turb # 21
" Std = 57 NTU
" Rdg = 58.9 NTU
" LOT # = 91017
" Exp = 4.30.21

SAMPLES

SAMPLE #	Analysis	PRESERV	LOT #	CONT	LAB
210413090DA	8260 (11)	ICE/HCl	2573.1	(3) 40mL VIALS	ALS
0905A	" (FB)	"	"	"	"
0910A	(1) NDMA	ICE	108501	(1) 1LTAMBER	SRI
0911A	" (FB)	"	"	"	"

BLED OFF ALL ZONES @ 210413102O. (224PSI)

Continued from page NA

Read and Understood By

Signed 4.13.21 Date

Signed 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.13.21 Page 1 of 1

Sample Location: WW-5-459

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: VOA LL 8260	LL 2DMA						Charge Number
										XGMD
210413 0900A	3	A	x							
0905A FB	3	A	x							
0910A	1	A		x						
0911A 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:
	4-13-21 1109AM			4-14-21 0900

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

PROJECT WW.5.579

Notebook No. D32#120(A)

Continued from page UA

AL MONTES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. PURGE PRESSURE SET @ 224 PSI & SAMPLE PRESSURE SET @ 203 PSI. BUBBLER SET @ 3 PSI & SABLE @ 4 PSI CARBOY 0.5

	INITIAL	FINAL
	210413 0914	210413 0923 A
pH	8.03	8.04
TEMP	19.0°C	19.1°C
COND	10.34 uS/cm	10.39 uS/cm
TURB	0.95 NTU	0.89 NTU
pH PRE	6.92-9.90 (19.9°C)	6.95-9.92 (20.1°C)
pH POST	6.93-9.91 (19.9°C	6.95-8.93

METER ID's
pH/cond = 12
Turb # = 21
" STD = 57 NTU
" STD = 5% 9 NTU
" LOT # = 91017
" EXP = 4.30.21

SAMPLES

SAMPLE #	Analysis	PRESERV	BOTT	CONT	LAB
210413 0915A	8260LL	HCL/HCl	2573.1	(3) 40 mL VOAs	ALS
0916A	" (FB)	"	"	"	"
0920A	LL NORM A	ICE	10850 1	(1) 1 L AMBER	SRL
0921A	" (FB)	"	"	"	

SLED OFF ZONE @ 210413 1020A. (224 PSI)

Continued from page NA

Signed

4-13-21
Date

Read and Understood By

Signed

4-14-21
Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4·13·21 Page 1 of 1

Sample Location: WW·S·579

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: LL 8260	Analytical Requirement: LL 2054						Charge Number: XGMD
210413 0915A	3	A	x							
0916A FB	3	A	x							
0920A	1	A		x						
0921A 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:
	4.13.21 11:00			4-14-21 / 0900

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

AL MONITES & TONY TORRES PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED FROM A DEDICATED TEFLON DISCHARGE TUBE. SET PURGE PRESSURE @ 22 PSI & SAMPLE PRESSURE @ 20 PSI. BUBBLER SET @ 3 PSI & STABLE @ 4 PSI CARBOY G-5

INITIAL	FINAL
210413 0925A	210413 0933A
pH 8.27	8.28
Temp 18.9°C	18.7°C
Cond 974 uS/cm	969 uS/cm
Turb 0.50 NTU	0.47 NTU
pH pre 6.93-9.91 (19.8°C)	6.95-9.92 (20.1°C)
pH post 6.91-9.95	6.95-9.96

METER ID's
pH/cond = 12
Turb # 21
" STD = 57 NTU
" Hdg = 53.9 NTU
" Lot # = 51017
" Exp = 4.30.22

Samples

Sample #	Analysis	Preserv	Lot #	Cont	Lab
210413 0926A	8260 (1)	ICE/HCl	2573.1	(3) 40 mL vials	ALS
— 0927A	" (FB)	"	"	"	"
— 0930A	ICN8MA	ICE	10850	(1) LT Amber	SNI
— 0931A	" (FB)	"	"	"	"

BLED off ZONE @ 210413 1020A. (22 PSI)

Continued from page NA

Read and Understood By

Signed — 4.13.21 Date

Signed — 4-14-21 Date

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4·13·21 Page 1 of 1

Sample Location: NW-S-809

Pertinent Notes (if any)

Analytical Requirement

Sample Number	# of Containers	Sample Matrix*	ONSOL	LL 2MA						Charge Number
										XGMD
210413 0926A	3	A	X							
0927A FB	3	A	X							
0930A	1	A		X						
0931A 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:
	4·13·21 11:00			4-14-21 0900

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

'0
ROJECT WW-5.909

Notebook No. D32#120(A)
Continued from page NA

AL MORRIES & TONY TORREZ PRESENT. THE WEATHER IS CLEAR & WARM. THIS ZONE WILL BE PURGED & SAMPLED USING A FLUTE SAMPLING SYSTEM. THIS ZONE WILL BE PURGED AT LEAST 4 TIMES PRIOR TO SAMPLING. SAMPLES COLLECTED USING A DEDICATED TEFLON DISCHARGE TUBE PURGE PRESSURE SET @ 224 PSI & SAMPLE PRESSURE SET @ 203 PSI. BLADDER SET @ 3 PSI & STABLE @ 4 PSI. DARBY 0.5

INITIAL	FINAL
210413 0935 A	210413 0950A
pH 7.98	7.99
TEMP 19.0°C	19.9°C
COND 1102 uS/cm	1121 uS/cm
TURB 1.62 NTU	1.80 NTU
pH PRE 6.93-9.95 (18.9°C)	6.94-9.96 (20.3C)
pH POST 6.95-9.96	6.96-9.97

METER ID'S
pH/COND = 12
TURB II 21
"STD = 57
"Rdg = 58.9
"LOT# = 91017
"EXP = 4.30.21

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	LOT #	CONT	LAB
210417 0940A	8260 (11)	ICE/HCl	25.73.1	(3) VOAs	ALS
0941 A	" (FB)	"	"	"	"
0945 A	(11 NDMA	ICE	10850	(1) AMBER	SRL
0946A	" (FB)	"	"	"	

SHUT OFF ZONE @ 210413 1020A. (224 PSI)

Continued from page NA

Read and Understood By

Signed — Date 4.13.21

Signed — Date 4-14-21

WSTF INTERNAL SAMPLE CHAIN OF CUSTODY RECORD

Date: 4.13.21 Page 1 of 1

Sample Location: WW.S.909

Pertinent Notes (if any) / Sample Number	# of Containers	Sample Matrix*	Analytical Requirement: 8260 LL	Analytical Requirement: LL NDMA						Charge Number: XGMD
210413 0940A	3	A	X							
0941A FB	3	A	X							
0945A	1	A		X						
0946A 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:
	4.13.21 11:00am			4-14-21 / 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 2021

NM 8800019434

Report Submitted: July 15, 2021

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 2021.
- The quantity and type of quality control samples collected or prepared in February 2021.
- 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

A significant increase in the number of SW-846 Method 8260 and Low Level Nitrosamine Method field and equipment blank detections in January and February 2021 prompted an investigation that revealed an inappropriate valve replacement in blank water carboys used in the field. The valve replacement was completed at the end of December 2020 and corrective action to reverse the valve replacement was taken immediately upon investigation and discovery at the end of February 2021. The field and equipment blank detections associated with this contamination source decreased significantly after corrective action was complete. No further corrective action is required.

2.2 Notable Anomalies

There were no notable anomalies, other than the blank contamination mentioned in Section 2.1, in the groundwater data associated with the February 2020 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in February 2021. 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 2021

Well ID	Event Date
400-EV-131	2/1/2021
400-GV-125	2/1/2021
ST-5-485	2/1/2021
ST-5-655	2/1/2021
400-JV-150	2/2/2021
BLM-32-543	2/2/2021
BLM-32-571	2/2/2021
BLM-32-632	2/2/2021
PL-7-560	2/2/2021
PL-7-630	2/2/2021
ST-2-466	2/2/2021
100-A-182	2/3/2021
300-B-166	2/3/2021
PL-7-480	2/3/2021

Well ID	Event Date
600-E-280	2/4/2021
BLM-23-431	2/4/2021
ST-4-589	2/4/2021
BLM-21-400	2/8/2021
PL-12-570	2/8/2021
PL-12-800	2/8/2021
B650-EFF-1	2/9/2021
B650-INF-1	2/9/2021
B655-EFF-2	2/9/2021
B655-INF-2	2/9/2021
MPE-1	2/10/2021
MPE-10	2/10/2021
MPE-11	2/10/2021
MPE-8	2/10/2021

Well ID	Event Date
MPE-9	2/10/2021
200-C-270	2/17/2021
ST-5-481	2/17/2021
200-C-170	2/18/2021
200-C-225	2/18/2021
300-A-170	2/18/2021
100-C-365	2/22/2021
200-F-370	2/22/2021
200-F-420	2/22/2021
200-F-225	2/23/2021
300-E-138	2/23/2021
300-E-183	2/24/2021

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	13	0	0	0	0	0	0
Nitrosamines by EPA Method 607	32	1	2	0	1	2	1
Perchlorate by SW-846 Method 6850	11	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	29	20	9	1	1	3	0
Low Level Volatile Organics by SW-846 Method 8260C	11	6	5	5	0	0	1
Semi-Volatile Organics by SW-846 Method 8270D	5	0	0	0	0	0	0
Anions by Various EPA Methods	11	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	22	2	2	0	1	2	0
Nitrosamines by Low-Level Method	15	10	5	7	1	2	0
Total Dissolved Solids by Standard Method 2540C	11	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Quantity February 2021	QC Quantity February 2021	QC % February 2021
VOA Duplicates	10	539	57	**11**	40	3	8
VOA Matrix Spikes	2	539	13	**2**	40	1	3
607 Duplicates	10	329	37	**11**	32	2	6
607 Matrix Spikes	2	329	8	**2**	32	1	3
607 Equipment Blanks	2	329	12	**4**	32	2	6
607 Field Blanks	2	329	10	**3**	32	1	3
NDMA_LL Duplicates	10	319	37	**12**	15	2	13
NDMA_LL Matrix Spikes	2	319	9	**3**	15	0	0
Metals Duplicates	10	235	26	**11**	22	2	9
Metals Matrix Spikes	2	235	6	**3**	22	0	0
Metals Equipment Blanks	5	235	13	**6**	22	2	9

Quality Control Requirement	Requirement %	Samp. Qty. since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Quantity February 2021	QC Quantity February 2021	QC % February 2021
Metals Field Blanks	5	235	15	**6**	22	2	9

Quality Control Requirement	Requirement %	Sample Events since 3/1/2020	QC Qty. since 3/1/2020	QC % since 3/1/2020	Sample Events February 2021	QC Quantity February 2021	QC % February 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	538	538	**100%**	40	40	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	315	315	**100%**	15	15	100%

Quality Control Requirement	Requirement %	Shipments since 3/1/2020	TB Qty. since 3/1/2020	TB % since 3/1/2020	Shipments in February 2021	TB Quantity February 2021	QC % February 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	113	113	**100%**	7	7	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	112	112	**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	**13**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**102**	0	**1**	0	0	0	0	0
Perchlorate by SW-846 Method 6850	**11**	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	**2092**	**2**	**1**	0	**4**	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**715**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**608**	0	0	0	0	0	0	0
Anions by Various EPA Methods	**44**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**648**	**1**	**1**	0	0	0	0	0
Nitrosamines by Low-Level Method	**34**	**6**	**3**	**2**	**1**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**11**	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	**13**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**102**	0	**12**	0	0	0	0	0	0	**3**
Perchlorate by SW-846 Method 6850	**11**	0	0	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**4**	0	0	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**2092**	0	0	0	0	0	0	0	0	**38**
Low Level Volatile Organics by SW-846 Method 8260C	**715**	0	0	0	0	0	0	0	0	**2**
Semi-Volatile Organics by SW-846 Method 8270D	**608**	0	0	0	0	0	0	0	0	0
Anions by Various EPA Methods	**44**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**648**	0	0	0	0	**3**	0	0	0	**136**
Nitrosamines by Low-Level Method	**34**	0	0	0	0	0	0	0	0	**5**
Total Dissolved Solids by Standard Method 2540C	**11**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-5-481	2/17/2021	For Low Level SW-846 Method 8260C, 2-butanone (MEK) (1.1 ug/L) and carbon disulfide (20 ug/L) were detected below the reporting limit with the exception of carbon disulfide and one unknown compound (7.1 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102171401B). No groundwater data are affected by this field blank contamination.
100-C-365	2/22/2021	For Low Level SW-846 Method 8260C, benzene (0.27 ug/L) was detected in the field blank (2102220946B) below the reporting limit. No groundwater data are affected by this field blank contamination.
B655-EFF-2	2/9/2021	For Low Level SW-846 Method 8260C, carbon disulfide (0.56 ug/L) was detected in the field blank (2102090855). No groundwater data are affected by this field blank contamination.
B650-EFF-1	2/9/2021	For Low Level SW-846 Method 8260C, carbon disulfide (0.69 ug/L) was detected in the field blank (2102091323). No groundwater data are affected by this field blank contamination.
ST-2-466	2/2/2021	For Low Level SW-846 Method 8260C, for sample 2102021501C the matrix spike recoveries of 1,1-dichloroethene (142%) and (142%) and trans-dichloroethene (132%) and (131%) were outside laboratory control limits (70-130%) and (73-118%). No groundwater data are affected by these elevated matrix spike recoveries.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, one unknown compound (5 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2102040700C). No groundwater data are affected by this trip blank contamination.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.1 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2102030730Y). No groundwater data are affected by this trip blank contamination.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 712878. No groundwater data are affected by this method blank contamination.
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
100-C-365	2/22/2021	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) 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	2/9/2021	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) 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	2/9/2021	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) 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-7-480	2/3/2021	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) 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-7-560	2/2/2021	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) 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	2/2/2021	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) 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-2-466	2/2/2021	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) 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	2/4/2021	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) 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	2/17/2021	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) 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-5-485	2/1/2021	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) 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-5-655	2/1/2021	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) 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-7-560	2/2/2021	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-7-630	2/2/2021	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-2-466	2/2/2021	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-5-485	2/1/2021	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-5-655	2/1/2021	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	2/9/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-7-480	2/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-560	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-7-630	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-2-466	2/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-589	2/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-5-481	2/17/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
ST-5-485	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-5-655	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-5-655	2/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
BLM-21-400	**2/8/2021**	**For SW-846 Method 8260C in blind control sample (2102081115C), the percent recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (36%), trichloroethene (52%), tetrachloroethene (48%), and trichlorofluoromethane (40%) were outside of the standard limits (75-125%). Additionally, vinyl chloride (0.24 ug/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**
200-C-170	**2/18/2021**	**For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.44 ug/L), chloromethane (0.54 ug/L) and trichlorofluoromethane (CFC 11) (0.72 ug/L) were detected in the equipment blank (2102181430Y) below the reporting limit. Affected data are appropriately qualified.**
MPE-8	2/10/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.3 ug/L) was detected in the field blank (2102100932) below the reporting limit. No groundwater data are affected by this field blank contamination.
MPE-9	2/10/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.41 ug/L) was detected in the field blank (2102100917) below the reporting limit. No groundwater data are affected by this field blank contamination.
MPE-11	**2/10/2021**	**For SW-846 Method 8260C, 2-propanol (8.4 ug/L) was detected below the reporting limit and one unknown compound (5.9 ug/L) and silane, methoxytrimethyl- (5.1 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102101102). Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-21-400	2/8/2021	For SW-846 Method 8260C, carbon disulfide (0.75 ug/L) was detected in the field blank (2102080907C) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8260C, carbon disulfide (0.81 ug/L) was detected and hexanoic acid, 2-ethyl- (13 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102020948A). Affected data are appropriately qualified.**
BLM-23-431	2/4/2021	For SW-846 Method 8260C, carbon disulfide (0.84 ug/L) was detected and one unknown compound (5.7 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102041306C). No groundwater data are affected by this field blank contamination.
BLM-32-632	2/2/2021	For SW-846 Method 8260C, carbon disulfide (1.1 ug/L) was detected in the field blank (2102021011A). No groundwater data are affected by this field blank contamination.
B655-INF-2	2/9/2021	For SW-846 Method 8260C, carbon disulfide (1.3 ug/L) was detected and one unknown compound (5.7 ug/L) and 1-Hexanol, 2-ethyl- (34 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102090845). No groundwater data are affected by this field blank contamination.
PL-12-800	2/8/2021	For SW-846 Method 8260C, carbon disulfide (1.6 ug/L) and toluene (0.25 ug/L) were detected below the reporting limit with the exception of carbon disulfide and 1-hexanol, 2-ethyl- (140 ug/L) and acetic acid, 2-ethylhexyl ester (7.6 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102080951B). No groundwater data are affected by this field blank contamination.
MPE-1	2/10/2021	For SW-846 Method 8260C, carbon disulfide (11.0 ug/L) and toluene (0.29 ug/L) were detected below the reporting limit with the exception of carbon disulfide and one unknown compound (84 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102100902). No groundwater data are affected by this field blank contamination.
PL-12-570	2/8/2021	For SW-846 Method 8260C, carbon disulfide (5.0 ug/L) and toluene (0.3 ug/L) were detected below the reporting limit with the exception of carbon disulfide and 1-hexanol, 2-ethyl- (66.0 ug/L) and acetic acid, 2-ethylhexyl ester (8.6 ug/L) were tentatively identified by a GC/MS library search in the field blank (2102081512B). No groundwater data are affected by this field blank contamination.
300-A-170	**2/18/2021**	**For SW-846 Method 8260C, carbon disulfide (9.0 ug/L) and chloromethane (0.61 ug/L) were detected in the field blank (2102181021B) below the reporting limit with the exception of carbon disulfide. Affected data are appropriately qualified.**
200-F-370	2/22/2021	For SW-846 Method 8260C, equipment blank 2102220915Y was inadvertently not shipped for analysis.
600-E-280	2/4/2021	For SW-846 Method 8260C, field duplicate samples 2102041310Y and 2102041311Y the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 6.7%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for trichloroethene (TCE) was 6.1%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for trichlorofluoromethane (CFC 11) was 13.3%. Upper acceptance limit for relative percent difference is 25%.
PL-12-570	2/8/2021	For SW-846 Method 8260C, field duplicate samples 2102081510B and 2102081511B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 11.9%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 0%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for trichlorofluoromethane (CFC 11) was 6.5%. Upper acceptance limit for relative percent difference is 25%.
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for trichloroethene (TCE) was 2.6%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
MPE-8	2/10/2021	For SW-846 Method 8260C, field duplicate samples 2102100931 and 2102100933 the relative percent difference for tetrachloroethene (PCE) was 6.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8260C, hexanoic acid, 2-ethyl- (11 ug/L) was tentatively identified by a GC/MS library search in sample 2102020947A.**
BLM-32-571	**2/2/2021**	**For SW-846 Method 8260C, hexanoic acid, 2-ethyl- (6.1 ug/L) was tentatively identified by a GC/MS library search in sample 2102021002A.**
MPE-8	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (13 ug/L) and silane, fluorotrimethyl- (7.9 ug/L) were tentatively identified by a GC/MS library search in duplicate sample 2102100933.**
MPE-8	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (13 ug/L) was tentatively identified by a GC/MS library search in sample 2102100931.**
400-EV-131	**2/1/2021**	**For SW-846 Method 8260C, one unknown compound (25 ug/L) was tentatively identified by a GC/MS library search in sample 2102011500C.**
300-B-166	2/3/2021	For SW-846 Method 8260C, one unknown compound (5 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102031456C). No groundwater data are affected by this field blank contamination.
400-EV-131	**2/1/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 712878. Affected data are appropriately qualified.**
PL-12-800	**2/8/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in sample 2102080950B.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (5.3 ug/L) was tentatively identified by a GC/MS library search in the field blank (2102100947). Affected data are appropriately qualified.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (5.6 ug/L) was tentatively identified by a GC/MS library search in sample 2102100946.**
200-F-420	**2/22/2021**	**For SW-846 Method 8260C, one unknown compound (5.8 ug/L) was tentatively identified by a GC/MS library search in sample 2102221535Y.**
200-C-170	**2/18/2021**	**For SW-846 Method 8260C, one unknown compound (6 ug/L) was tentatively identified by a GC/MS library search in sample 2102181520Y.**
MPE-1	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
MPE-10	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
MPE-8	2/10/2021	For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. No groundwater data are affected by this method blank contamination.
MPE-9	**2/10/2021**	**For SW-846 Method 8260C, one unknown compound (6.0 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713684. Affected data are appropriately qualified.**
600-E-280	2/4/2021	For SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
BLM-23-431	2/4/2021	For SW-846 Method 8260C, one unknown compound (6.3 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 713258. No groundwater data are affected by this method blank contamination.
200-F-420	2/22/2021	For SW-846 Method 8260C, tetrahydrofuran (THF) (1.8 ug/L) was detected in the equipment blank (2102221435Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
100-A-182	2/3/2021	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) 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
200-C-170	2/18/2021	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) 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-225	2/18/2021	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) 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-270	2/17/2021	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) 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	2/23/2021	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) 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	2/22/2021	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) 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	2/22/2021	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) 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-A-170	2/18/2021	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) 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	2/3/2021	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) 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	2/23/2021	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) 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	2/24/2021	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) 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	2/1/2021	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) 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	2/1/2021	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) 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	2/2/2021	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) 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	2/4/2021	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) 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
B650-INF-1	2/9/2021	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) 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	2/9/2021	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) 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-21-400	2/8/2021	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) 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	2/4/2021	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) 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	2/2/2021	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) 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	2/2/2021	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) 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	2/2/2021	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) 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	2/10/2021	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) 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	2/10/2021	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) 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-11	2/10/2021	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) 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	2/10/2021	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) 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	2/10/2021	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) 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-12-570	2/8/2021	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) 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	2/8/2021	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) 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
400-EV-131	2/1/2021	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-GV-125	2/1/2021	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-JV-150	2/2/2021	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-32-543	2/2/2021	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-32-571	2/2/2021	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-32-632	2/2/2021	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-225	2/18/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-C-270	2/17/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
200-F-225	2/23/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
300-E-138	2/23/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
600-E-280	2/4/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
100-A-182	2/3/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-EV-131	2/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-GV-125	2/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-JV-150	2/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	2/9/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-32-571	2/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PL-12-800	2/8/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
300-E-183	2/24/2021	For SW-846 Method 8260C, trichlorofluoromethane (CFC 11) (0.6 ug/L) was detected in the equipment blank (2102240925Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
MPE-1	**2/10/2021**	**For SW-846 Method 8260C, two unknown compounds were tentatively identified by a GC/MS library search in sample 2102100901.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
BLM-21-400	2/8/2021	For Modified EPA Method 607 in blind control sample (2102081116C), all recoveries were within standard limits.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
600-E-280	**2/4/2021**	**For Modified EPA Method 607, bromacil (0.029 ug/L) was detected in the equipment blank (2102040936Y). Affected data are appropriately qualified.**
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for N-nitrodimethylamine was 4.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for bromacil was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-23-431	2/4/2021	For Modified EPA Method 607, field duplicate samples 2102041307C and 2102041308C the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for N-nitrosodimethylamine was 6.3%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for N-nitrodimethylamine was 4.1%. Upper acceptance limit for relative percent difference is 25%.
MPE-9	2/10/2021	For Modified EPA Method 607, field duplicate samples 2102100918 and 2102100919 the relative percent difference for bromacil was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Modified EPA Method 607, matrix spike recoveries for sample 2102021504C were within laboratory control limits.
100-C-365	2/22/2021	For Modified EPA Method 607, surrogate recovery of N-nitroso-di-n-propylamine-d14 (19%) was outside laboratory control limits (40-160%) for sample 2102220948B. Surrogate data are appropriately qualified.
100-C-365	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-225	**2/23/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-370	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
200-F-420	**2/22/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-138	**2/23/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-183	**2/24/2021**	**For Modified EPA Method 607, the laboratory control sample recoveries of N-nitrosodimethylamine (1.4%) and N-nitrodimethylamine (5.8%) were outside laboratory control limits (13-110%) and (30-150%) for analytical batch LCS_01MAR21. Affected data are appropriately qualified.**
300-E-183	2/24/2021	For Modified EPA Method 607, there were no detections in the equipment blank.
100-A-182	2/3/2021	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	**2/8/2021**	**For Low Level Nitrosamine Method in blind control sample (2102081100B), the percent recovery for N-nitrosodimethylamine (160%) was outside of the standard limits (70-130%). Affected data are appropriately qualified.**
PL-12-570	2/8/2021	For Low Level Nitrosamine Method, field duplicate samples 2102081514B and 2102081516B the relative percent difference for N-nitrosodimethylamine was 3.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-32-571	2/2/2021	For Low Level Nitrosamine Method, N-nitrodimethylamine (0.21 ng/L) was detected in the field blank (2102021006A) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-32-543	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.34 ng/L) was detected in the field blank (2102021028A) below the reporting limit. Affected data are appropriately qualified.**
B650-EFF-1	2/9/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the field blank (2102091326) below the reporting limit. No groundwater data are affected by this field blank contamination.
ST-5-655	**2/1/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.39 ng/L) was detected in the trip blank (2102010746Y) below the reporting limit. Affected data are appropriately qualified.**
ST-5-481	2/17/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.52 ng/L) was detected in the trip blank (2102170901B). No groundwater data are affected by this trip blank contamination.
ST-5-655	**2/1/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.62 ng/L) was detected in the equipment blank (2102010901Y) below the reporting limit. Affected data are appropriately qualified.**
PL-12-570	**2/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.65 ng/L) and N-nitrodimethylamine (0.34 ng/l) were detected in the field blank (2102081517B) below the reporting limit for N-nitrodimethylamine only. Affected data are appropriately qualified.**
PL-7-630	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.3 ng/L) was detected in the trip blank (2102020740Y). Affected data are appropriately qualified.**
PL-7-630	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.9 ng/L) and N-nitrodimethylamine (0.5 ng/L) were detected in the equipment blank (2102020906Y). Affected data are appropriately qualified.**
PL-7-560	**2/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (2.0 ng/L) and N-nitrodimethylamine (0.57 ng/L) were detected in the equipment blank (2102021351Y). Affected data are appropriately qualified.**
ST-4-589	2/4/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (5.8 ng/L) and N-nitrodimethylamine (1.3 ng/L) were detected in the field blank (2102041003C). No groundwater data are affected by this field blank contamination.
ST-2-466	2/2/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (7.3 ng/L) and N-nitrodimethylamine (2.1 ng/L) were detected in the field blank (2102021506C. No groundwater data are affected by this field blank contamination.
PL-12-800	**2/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine was detected in the field blank (2102080954B) at 0.85 ng/L. Affected data are appropriately qualified.**
BLM-32-571	2/2/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2102021004A and 2102021038A were within control limits or below the calculable range.
B650-EFF-1	2/9/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
B655-EFF-2	2/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-32-632	2/2/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-12-800	2/8/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-7-480	2/3/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-7-480	2/3/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-4-589	2/4/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-5-481	2/17/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-5-485	2/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
PL-12-800	**2/8/2021**	**For SW-846 Method 8270D, 2,4,6-triallyloxy-1,3,5-triazine (3.6 ug/L), drometrizole (1.3 ug/L), benzoic acid, 3,5-bis(1,1-dimethyl (1.3 ug/L), trichloroethene (TCE) (1.7 ug/L), and one unknown compounds (2.5 ug/L) were tentatively identified by a GC/MS library search in sample 2102080955B.**
100-C-365	2/22/2021	For SW-846 Method 8270D, 2,4-dinitrophenol has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. 2,4-Dinitrophenol was detected at 30% and 37% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
100-C-365	**2/22/2021**	**For SW-846 Method 8270D, benzenamine, 2,6-bis(1-methylethyl (10 ug/L), 2,5-cyclohexadiene-1,4-dione, 2,6- (5 ug/L), and one unknown compounds (9.5 ug/L) were tentatively identified by a GC/MS library search in sample 2102220949B.**
100-A-182	2/3/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form.
100-C-365	2/22/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl)Phthalate was detected at 60% and 62% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-32-543	2/2/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 62% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
PL-12-570	2/8/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
PL-12-800	2/8/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 64% recovery, respectively, within laboratory limits. The LCSD is acceptable and should not be flagged on the summary form.
BLM-32-543	**2/2/2021**	**For SW-846 Method 8270D, butane, 2-methoxy-2-methyl- (85 ug/L), 1,4-dioxane, 2,5-dimethyl- (10 ug/L), benzenesulfonamide, N-butyl- (7.2 ug/L), and one unknown compounds (6.9 ug/L) were tentatively identified by a GC/MS library search in sample 2102021310A.**
100-C-365	2/22/2021	For SW-846 Method 8270D, chrysene (1.6 ug/L) was detected in the method blank for analytical batch 374869. No groundwater data are affected by this method blank contamination.
PL-12-570	**2/8/2021**	**For SW-846 Method 8270D, drometrizole (3.2 ug/L), trichloroethene (TCE) (1.9 ug/L), n-hexadecanoic acid (1.7 ug/L), stearic acid (octadecanoic acid) (1.2 ug/L), and one unknown compounds (3.6 ug/L) were tentatively identified by a GC/MS library search in sample 2102081518B.**
100-A-182	**2/3/2021**	**For SW-846 Method 8270D, one unknown compound (82 ug/L) was tentatively identified by a GC/MS library search in sample 2102031005C.**
100-A-182	**2/3/2021**	**For SW-846 Method 8270D, one unknown compound (93 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 373896. Affected data are appropriately qualified.**
BLM-32-543	**2/2/2021**	**For SW-846 Method 8270D, one unknown compound (93 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 373896. Affected data are appropriately qualified.**
100-A-182	2/3/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/22/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the

Well ID	Event Date	SW-846 Method 8270D QA Narratives
		associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-32-543	2/2/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
100-C-365	2/22/2021	For SW-846 Method 8270D, the relative percent difference (RPD) for the laboratory control samples was greater than the limit for benzidine. The percent recovery limit was met for both the LCS and the LCSD. No groundwater data are affected by this QC issue.
100-A-182	2/3/2021	For SW-846 Method 8270D, 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) 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	2/2/2021	For SW-846 Method 8270D, 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) 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	2/8/2021	For SW-846 Method 8270D, 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) 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	2/8/2021	For SW-846 Method 8270D, 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) 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-A-182	2/3/2021	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	2/22/2021	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.
BLM-32-543	2/2/2021	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
200-F-420	**2/22/2021**	**For Total Metals, antimony (0.0002 mg/L), calcium (0.5 mg/L), magnesium (0.1 mg/L), and strontium (0.05 mg/L) were detected in the equipment blank (2102221436Y) below the reporting limit. Affected data are appropriately qualified.**
ST-5-481	**2/17/2021**	**For Total Metals, antimony (0.0003 mg/L) was detected in the field blank (2102171406B) below the reporting limit. Affected data are appropriately qualified.**
600-E-280	2/4/2021	For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. No groundwater data are affected by this method blank contamination.
BLM-21-400	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**
PL-12-570	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Total Metals QA Narratives
PL-12-800	**2/8/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 374067 below the reporting limit. Affected data are appropriately qualified.**
BLM-21-400	2/8/2021	For Total Metals, blind control sample (2102081117C) was prepared at a concentration below the reporting limits for calcium. The result for this metal is not qualified based on this control.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for magnesium was 1.5%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for sodium was 1.5%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for calcium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
ST-2-466	2/2/2021	For Total Metals, field duplicate samples 2102021507C and 2102021508C the relative percent difference for strontium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for sodium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for calcium was 1.7%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for strontium was 2.1%. Upper acceptance limit for relative percent difference is 25%.
100-C-365	2/22/2021	For Total Metals, field duplicate samples 2102220950B and 2102220951B the relative percent difference for magnesium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
600-E-280	2/4/2021	For Total Metals, magnesium (0.06 mg/L) and strontium (0.004 mg/L) were detected in the equipment blank (2102041040Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
200-C-225	2/18/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-270	2/17/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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	2/18/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-5-481	2/17/2021	For Total Metals, the upper control limit was exceeded for mercury in the Contract Required Detection Limit Standard (CRDL). 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-A-182	2/3/2021	For Total Metals, there were no detections in the field blank.

Well ID	Event Date	Miscellaneous QA Narratives
100-C-365	2/22/2021	For SW-846 Method 8015D, gasoline range organics (GRO) (7.8 ug/L) was detected in the method blank for analytical batch 692041 below the reporting limit. No groundwater data are affected by this method blank contamination.

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	140	ug/L	TIC FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	84	ug/L	TIC FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	66	ug/L	TIC FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	104-76-7	1-Hexanol, 2-ethyl-	34	ug/L	TIC FB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	20	ug/L	FB
BLM-32-543	2/2/2021	Carboy G5	8260	VOA-FB	149-57-5	Hexanoic acid, 2-ethyl-	13	ug/L	TIC FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	11	ug/L	FB
300-A-170	2/18/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	9	ug/L	FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	103-09-3	Acetic acid, 2-ethylhexyl ester	8.6	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	67-63-0	2-Propanol	8.4	ug/L	J FB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	103-09-3	Acetic acid, 2-ethylhexyl ester	7.6	ug/L	TIC FB
ST-2-466	2/2/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	7.3	ng/L	FB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	TIC	Unknown	7.1	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	5.9	ug/L	TIC FB
ST-4-589	2/4/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	5.8	ng/L	FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	TIC	Unknown	5.7	ug/L	TIC FB
BLM-23-431	2/4/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5.7	ug/L	TIC FB
MPE-10	2/10/2021	Carboy G5	8260	VOA-FB	TIC	Unknown	5.3	ug/L	TIC FB
MPE-11	2/10/2021	Carboy G5	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	5.1	ug/L	TIC FB
PL-7-480	2/3/2021	Carboy G2	8260_LL	VOA-TB	TIC	Unknown	5.1	ug/L	TIC RB TB
ST-4-589	2/4/2021	Carboy G3	8260_LL	VOA-TB	TIC	Unknown	5	ug/L	TIC RB TB
300-B-166	2/3/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5	ug/L	TIC FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	5	ug/L	FB
ST-2-466	2/2/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	2.1	ng/L	FB
PL-7-560	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	2	ng/L	EB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.9	ng/L	TB EB
200-F-420	2/22/2021	Carboy G2	8260	VOA-EB	109-99-9	Tetrahydrofuran (THF)	1.8	ug/L	J EB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	1.6	ug/L	FB
B655-INF-2	2/9/2021	Carboy PF1	8260	VOA-FB	75-15-0	Carbon Disulfide	1.3	ug/L	FB
ST-4-589	2/4/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	1.3	ng/L	FB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.3	ng/L	TB EB
ST-5-481	2/17/2021	Carboy G5	8260_LL	VOA-FB	78-93-3	2-Butanone (MEK)	1.1	ug/L	J FB
BLM-32-632	2/2/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	1.1	ug/L	FB
PL-12-800	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.85	ng/L	FB Q
BLM-23-431	2/4/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.84	ug/L	J FB
BLM-32-543	2/2/2021	Carboy G5	8260	VOA-FB	75-15-0	Carbon Disulfide	0.81	ug/L	J FB
BLM-21-400	2/8/2021	Carboy G3	8260	VOA-FB	75-15-0	Carbon Disulfide	0.75	ug/L	J FB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	75-69-4	Trichlorofluoromethane (CFC 11)	0.72	ug/L	J EB
B650-EFF-1	2/9/2021	Carboy PF1	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.69	ug/L	FB
PL-12-570	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.65	ng/L	FB
ST-5-655	2/1/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.62	ng/L	TB EB
300-A-170	2/18/2021	Carboy G3	8260	VOA-FB	74-87-3	Chloromethane	0.61	ug/L	J FB
300-E-183	2/24/2021	Carboy G2	8260	VOA-EB	75-69-4	Trichlorofluoromethane (CFC 11)	0.6	ug/L	J EB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-7-560	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.57	ng/L	EB
B655-EFF-2	2/9/2021	Carboy PF1	8260_LL	VOA-FB	75-15-0	Carbon Disulfide	0.56	ug/L	FB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	74-87-3	Chloromethane	0.54	ug/L	J EB
ST-5-481	2/17/2021	Carboy G5	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.52	ng/L	TB
PL-7-630	2/2/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	4164-28-7	N-Nitrodimethylamine	0.5	ng/L	EB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-70-2	Calcium, Total	0.5	mg/L	J EB
200-C-170	2/18/2021	Carboy G5	8260	VOA-EB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.44	ug/L	J EB
MPE-9	2/10/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.41	ug/L	J FB
ST-5-655	2/1/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.39	ng/L	J TB EB
B650-EFF-1	2/9/2021	Carboy PF1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.38	ng/L	J FB
BLM-32-543	2/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.34	ng/L	J FB
PL-12-570	2/8/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.34	ng/L	J FB
MPE-8	2/10/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.3	ug/L	J FB
PL-12-570	2/8/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.3	ug/L	J FB
MPE-1	2/10/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.29	ug/L	J FB
100-C-365	2/22/2021	Carboy G3	8260_LL	VOA-FB	71-43-2	Benzene	0.27	ug/L	J FB
PL-12-800	2/8/2021	Carboy G5	8260	VOA-FB	108-88-3	Toluene	0.25	ug/L	J FB
BLM-32-571	2/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.21	ng/L	J FB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.1	mg/L	J EB
600-E-280	2/4/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.06	mg/L	J EB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.05	mg/L	J EB
600-E-280	2/4/2021	Carboy G2	607	NDMA-EB	314-40-9	Bromacil	0.029	µg/L	EB
600-E-280	2/4/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.004	mg/L	J EB
ST-5-481	2/17/2021	Carboy G5	METALS	METALS-FB	7440-36-0	Antimony, Total	0.0003	mg/L	J FB
200-F-420	2/22/2021	Carboy G2	METALS	METALS-EB	7440-36-0	Antimony, Total	0.0002	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

March 2021

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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 2021.
- The quantity and type of quality control samples collected or prepared in March 2021.
- 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 2021 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in March 2021. 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 2021

Well ID	Event Date
BLM-7-509	3/1/2021
WW-1-452	3/1/2021
WW-3-569	3/1/2021
WW-3-710	3/1/2021
BLM-9-419	3/2/2021
PL-11-470	3/2/2021
PL-11-530	3/2/2021

Well ID	Event Date
PL-11-710	3/2/2021
ST-4-690	3/2/2021
WW-3-469	3/2/2021
WW-3-978	3/2/2021
PL-8-605	3/3/2021
PL-8-965	3/3/2021
ST-4-481	3/3/2021

Well ID	Event Date
BLM-13-300	3/4/2021
PL-11-820	3/4/2021
PL-11-980	3/4/2021
PL-8-455	3/4/2021
B650-EFF-1	3/5/2021
B650-INF-1	3/5/2021
B655-EFF-2	3/5/2021

Well ID	Event Date
B655-INF-2	3/5/2021
PL-8-780	3/8/2021
WW-2-489	3/8/2021
WW-2-664	3/8/2021
BW-1-268	3/9/2021
ST-6-528	3/9/2021
ST-6-568	3/9/2021
ST-6-678	3/9/2021
200-KV-150	3/10/2021
BLM-42-569	3/10/2021

Well ID	Event Date
BLM-42-709	3/10/2021
100-HG-139	3/11/2021
BW-6-355	3/11/2021
PL-4-464	3/11/2021
ST-6-824	3/11/2021
ST-6-970	3/11/2021
200-B-240	3/15/2021
BLM-14-327	3/15/2021
BLM-5-527	3/15/2021
PL-2-504	3/15/2021

Well ID	Event Date
200-D-240	3/16/2021
NASA 3	3/17/2021
700-A-253	3/22/2021
700-H-535	3/22/2021
700-H-670	3/22/2021
700-J-200	3/22/2021
700-D-186	3/23/2021
700-H-350	3/23/2021

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	**18**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**35**	**1**	**1**	0	**1**	**3**	**1**
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	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	**20**	**17**	**3**	**3**	0	**5**	0
Low Level Volatile Organics by SW-846 Method 8260C	**29**	**21**	**8**	**7**	0	0	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**13**	**1**	0	0	0	**1**	**1**
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 9034	**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	**22**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**25**	**1**	**1**	0	**1**	**2**	**1**
Nitrosamines by Low-Level Method	**31**	**23**	**8**	**9**	**1**	**3**	**1**
Total Dissolved Solids by Standard Method 2540C	**18**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Quantity March 2021	QC Quantity March 2021	QC % March 2021
VOA Duplicates	10	540	56	**10**	49	5	10
VOA Matrix Spikes	2	540	14	**3**	49	1	2
607 Duplicates	10	339	37	**11**	35	3	9
607 Matrix Spikes	2	339	8	**2**	35	1	3
607 Equipment Blanks	2	339	12	**4**	35	1	3
607 Field Blanks	2	339	9	**3**	35	1	3
NDMA_LL Duplicates	10	317	36	**11**	31	3	10
NDMA_LL Matrix Spikes	2	317	9	**3**	31	1	3
Metals Duplicates	10	236	26	**11**	25	2	8
Metals Matrix Spikes	2	236	6	**3**	25	1	4

Quality Control Requirement	Requirement %	Samp. Qty. since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Quantity March 2021	QC Quantity March 2021	QC % March 2021
Metals Equipment Blanks	5	236	13	**6**	25	1	4
Metals Field Blanks	5	236	13	**6**	25	1	4

Quality Control Requirement	Requirement %	Sample Events since 4/1/2020	QC Qty. since 4/1/2020	QC % since 4/1/2020	Sample Events March 2021	QC Quantity March 2021	QC % March 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	539	539	**100%**	49	49	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	313	313	**100%**	31	31	100%

Quality Control Requirement	Requirement %	Shipments since 4/1/2020	TB Qty. since 4/1/2020	TB % since 4/1/2020	Shipments in March 2021	TB Quantity March 2021	QC % March 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	112	112	**100%**	11	11	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	109	109	**100%**	9	9	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	**18**	0	0	0	0	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Nitrosamines by EPA Method 607	**114**	0	**1**	0	0	0	**3**	0
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0	0
Organics by SW-846 Method 8015M	**2**	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	**1635**	**4**	**4**	**2**	0	0	0	0
Low Level Volatile Organics by SW-846 Method 8260C	**1894**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**593**	0	0	0	0	0	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 9034	**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	**88**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**729**	0	0	0	0	0	0	0
Nitrosamines by Low-Level Method	**68**	**6**	**3**	**1**	**2**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**18**	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	**18**	0	0	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**114**	0	0	0	0	0	0	0	0	**10**
Perchlorate by SW-846 Method 6850	**24**	0	0	0	0	0	0	0	0	**3**
Organics by SW-846 Method 8015M	**2**	0	0	0	0	0	0	0	0	0
Pesticides by SW-846 Method 8081	**21**	0	0	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	**1635**	0	0	0	0	**10**	0	0	0	**35**
Low Level Volatile Organics by SW-846 Method 8260C	**1894**	0	0	0	0	0	**65**	0	0	**13**
Semi-Volatile Organics by SW-846 Method 8270D	**593**	0	0	0	0	0	0	0	0	0
Dioxins/Furans by SW-846 Method 8290	**25**	0	**14**	0	0	0	0	0	0	0
Cyanide by SW-846 Method 9012B	**1**	0	0	0	0	0	0	0	0	0
Sulfide by SW-846 Method 9034	**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	**88**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**729**	0	0	0	0	**3**	0	0	0	**138**
Nitrosamines by Low-Level Method	**68**	6	0	0	0	**9**	0	0	0	**12**
Total Dissolved Solids by Standard Method 2540C	**18**	0	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-1-452	3/1/2021	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2103011411C were within laboratory control limits.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-3-469	3/2/2021	For Low Level SW-846 Method 8260C, one unknown compound (5.4 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103020810Y). No groundwater data are affected by this trip blank contamination.
PL-11-820	**3/4/2021**	**For Low Level SW-846 Method 8260C, sample 2103040846A was determined to be insufficiently preserved after analysis and was analyzed was outside the 7 day hold time. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (100 ug/L) was tentatively identified by a GC/MS library search in sample 2103101030B.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (120 ug/L) and one unknown compound (5.4 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103100909B). Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (150 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103100700B). Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (18 ug/L) and silane, methoxytrimethyl- (6.9 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103090927A). Affected data are appropriately qualified.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (18 ug/L) was tentatively identified by a GC/MS library search in sample 2103090956A.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (24 ug/L) was tentatively identified by a GC/MS library search in sample 2103090945A.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (25 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103111002A). Affected data are appropriately qualified.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (32 ug/L) was tentatively identified by a GC/MS library search in sample 2103111001A.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (35 ug/L) and one unknown compound (7.1 ug/L) were tentatively identified by a GC/MS library search in sample 2103090926A.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (37 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103090957A). Affected data are appropriately qualified.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (40 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103170906B). Affected data are appropriately qualified.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (48 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103110942A). Affected data are appropriately qualified.**
PL-11-820	3/4/2021	For Low Level SW-846 Method 8260C, sulfur dioxide (5.1 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103040847A). No groundwater data are affected by this field blank contamination.
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (59 ug/L) was tentatively identified by a GC/MS library search in sample 2103110941A.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (77 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717070. Affected data are appropriately qualified.**
ST-6-970	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (77 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717070. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-528	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (80 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103090946A). Affected data are appropriately qualified.**
BLM-42-569	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (82 ug/L) was tentatively identified by a GC/MS library search in sample 2103100900B.**
ST-6-824	**3/11/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (83 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103110700A), Affected data are appropriately qualified.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in sample 2103170905B.**
NASA 3	**3/17/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level SW-846 Method 8260C, sulfur dioxide (82 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103101031B). Affected data are appropriately qualified.**
B650-EFF-1	3/5/2021	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) 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	3/5/2021	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) 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	3/10/2021	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) 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	3/10/2021	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) 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	3/1/2021	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) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
NASA 3	3/17/2021	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) 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	3/2/2021	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) 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-11-530	3/2/2021	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) 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	3/2/2021	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) 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	3/4/2021	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) 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-11-980	3/4/2021	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) 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	3/4/2021	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) 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	3/3/2021	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) 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-8-780	3/8/2021	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) 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	3/3/2021	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) 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-4-481	3/3/2021	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) 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-4-690	3/2/2021	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) 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-6-528	3/9/2021	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) 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-6-568	3/9/2021	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) 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	3/9/2021	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) 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	3/11/2021	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) 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
ST-6-970	3/11/2021	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) 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	3/1/2021	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) 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	3/8/2021	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) 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	3/8/2021	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) 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	3/2/2021	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) 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	3/1/2021	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) 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	3/1/2021	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) 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	3/2/2021	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) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
NASA 3	3/17/2021	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) 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	3/8/2021	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) 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-42-569	3/10/2021	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	3/10/2021	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-7-509	3/1/2021	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-6-528	3/9/2021	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	3/9/2021	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	3/9/2021	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	3/1/2021	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	3/1/2021	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	3/1/2021	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	3/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
B655-EFF-2	3/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-7-509	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-470	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-530	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-710	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-11-980	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-8-455	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-455	3/4/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-605	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-8-780	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-8-965	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-4-481	3/3/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-4-690	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-1-452	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-489	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-2-664	3/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-3-469	3/2/2021	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
WW-3-569	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
WW-3-569	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-710	3/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
WW-3-978	3/2/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-2-504	3/15/2021	For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.21 ug/L) and trichloroethene (TCE) (0.22 ug/L) were detected in the field blank (2103150956B) below the reporting limit. No groundwater data are affected by this field blank contamination.
700-H-535	**3/22/2021**	**For SW-846 Method 8260C, 2-propanol (4.8 ug/L) and trichloroethene (TCE) (1.2 ug/L) were detected in the equipment blank (2103221325Y) below the reporting limit for 2-propanol only. Affected data are appropriately qualified.**
200-B-240	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
BLM-14-327	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
PL-2-504	3/15/2021	For SW-846 Method 8260C, carbon disulfide (0.44 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717288. No groundwater data are affected by this method blank contamination.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 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%.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 the relative percent difference for trichloroethene (TCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, field duplicate samples 2103050554 and 2103050555 the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for trichloroethene (TCE) was 7.4%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for trichlorofluoromethane (CFC 11) was 4.0%. Upper acceptance limit for relative percent difference is 25%.
200-KV-150	3/10/2021	For SW-846 Method 8260C, field duplicate samples 2103101435C and 2103101436C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 9.5%. Upper acceptance limit for relative percent difference is 25%.
100-HG-139	3/11/2021	For SW-846 Method 8260C, field duplicate samples 2103111425B and 2103111426B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 6.7%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 10.9%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for trichlorofluoromethane (CFC 11) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, field duplicate samples 2103151345B and 2103151346B the relative percent difference for trichloroethene (TCE) was 4.1%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
100-HG-139	3/11/2021	For SW-846 Method 8260C, silane, methoxytrimethyl- was tentatively identified by a GC/MS library search in the field blank (2103111427B). No groundwater data are affected by this field blank contamination.
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (110 ug/L)was tentatively identified by a GC/MS library search in the field blank (2103091317B). Affected data are appropriately qualified.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. Affected data are appropriately qualified.**
PL-4-464	3/11/2021	For SW-846 Method 8260C, sulfur dioxide (130 ug/L) and one unknown compound (5.6 ug/L) were tentatively identified by a GC/MS library search in the method blank for analytical batch 716621. No groundwater data are affected by this method blank contamination.
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (160 ug/L) was tentatively identified by a GC/MS library search in the trip blank (2103110700C). Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (24 ug/L) and silane, methoxytrimethyl- (7.4 ug/L) were tentatively identified by a GC/MS library search in sample 2103110945C.**
100-HG-139	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (27 ug/L) and (22 ug/L) was tentatively identified by a GC/MS library search in sample 2103111425B and duplicate sample 2103111426B.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (32 ug/L) was tentatively identified by a GC/MS library search in duplicate sample 2103101436C.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (35 ug/L) and silane, methoxytrimethyl- (5.3 ug/L) were tentatively identified by a GC/MS library search in sample 2103101435C.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (39 ug/L) was tentatively identified by a GC/MS library search in duplicate sample 2103110946C.**
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (40 ug/L) was tentatively identified by a GC/MS library search in sample 2103091316B.**
200-KV-150	**3/10/2021**	**For SW-846 Method 8260C, sulfur dioxide (41 ug/L) and silane, methoxytrimethyl- (6.9 ug/L) were tentatively identified by a GC/MS library search in the field blank (2103101437C). Affected data are appropriately qualified.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (44 ug/L) was tentatively identified by a GC/MS library search in sample 2103111035B.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (61 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103111036B). Affected data are appropriately qualified.**
BW-1-268	**3/9/2021**	**For SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 716424. Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (80 ug/L) was tentatively identified by a GC/MS library search in the field blank (2103110947C). Affected data are appropriately qualified.**
100-HG-139	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
BW-6-355	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For SW-846 Method 8260C, sulfur dioxide (97 ug/L) was tentatively identified by a GC/MS library search in the method blank for analytical batch 717102. Affected data are appropriately qualified.**
700-J-200	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.26 ug/L) and trichloroethene (TCE) (1.5 ug/L) were detected in the field blank (2103220901B) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.38 ug/L) and trichloroethene (TCE) (2.2 ug/L) were detected in the trip blank (2103220745Y) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, tetrachloroethene (PCE) (0.41 ug/L) and trichloroethene (TCE) (1.9 ug/L) were detected in the equipment blank (2103220845Y) below the reporting limit for tetrachloroethene (PCE) only. Affected data are appropriately qualified.**
100-HG-139	3/11/2021	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) 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-KV-150	3/10/2021	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) 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	3/5/2021	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) 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	3/5/2021	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) 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	3/4/2021	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) 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	3/2/2021	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) 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	3/9/2021	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) 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	3/11/2021	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) 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	3/11/2021	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) 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-HG-139	3/11/2021	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) 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	3/2/2021	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) 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.
BW-6-355	3/11/2021	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) 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-4-464	3/11/2021	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) in the

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		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	3/15/2021	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	3/16/2021	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-KV-150	3/10/2021	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-A-253	3/22/2021	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	3/23/2021	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	3/23/2021	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	3/22/2021	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	3/22/2021	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	3/22/2021	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	3/15/2021	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	3/15/2021	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.
BLM-9-419	3/2/2021	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-1-268	3/9/2021	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	3/15/2021	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	3/11/2021	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-B-240	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
200-D-240	3/16/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	3/5/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	3/5/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-13-300	3/4/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-14-327	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-5-527	3/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-9-419	3/2/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PL-2-504	3/15/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
700-A-253	3/22/2021	For SW-846 Method 8260C, trichloroethene (0.44 ug/L) was detected in the method blank for analytical batch 718329 below the reporting limit. No groundwater data are affected by this method blank contamination.
700-A-253	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-D-186	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-350	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-535	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-H-670	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-J-200	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (2.5 ug/L) and tetrachloroethene (PCE) (0.45 ug/L) were detected in the method blank for analytical batch 718162 below the reporting limit with the exception of trichloroethene. Affected data are appropriately qualified.**
700-A-253	**3/22/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.3 ug/L) was detected in the field blank (2103221321B) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
700-D-186	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.93 ug/L) was detected in the field blank (2103230921B) below the reporting limit. Affected data are appropriately qualified.**
700-H-350	**3/23/2021**	**For SW-846 Method 8260C, trichloroethene (TCE) (0.94 ug/L) was detected in the equipment blank (2103231400Y) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
WW-1-452	**3/1/2021**	**For Modified EPA Method 607, matrix spike recoveries of NDMA (10%), DMN (27%), and bromacil (33%) as well as the surrogate recovery (22%) for sample 2103011414C were outside laboratory lower control limits (NDMA 13-110%), (DMN 30-150%), (Bromacil 40-190%), and (surrogate 40-160%). Affected data are appropriately qualified.**
200-D-240	3/16/2021	For Modified EPA Method 607 in blind control sample (2103161330C), all recoveries were within standard limits.
700-H-670	**3/22/2021**	**For Modified EPA Method 607, bromacil (0.0095 ug/L) was detected in the equipment blank (2103220846Y). Affected data are appropriately qualified.**
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for N-nitrosodimethylamine was 3.2%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	3/5/2021	For Modified EPA Method 607, field duplicate samples 2103050557 and 2103050558 the relative percent difference for bromacil was 7.1%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For Modified EPA Method 607, field duplicate samples 2103151348B and 2103151349B the relative percent difference for N-nitrodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-5-527	3/15/2021	For Modified EPA Method 607, field duplicate samples 2103151348B and 2103151349B the relative percent difference for N-nitrosodimethylamine was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-9-419	3/2/2021	For Modified EPA Method 607, relative percent differences (RPD) for duplicate samples 2103021335C and 2103021336C were within control limits or below the calculable range.
100-HG-139	3/11/2021	For Modified EPA Method 607, there were no detections in the field blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-4-464	**3/11/2021**	**For Low Level Nitrosamine Method in blind control sample (2103111030C), the percent recovery for N-nitrosodimethylamine (150%) was outside of the standard limits (70-130%). Additionally, N-nitrodimethylamine (0.26 ng/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**
WW-1-452	3/1/2021	For Low Level Nitrosamine Method, matrix spike and matrix spike duplicate recoveries and RPD for samples 2103011416C and 2103011417C were within laboratory control limits.
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the field blank (2103170908B) below the reporting limit. Affected data are appropriately qualified.**
PL-8-455	**3/4/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the equipment blank (2103040916Y) below the reporting limit. Affected data are appropriately qualified.**
PL-11-470	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-11-530	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
PL-11-710	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-8-605	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-8-965	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
ST-4-481	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
ST-4-690	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
WW-3-469	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
WW-3-978	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.37 ng/L) was detected in the method blank (PB21C09HE1) below the reporting limit. Affected data are appropriately qualified.**
PL-11-530	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L) was detected in the field blank (2103021034A) below the reporting limit. Affected data are appropriately qualified.**
PL-11-980	3/4/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L was detected in the field blank (2103040904A) below the reporting limit. No groundwater data are affected by this field blank contamination.
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the trip blank (2103170730B) below the reporting limit. Affected data are appropriately qualified.**
PL-8-605	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the equipment blank (2103030931Y) below the reporting limit. Affected data are appropriately qualified.**
ST-6-568	**3/9/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.46 ng/L) was detected in the field blank (2103090929A) below the reporting limit. Affected data are appropriately qualified.**
PL-11-710	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.47 ng/L) was detected in the field blank (2103021049A) below the reporting limit. Affected data are appropriately qualified.**
PL-8-965	**3/3/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.53 ng/L) was detected in the equipment blank (2103031331Y) below the reporting limit. Affected data are appropriately qualified.**
ST-4-690	**3/2/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.56 ng/L) was detected in the field blank (2103021505C). Affected data are appropriately qualified.**
PL-11-820	3/4/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103040848A and 2103040925A were within control limits or below the calculable range.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103110949C and 2103110950C were within control limits or below the calculable range.
ST-6-568	3/9/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2103090928A and 2103091005A were within control limits or below the calculable range.
BLM-42-569	**3/10/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-42-709	**3/10/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
NASA 3	**3/17/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (212%) in the laboratory fortified blank (LFB21C24CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PL-4-464	**3/11/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
ST-6-528	3/9/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
ST-6-568	**3/9/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
ST-6-678	**3/9/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (144%) in the laboratory fortified blank (LFB21C15CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B650-EFF-1	3/5/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
B655-EFF-2	3/5/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-13-300	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-569	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-42-569	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-42-709	3/10/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-7-509	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-470	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-11-820	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-4-464	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-455	3/4/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-605	3/3/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-8-780	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
ST-4-481	3/3/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-528	3/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-678	3/9/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-824	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-6-824	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
ST-6-970	3/11/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-1-452	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-489	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-2-664	3/8/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-3-469	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-469	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-569	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
WW-3-710	3/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
WW-3-978	3/2/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
200-KV-150	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-13-300	3/4/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 60% recovery, respectively, within laboratory limits. The LCS is acceptable and should not be flagged on the summary form.
BLM-42-569	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
BLM-42-709	3/10/2021	For SW-846 Method 8270D, bis(2-ethylhexyl) phthalate has been reported as zero percent recovery in the LCS/LCSD due to a limitation in LIMs. Bis(2-ethylhexyl) phthalate was detected at 56% and 58% recovery, respectively, within laboratory limits. The LCS/LCSD is acceptable and should not be flagged on the summary form.
PL-11-530	3/2/2021	For SW-846 Method 8270D, field duplicate samples 2103021311A and 2103021312A the relative percent difference for 1,4-dioxane was 24.2%. Upper acceptance limit for relative percent difference is 25%.
PL-8-605	3/3/2021	For SW-846 Method 8270D, matrix spike recoveries for sample 2103031111Y were within laboratory control limits.
200-KV-150	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-569	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-42-709	3/10/2021	For SW-846 Method 8270D, the control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
BLM-13-300	3/4/2021	For SW-846 Method 8270D, 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) 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	3/15/2021	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.
BLM-13-300	3/4/2021	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.
ST-6-568	3/9/2021	For SW-846 Method 8270D, there were no detections in the field blank.
200-B-240	**3/15/2021**	**For SW-846 Method 8270D, trichloroethene (TCE) was tentatively identified by a GC/MS library search in sample 2103151006C.**

Well ID	Event Date	Total Metals QA Narratives
200-B-240	**3/15/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Total Metals QA Narratives
BLM-14-327	**3/15/2021**	**For Total Metals, antimony (0.0004 mg/L) was detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**
100-HG-139	**3/11/2021**	**For Total Metals, antimony (0.0004 mg/L) were detected in the method blank for analytical batch 375960 below the reporting limit. Affected data are appropriately qualified.**
PL-4-464	3/11/2021	For Total Metals, antimony (0.0004 mg/L) were detected in the method blank for analytical batch 375960 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For Total Metals, blind control sample (2103161331C) 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.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for sodium was 0.3%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for magnesium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for calcium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
ST-4-481	3/3/2021	For Total Metals, field duplicate samples 2103030959C and 2103031000C the relative percent difference for strontium was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for calcium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for magnesium was 0.8%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for sodium was 1.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for strontium was 1.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-13-300	3/4/2021	For Total Metals, field duplicate samples 2103040916C and 2103040917C the relative percent difference for potassium was 1.1%. Upper acceptance limit for relative percent difference is 25%.
WW-3-710	3/1/2021	For Total Metals, for matrix spike sample 2103011436Y 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.
WW-3-569	3/1/2021	For Total Metals, magnesium (0.04 mg/L) and strontium (0.002 mg/L) were detected in the equipment blank (2103010922Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
BW-1-268	3/9/2021	For Total Metals, strontium (0.003 mg/L) were detected in the method blank for analytical batch 375706 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-D-240	3/16/2021	For Total Metals, the upper control limit was exceeded for antimony 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.
NASA 3	3/17/2021	For Total Metals, the upper control limit was exceeded for antimony 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-B-240	3/15/2021	For Total Metals, the upper control limit was exceeded for thallium 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

Well ID	Event Date	Total Metals QA Narratives
		to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
BLM-14-327	3/15/2021	For Total Metals, the upper control limit was exceeded for thallium 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-HG-139	3/11/2021	For Total Metals, there were no detections in the field blank.

Well ID	Event Date	Miscellaneous QA Narratives
BLM-13-300	3/4/2021	For SW-846 Method 8015C, the control limits were exceeded for one or more surrogates in one or more QC samples associated with samples. The associated recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier is flagged accordingly. No further corrective action was appropriate.
BLM-13-300	3/4/2021	For SW-846 Method 8015C, the upper control limit was exceeded for one or more surrogates in one or more samples. The elevated recovery equates to a high bias. Since no target analytes were detected in the sample(s), the quality of the sample data is not significantly affected. No further corrective action was appropriate.
BLM-13-300	3/4/2021	For SW-846 Method 8015C, 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	3/4/2021	For SW-846 Method 8015D, gasoline range organics (GRO) (25.7 ug/L) was detected in the method blank for analytical batch 696043 below the reporting limit. No groundwater data are affected by this method blank contamination.
200-B-240	3/15/2021	For SW-846 Method 8081B, 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-B-240	3/15/2021	For SW-846 Method 8151A, the control limits were exceeded for one or more surrogates in one or more QC samples associated with samples. The associated recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier is flagged accordingly. No further corrective action was appropriate. There was no more sample for a reextraction.
200-B-240	3/15/2021	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 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	**3/15/2021**	**For SW-846 Method 8290A, laboratory control sample recoveries for the majority of the analytes were outside the lower laboratory limits. Affected data are appropriately qualified.**
200-B-240	3/15/2021	For SW-846 Method 8290A, several compounds were detected below the reporting limit in the method blank. No groundwater data are affected by this method blank contamination.

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-4-464	3/11/2021	Carboy G1	8260	VOA-TB	7446-09-5	Sulfur Dioxide	160	ug/L	TIC RB TB FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-TB	7446-09-5	Sulfur Dioxide	150	ug/L	TIC TB FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	120	ug/L	TIC RB TB FB
BW-1-268	3/9/2021	Carboy G3	8260	VOA-FB	7446-09-5	Sulfur Dioxide	110	ug/L	TIC FB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
ST-6-824	3/11/2021		8260_LL	VOA-TB	7446-09-5	Sulfur Dioxide	83	ug/L	TIC RB TB FB
BLM-42-709	3/10/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	82	ug/L	TIC RB FB
ST-6-678	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	80	ug/L	TIC RB FB
PL-4-464	3/11/2021	Carboy G1	8260	VOA-FB	7446-09-5	Sulfur Dioxide	80	ug/L	TIC RB TB FB
BW-6-355	3/11/2021	Carboy G5	8260	VOA-FB	7446-09-5	Sulfur Dioxide	61	ug/L	TIC RB FB
ST-6-824	3/11/2021		8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	48	ug/L	TIC RB TB FB
200-KV-150	3/10/2021	Carboy G1	8260	VOA-FB	7446-09-5	Sulfur Dioxide	41	ug/L	TIC RB FB
NASA 3	3/17/2021	Carboy G3	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	40	ug/L	TIC RB FB
ST-6-528	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	37	ug/L	TIC RB FB
ST-6-970	3/11/2021		8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	25	ug/L	TIC RB FB
ST-6-568	3/9/2021	Carboy G1	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	18	ug/L	TIC RB FB
200-KV-150	3/10/2021	Carboy G1	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.9	ug/L	TIC FB
ST-6-568	3/9/2021	Carboy G1	8260_LL	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.9	ug/L	TIC FB
100-HG-139	3/11/2021	Carboy G5	8260	VOA-FB	1825-61-2	Silane, methoxytrimethyl-	6.7	ug/L	TIC FB
BLM-42-569	3/10/2021	Carboy G3	8260_LL	VOA-FB	TIC	Unknown	5.4	ug/L	TIC RB FB
WW-3-469	3/2/2021	Carboy G3	8260_LL	VOA-TB	TIC	Unknown	5.4	ug/L	TIC TB
PL-11-820	3/4/2021	Carboy	8260_LL	VOA-FB	7446-09-5	Sulfur Dioxide	5.1	ug/L	TIC FB
700-H-535	3/22/2021	Carboy G5	8260	VOA-EB	67-63-0	2-Propanol	4.8	ug/L	J EB
700-H-670	3/22/2021	Carboy G5	8260	VOA-TB	79-01-6	Trichloroethene (TCE)	2.2	ug/L	RB TB EB
700-H-670	3/22/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	1.9	ug/L	RB TB EB
700-J-200	3/22/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	1.5	ug/L	RB FB
700-H-535	3/22/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	1.2	ug/L	RB EB
700-H-350	3/23/2021	Carboy G5	8260	VOA-EB	79-01-6	Trichloroethene (TCE)	0.94	ug/L	J RB EB
700-D-186	3/23/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.93	ug/L	J RB FB
ST-4-690	3/2/2021	Carboy G1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.56	ng/L	RB FB
PL-8-965	3/3/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.53	ng/L	RB EB
PL-11-710	3/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.47	ng/L	J RB FB
ST-6-568	3/9/2021	Carboy G1	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J * FB
PL-8-605	3/3/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J RB EB
NASA 3	3/17/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.46	ng/L	J TB * FB
700-H-670	3/22/2021	Carboy G5	8260	VOA-EB	127-18-4	Tetrachloroethene (PCE)	0.41	ug/L	J RB TB EB
PL-11-980	3/4/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J FB
PL-11-530	3/2/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J RB FB
700-H-670	3/22/2021	Carboy G5	8260	VOA-TB	127-18-4	Tetrachloroethene (PCE)	0.38	ug/L	J RB TB EB
PL-8-455	3/4/2021	Carboy G3	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J EB
NASA 3	3/17/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J TB FB *
700-A-253	3/22/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.3	ug/L	J RB FB
700-J-200	3/22/2021	Carboy G3	8260	VOA-FB	127-18-4	Tetrachloroethene (PCE)	0.26	ug/L	J RB FB
PL-2-504	3/15/2021	Carboy G5	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.22	ug/L	J FB
PL-2-504	3/15/2021	Carboy G5	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.21	ug/L	J FB
WW-3-569	3/1/2021	Carboy G3	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.04	mg/L	J EB
700-H-670	3/22/2021	Carboy G5	607	NDMA-EB	314-40-9	Bromacil	0.0095	µg/L	EB
WW-3-569	3/1/2021	Carboy G3	METALS	METALS-EB	7440-24-6	Strontium, Total	0.002	mg/L	J EB

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility Groundwater Monitoring Data

April 2021

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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 2021.
- The quantity and type of quality control samples collected or prepared in April 2021.
- 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 2021 QAR.

3.0 Data Tables

Table 1 summarizes the groundwater sample events initiated in April 2021. 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 2021

Well ID	Event Date
BLM-10-517	4/1/2021
BLM-40-517	4/1/2021
PL-10-813	4/1/2021
PL-10-592	4/5/2021
PL-10-962	4/5/2021
PL-10-484	4/6/2021
ST-7-453	4/6/2021
ST-7-544	4/6/2021
ST-7-779	4/6/2021
ST-7-970	4/6/2021
BLM-39-385	4/7/2021
BLM-39-560	4/7/2021
JER-1-483	4/8/2021
JER-1-563	4/8/2021
JER-1-683	4/8/2021
PL-6-545	4/8/2021
PL-6-725	4/8/2021
BLM-40-595	4/12/2021
ST-1-473	4/12/2021
JP-1-424	4/13/2021
JP-2-447	4/13/2021

Well ID	Event Date
WW-5-459	4/13/2021
WW-5-579	4/13/2021
WW-5-809	4/13/2021
WW-5-909	4/13/2021
B650-EFF-1	4/14/2021
B650-INF-1	4/14/2021
B655-EFF-2	4/14/2021
B655-INF-2	4/14/2021
BLM-40-688	4/14/2021

Well ID	Event Date
BLM-6-488	4/14/2021
JP-3-509	4/15/2021
JP-3-689	4/15/2021
PFE-2	4/15/2021
PFE-3	4/15/2021
PFE-4A	4/15/2021
PFE-5	4/15/2021
PFE-7	4/15/2021
BW-3-180	4/19/2021

Well ID	Event Date
PL-1-486	4/19/2021
BLM-41-420	4/20/2021
BLM-41-670	4/20/2021
JER-2-504	4/20/2021
JER-2-584	4/20/2021
JER-2-684	4/20/2021
400-FV-131	4/21/2021
400-HV-147	4/21/2021
600-G-138	4/27/2021

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	**16**	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**21**	**1**	**1**	0	**1**	**2**	**1**
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**16**	**14**	**2**	**2**	**1**	**4**	0
Low Level Volatile Organics by SW-846 Method 8260C	**32**	**26**	**6**	**6**	0	**1**	**1**
Semi-Volatile Organics by SW-846 Method 8270D	**8**	**1**	0	0	0	**1**	0
Anions by Various EPA Methods	**15**	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**15**	0	**1**	0	0	2	0
Nitrosamines by Low-Level Method	**35**	**29**	**6**	**7**	**1**	**4**	**1**
Total Dissolved Solids by Standard Method 2540C	**15**	0	0	0	0	0	0

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement %	Samp. Qty. since 5/1/2020	QC Qty. since 5/1/2020	QC % since 5/1/2020	Sample Quantity April 2021	QC Quantity April 2021	QC % April 2021
VOA Duplicates	10	538	56	**10**	48	5	10
VOA Matrix Spikes	2	538	14	**3**	48	1	2
607 Duplicates	10	340	38	**11**	21	2	10
607 Matrix Spikes	2	340	9	**3**	21	1	5
607 Equipment Blanks	2	340	12	**4**	21	1	5
607 Field Blanks	2	340	11	**3**	21	2	10
NDMA_LL Duplicates	10	313	36	**11**	35	4	11
NDMA_LL Matrix Spikes	2	313	9	**3**	35	1	3
Metals Duplicates	10	232	27	**12**	15	2	13
Metals Matrix Spikes	2	232	6	**3**	15	0	0
Metals Equipment Blanks	5	232	13	**6**	15	1	7
Metals Field Blanks	5	232	12	**5**	15	0	0

Quality Control Requirement	Requirement %	Sample Events since 5/1/2020	QC Qty. since 5/1/2020	QC % since 5/1/2020	Sample Events April 2021	QC Quantity April 2021	QC % April 2021
VOA Equipment Blanks and Field Blanks	*Should approach 100%*	538	538	**100%**	48	48	100%
Low Level Nitrosamine Equipment Blanks and Field Blanks	*Should approach 100%*	313	313	**100%**	35	35	100%

Quality Control Requirement	Requirement %	Shipments since 5/1/2020	TB Qty. since 5/1/2020	TB % since 5/1/2020	Shipments in April 2021	TB Quantity April 2021	QC % April 2021
VOA Trip Blank (per shipment)	*Should approach 100%*	108	108	**100%**	8	8	100%
Low Level Nitrosamine Trip Blank (per shipment)	*Should approach 100%*	105	105	**100%**	7	7	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	**16**	0	0	0	0	0	0	0
Nitrosamines by EPA Method 607	**69**	0	0	0	0	**4**	0	0
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0	0
Volatile Organics by SW-846 Method 8260C	**1304**	0	0	0	**4**	0	0	0

Method	Total Result Records	"FB"	"EB"	"TB"	"Q"	"QD"	"SP"	"R"
Low Level Volatile Organics by SW-846 Method 8260C	**2146**	0	0	0	0	0	0	0
Semi-Volatile Organics by SW-846 Method 8270D	**8**	0	0	0	0	**2**	0	0
Anions by Various EPA Methods	**60**	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**459**	0	0	0	0	0	0	0
Nitrosamines by Low-Level Method	**78**	**17**	**2**	**1**	**2**	0	0	0
Total Dissolved Solids by Standard Method 2540C	**15**	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	**16**	0	0	0	0	0	0	0	0	**1**
Nitrosamines by EPA Method 607	**69**	0	0	0	0	**7**	0	**1**	0	**4**
Perchlorate by SW-846 Method 6850	**15**	0	0	0	0	0	0	0	0	**2**
Volatile Organics by SW-846 Method 8260C	**1304**	0	0	0	0	0	0	0	0	**31**
Low Level Volatile Organics by SW-846 Method 8260C	**2146**	0	0	0	0	0	0	0	0	**15**
Semi-Volatile Organics by SW-846 Method 8270D	**8**	0	0	0	0	0	**1**	0	0	0
Anions by Various EPA Methods	**60**	0	0	0	0	0	0	0	0	0
Total Metals by Various SW-846 Methods	**459**	0	0	0	0	**1**	0	0	0	**88**
Nitrosamines by Low-Level Method	**78**	**13**	0	0	0	**18**	0	0	0	**4**
Total Dissolved Solids by Standard Method 2540C	**15**	**1**	0	0	0	0	0	0	0	0

Table 7 – Quality Assurance Narratives

Well ID	Event Date	SW-846 Method 8260C QA Narratives
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, 2-propanol (13 ug/L) was detected in the field blank (2104191457C) below the reporting limit. No groundwater data are affected by this field blank contamination.
B655-EFF-2	4/14/2021	For Low Level SW-846 Method 8260C, 2-propanol (4 ug/L) was detected in the field blank (2104141327) below the reporting limit. No groundwater data are affected by this field blank contamination.
JP-2-447	4/13/2021	For Low Level SW-846 Method 8260C, 2-propanol (4.4 ug/L) was detected in the field blank (2104131001C) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-40-595	4/12/2021	For Low Level SW-846 Method 8260C, 2-propanol (5.2 ug/L) was detected in the trip blank (2104121245C) below the reporting limit. No groundwater data are affected by this trip blank contamination.
WW-5-809	4/13/2021	For Low Level SW-846 Method 8260C, 2-propanol (5.7 ug/L) was detected in the field blank (2104130927A) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-40-688	4/14/2021	For Low Level SW-846 Method 8260C, 2-propanol (9.3 ug/L) was detected in the trip blank (2104141000C) below the reporting limit. No groundwater data are affected by this trip blank contamination.
JER-1-683	4/8/2021	For Low Level SW-846 Method 8260C, 2-propanol (9.6 ug/L) was detected in the field blank (2104080912A) below the reporting limit. No groundwater data are affected by this field blank contamination.
PL-10-592	4/5/2021	For Low Level SW-846 Method 8260C, matrix spike recoveries for sample 2104051456Y were within laboratory control limits.

Well ID	Event Date	SW-846 Method 8260C QA Narratives
WW-5-809	**4/13/2021**	**For Low Level SW-846 Method 8260C, one unknown compound (55 ug/L) was tentatively identified by a GC/MS library search in sample 2104130926A.**
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2104191455C and 2104191456C were within control limits or below the calculable range.
B650-EFF-1	4/14/2021	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) 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	4/14/2021	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) 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-40-595	4/12/2021	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) 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	4/14/2021	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) 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-1-424	4/13/2021	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) 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-2-447	4/13/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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-5-459	4/13/2021	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) 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-5-579	4/13/2021	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) 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-5-809	4/13/2021	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) 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-5-909	4/13/2021	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) 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-40-517	4/1/2021	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) in the associated field samples. The error associated with elevated recovery equates to

Well ID	Event Date	SW-846 Method 8260C QA Narratives
		a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
BLM-40-595	4/12/2021	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) 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-1-424	4/13/2021	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) 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	4/13/2021	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) 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	4/1/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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	4/13/2021	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) 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-40-517	4/1/2021	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-40-595	4/12/2021	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	4/13/2021	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.
JP-2-447	4/13/2021	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-10-484	4/6/2021	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-10-592	4/5/2021	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-10-813	4/1/2021	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-10-962	4/5/2021	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	4/6/2021	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	4/6/2021	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	4/6/2021	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	4/6/2021	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	4/13/2021	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	4/13/2021	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.
WW-5-809	4/13/2021	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	4/13/2021	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	4/14/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-517	4/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-595	4/12/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-420	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
BLM-41-670	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-483	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-1-483	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JER-1-563	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-504	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-584	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JER-2-684	4/20/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-1-424	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-509	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
JP-3-509	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
JP-3-689	4/15/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
PL-10-484	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-592	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-813	4/1/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-1-486	4/19/2021	For Low Level SW-846 Method 8260C, there were no detections in the trip blank.
PL-6-545	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
PL-6-725	4/8/2021	For Low Level SW-846 Method 8260C, there were no detections in the equipment blank.
ST-7-453	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-544	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-779	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
ST-7-970	4/6/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-459	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-579	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
WW-5-909	4/13/2021	For Low Level SW-846 Method 8260C, there were no detections in the field blank.
600-G-138	**4/27/2021**	**For SW-846 Method 8260C in blind control sample (2104270730B), the percent recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (8.8%), trichloroethene (17.2%), tetrachloroethene (17.6%), and trichlorofluoromethane (10.4%) were outside of the standard limits (75-125%). Additionally, vinyl chloride (0.25 ug/L) was detected below the reporting limit but none was added. Affected data are appropriately qualified.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
ST-1-473	**4/12/2021**	**For SW-846 Method 8260C, 1,1,2-trichloro-1,2,2-trifluoroethane (0.75 ug/L), trichloroethene (TCE) (0.75 ug/L), trichlorofluoromethane (CFC 11) (0.51 ug/L) were detected below the reporting limit and one unknown compound (5.9 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104120932C). Affected data are appropriately qualified.**
PFE-4A	4/15/2021	For SW-846 Method 8260C, 2-propanol (11 ug/L) was detected in the field blank (2104150951) below the reporting limit. No groundwater data are affected by this field blank contamination.
600-G-138	4/27/2021	For SW-846 Method 8260C, 2-propanol (4.4 ug/L) was detected in the field blank (2104270816B) below the reporting limit. No groundwater data are affected by this field blank contamination.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for dichlorofluoromethane (CFC 21) was 1.4%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 1.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for trichloroethene (TCE) was 8.7%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for 1,2-dichloro-1,1,2-trifluoroethane (CFC 123a) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, field duplicate samples 2104071015Y and 2104071016Y the relative percent difference for trichlorofluoromethane (CFC 11) was 3.3%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for tetrachloroethene (PCE) was 3.8%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 22.2%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for trichlorofluoromethane (CFC 11) was 5.7%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	4/12/2021	For SW-846 Method 8260C, field duplicate samples 2104120930C and 2104120931C the relative percent difference for trichloroethene (TCE) was 9.5%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for trichloroethene (TCE) was 0.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for trichlorofluoromethane (CFC 11) was 8.0%. Upper acceptance limit for relative percent difference is 25%.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, field duplicate samples 2104141416 and 2104141418 the relative percent difference for 1,1,2-trichloro-1,2,2-trifluoroethane was 4.3%. Upper acceptance limit for relative percent difference is 25%.
PFE-7	4/15/2021	For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104151321). No groundwater data are affected by this field blank contamination.
ST-1-473	**4/12/2021**	**For SW-846 Method 8260C, one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in sample 2104120930C and duplicate sample 2104120931C.**
PFE-4A	4/15/2021	For SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2104150950 and 2104150952 were within control limits or below the calculable range.
BW-3-180	**4/19/2021**	**For SW-846 Method 8260C, sulfur dioxide (8.6 ug/L) and one unknown compound (5.4 ug/L) were tentatively identified by a GC/MS library search in sample 2104190950C.**

Well ID	Event Date	SW-846 Method 8260C QA Narratives
400-FV-131	4/21/2021	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) 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	4/21/2021	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) 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	4/27/2021	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) 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	4/14/2021	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) 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	4/14/2021	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) 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	4/14/2021	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) 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	4/19/2021	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) 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	4/15/2021	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) 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-3	4/15/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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	4/15/2021	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) 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-1-473	4/12/2021	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) 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	4/21/2021	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) 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	4/21/2021	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) 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-G-138	4/27/2021	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) 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	4/1/2021	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) 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	4/1/2021	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	4/7/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
BLM-39-560	4/7/2021	For SW-846 Method 8260C, there were no detections in the equipment blank.
400-FV-131	4/21/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-HV-147	4/21/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B650-INF-1	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
B655-INF-2	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-10-517	4/1/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BLM-6-488	4/14/2021	For SW-846 Method 8260C, there were no detections in the field blank.
BW-3-180	4/19/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-2	4/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
PFE-3	4/15/2021	For SW-846 Method 8260C, there were no detections in the field blank.
400-FV-131	4/21/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
BLM-10-517	4/1/2021	For SW-846 Method 8260C, there were no detections in the trip blank.
PFE-5	4/15/2021	For SW-846 Method 8260C, trichloroethene (TCE) (0.27 ug/L) was detected below the reporting limit and one unknown compound (5.2 ug/L) was tentatively identified by a GC/MS library search in the field blank (2104151031). No groundwater data are affected by this field blank contamination.

Well ID	Event Date	Modified EPA Method 607 QA Narratives
600-G-138	4/27/2021	For Modified EPA Method 607 in blind control sample (2104270731B), all recoveries were within standard limits.
600-G-138	4/27/2021	For Modified EPA Method 607, bromacil (0.01 ug/L) was detected in the method blank WBLANK_28APR21. No groundwater data are affected by this method blank contamination.
BLM-39-385	4/7/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. No groundwater data are affected by this method blank contamination.
BLM-39-560	4/7/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_08APR21. No groundwater data are affected by this method blank contamination.
BW-3-180	4/19/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. No groundwater data are affected by this method blank contamination.
PFE-2	4/15/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. No groundwater data are affected by this method blank contamination.
PFE-3	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PFE-4A	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**

Well ID	Event Date	Modified EPA Method 607 QA Narratives
PFE-5	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PL-1-486	**4/19/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_22APR21. Affected data are appropriately qualified.**
PL-6-545	4/8/2021	For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. No groundwater data are affected by this method blank contamination.
PL-6-725	**4/8/2021**	**For Modified EPA Method 607, bromacil (0.02 ug/L) was detected in the method blank WBLANK_14APR21. Affected data are appropriately qualified.**
600-G-138	4/27/2021	For Modified EPA Method 607, bromacil (0.12 ug/L) was detected in the field blank (2104270818B). No groundwater data are affected by this field blank contamination.
ST-1-473	4/12/2021	For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for N-nitrodimethylamine was 4.9%. Upper acceptance limit for relative percent difference is 25%.
ST-1-473	**4/12/2021**	**For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for bromacil was 81.7%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
ST-1-473	4/12/2021	For Modified EPA Method 607, field duplicate samples 2104120933C and 2104120934C the relative percent difference for N-nitrosodimethylamine was 2.4%. Upper acceptance limit for relative percent difference is 25%.
PFE-4A	**4/15/2021**	**For Modified EPA Method 607, field duplicate samples 2104150953 and 2104150954 the relative percent difference for bromacil was 50%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
JP-2-447	4/13/2021	For Modified EPA Method 607, matrix spike recoveries for sample 2104131003C were within laboratory control limits.
BLM-39-385	4/7/2021	For Modified EPA Method 607, there were no detections in the equipment blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method in blind control sample (2104201120C), the percent recovery for N-nitrosodimethylamine (170%) was outside of the standard limits (70-130%). Affected data are appropriately qualified.**
PFE-7	4/15/2021	For Low Level Nitrosamine Method, field duplicate samples 2104151323 and 2104151325 the relative percent difference for N-nitrosodimethylamine was 3.5%. Upper acceptance limit for relative percent difference is 25%.
BLM-41-670	4/20/2021	For Low Level Nitrosamine Method, field duplicate samples 2104200927C and 2104200928C the relative percent difference for N-nitrosodimethylamine was 6.9%. Upper acceptance limit for relative percent difference is 25%.
JER-2-584	4/20/2021	For Low Level Nitrosamine Method, field duplicate samples 2104201018A and 2104201020A the relative percent difference for N-nitrosodimethylamine was 25%. Upper acceptance limit for relative percent difference is 25%.
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method, for duplicate sample 2104200928C the internal standard recovery of NDMA-d6 (8.5%) was outside laboratory control limits (10-100%). Affected data are appropriately qualified.**
B650-EFF-1	4/14/2021	For Low Level Nitrosamine Method, for field blank 2104141410 internal standard recoveries of NDMA-d6 (3.7%) and DMN-d6 (7.1%) were outside laboratory control limits (10-100%). No corrective action was deemed necessary by the analytical laboratory based on sufficient signal to noise ratios.
JP-1-424	4/13/2021	For Low Level Nitrosamine Method, matrix spike recoveries for samples 2104131403C and 2104131404C were within laboratory control limits.
WW-5-459	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.35 ng/L) was detected in the field blank (2104130911A) below the reporting limit. Affected data are appropriately qualified.**

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-41-420	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
BLM-41-670	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-504	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-584	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-2-684	4/20/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-1-486	**4/19/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.38 ng/L) was detected in the method blank (PB21D23CM1) below the reporting limit. Affected data are appropriately qualified.**
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.4 ng/L) was detected in the field blank (2104150908C) below the reporting limit. No groundwater data are affected by this field blank contamination.
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.41 ng/L) and N-nitrodimethylamine (0.2 ng/L) were detected in the trip blank (2104080701A) below the reporting limit. No groundwater data are affected by this trip blank contamination.
JER-1-563	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.42 ng/L) and N-nitrodimethylamine (0.87 ng/L) were detected in the field blank (2104080854A) below the reporting limit for N-nitrosodimethylamine only. Affected data are appropriately qualified.**
JP-1-424	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the field blank (2104131405C) below the reporting limit. Affected data are appropriately qualified.**
PL-10-484	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
PL-10-592	**4/5/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. No groundwater data are affected by this method blank contamination.
PL-10-962	**4/5/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-453	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-544	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-779	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. Affected data are appropriately qualified.**
ST-7-970	4/6/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.43 ng/L) was detected in the method blank (PB21D12CM3) below the reporting limit. No groundwater data are affected by this method blank contamination.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. No groundwater data are affected by this method blank contamination.
JER-1-563	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
JER-1-683	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
PL-6-545	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
PL-6-725	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.44 ng/L) was detected in the method blank (PB21D15CM1) below the reporting limit. Affected data are appropriately qualified.**
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.48 ng/L) was detected in the trip blank (2104150751C). No groundwater data are affected by this trip blank contamination.
JP-3-689	**4/15/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.49 ng/L) was detected in the field blank (2104151038C) below the reporting limit. Affected data are appropriately qualified.**
WW-5-909	4/13/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.52 ng/L) was detected in the field blank (2104130946A). No groundwater data are affected by this field blank contamination.
JER-1-683	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.57 ng/L) was detected in the field blank (2104080914A) below the reporting limit. Affected data are appropriately qualified.**
ST-7-970	4/6/2021	For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.61 ng/L) was detected in the field blank (2104061003A). No groundwater data are affected by this field blank contamination.
WW-5-809	**4/13/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.66 ng/L) was detected in the field blank (2104130931A). Affected data are appropriately qualified.**
ST-7-779	**4/6/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.67 ng/L) was detected in the field blank (2104060948A) below the reporting limit. Affected data are appropriately qualified.**
BLM-41-420	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.69 ng/L) was detected in the field blank (2104201424C). Affected data are appropriately qualified.**
JER-2-684	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.75 ng/L) was detected in the field blank (2104201034A). Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.79 ng/L) was detected in the field blank (2104151324). Affected data are appropriately qualified.**
JER-2-584	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (0.94 ng/L) was detected in the field blank (2104201019A). Affected data are appropriately qualified.**
PL-6-545	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.0 ng/L) was detected in the equipment blank (2104081336Y) below the reporting limit. Affected data are appropriately qualified.**
B655-EFF-2	**4/14/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.1 ng/L) and N-nitrodimethylamine (0.26 ng/L) were detected in the field blank (2104141330) below the reporting limit for N-nitrodimethylamine only. Affected data are appropriately qualified.**
PL-1-486	**4/19/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.1 ng/L) was detected in the trip blank (2104191301C). Affected data are appropriately qualified.**
PL-6-725	**4/8/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.2 ng/L) was detected in the equipment blank (2104080926Y) below the reporting limit. Affected data are appropriately qualified.**
JER-2-504	**4/20/2021**	**For Low Level Nitrosamine Method, N-nitrosodimethylamine (1.3 ng/L) was detected in the field blank (2104200954A). Affected data are appropriately qualified.**
BLM-41-420	4/20/2021	For Low Level Nitrosamine Method, relative percent differences (RPD) for duplicate samples 2104201422C and 2104201423C were within control limits or below the calculable range.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
JER-1-483	4/8/2021	For Low Level Nitrosamine Method, field blank 2104080834A was broken during shipment and was not analyzed.
B650-EFF-1	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B655-EFF-2	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-10-517	**4/1/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
BLM-40-517	4/1/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
BLM-6-488	**4/14/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
JP-1-424	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
JP-2-447	4/13/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
JP-3-509	4/15/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
JP-3-689	**4/15/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PFE-7	**4/15/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (225%) in the laboratory fortified blank (LFB21D21CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (266%) in the laboratory fortified blank (LFB21D08CM1) was outside laboratory control limits (70-130%). No groundwater data are affected by this QC issue.
WW-5-459	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-579	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-809	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
WW-5-909	**4/13/2021**	**For Low Level Nitrosamine Method, the recovery of N-nitrosodimethylamine (198%) in the laboratory fortified blank (LFB21D16CM1) was outside laboratory control limits (70-130%). Affected data are appropriately qualified.**
B650-EFF-1	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-10-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.

Well ID	Event Date	Low-Level Nitrosamine Method QA Narratives
BLM-10-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-517	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-40-595	4/12/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-40-688	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
BLM-41-670	4/20/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
BLM-6-488	4/14/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
JP-2-447	4/13/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
PL-10-484	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-592	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-813	4/1/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the equipment blank.
PL-10-962	4/5/2021	For Low Level Nitrosamine Method, there were no detections in the trip blank.
PL-1-486	4/19/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-453	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
ST-7-544	4/6/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.
WW-5-579	4/13/2021	For Low Level Nitrosamine Method, there were no detections in the field blank.

Well ID	Event Date	SW-846 Method 8270D QA Narratives
JER-1-563	**4/8/2021**	**For SW-846 Method 8270D, field duplicate samples 2104080855A and 2104080856A the relative percent difference for 1,4-dioxane was 34.0%. This value is outside the upper acceptance limit for relative percent difference of 25%.**
JER-1-483	**4/8/2021**	**For SW-846 Method 8270D, the upper control limit was exceeded for the surrogate in sample 2104080835A. The elevated recovery equates to a high bias. The sample extraction was initially performed within the holding time, but was re-extracted due to the QC failure. The re-extraction was performed past the recommended holding time. The data are flagged to indicate the holding time exceedance.**
JER-2-684	4/20/2021	For SW-846 Method 8270D, there were no detections in the field blank.

Well ID	Event Date	Total Metals QA Narratives
PFE-2	**4/15/2021**	**For Total Metals, chromium (0.0006 mg/L) were detected in the method blank for analytical batch 377893 below the reporting limit. Affected data are appropriately qualified.**
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for sodium was 4.2%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for calcium was 3.9%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for strontium was 4.7%. Upper acceptance limit for relative percent difference is 25%.
PL-6-725	4/8/2021	For Total Metals, field duplicate samples 2104081051Y and 2104081115Y the relative percent difference for magnesium was 4.3%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for chromium was 0.4%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for nickel was 1.9%. Upper acceptance limit for relative percent difference is 25%.

Well ID	Event Date	Total Metals QA Narratives
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for iron was 0.9%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for strontium was 2.2%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for magnesium was 2.1%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for sodium was 2.4%. Upper acceptance limit for relative percent difference is 25%.
BW-3-180	4/19/2021	For Total Metals, field duplicate samples 2104190953C and 2104190954C the relative percent difference for calcium was 8.2%. Upper acceptance limit for relative percent difference is 25%.
BLM-39-560	4/7/2021	For Total Metals, magnesium (0.07 mg/L), sodium (0.7 mg/L), and strontium (0.006 mg/L) were detected in the equipment blank (2104070901Y) below the reporting limit. No groundwater data are affected by this equipment blank contamination.
JP-1-424	4/13/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-2-447	4/13/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
ST-1-473	4/12/2021	For Total Metals, the Continuing Calibration Blank (CCB) contained a low level of sodium at concentrations above the Method Reporting Limit (MRL), but less than ten times the concentration in the associated samples. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-1-424	4/13/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
JP-2-447	4/13/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
ST-1-473	4/12/2021	For Total Metals, the Contract Required Detection Limit Standard (CRDL) exceeded the upper control limit for sodium. Sample concentrations are above ten times the CRDL concentration. Contamination is deemed insignificant relative to the reported samples and the data is reported with no further corrective action required.
BLM-40-517	4/1/2021	For Total Metals, the upper control limit was exceeded for selenium in the Contract Required Detection Limit Standard (CRDL). The field samples analyzed in this sequence did not contain the analyte 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-10-484	4/6/2021	For Total Metals, the upper control limit was exceeded for thallium 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-10-592	4/5/2021	For Total Metals, the upper control limit was exceeded for thallium 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-10-813	4/1/2021	For Total Metals, the upper control limit was exceeded for thallium in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the

Well ID	Event Date	Total Metals QA Narratives
		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-10-962	4/5/2021	For Total Metals, the upper control limit was exceeded for thallium 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	Miscellaneous QA Narratives
PL-10-962	**4/5/2021**	**For Standard Method 2540C, the minimum target residue of 2.5 mg, as described by the reference method, was not achieved. The laboratory Method Reporting Limit (MRL) of 10 mg/L is based on 100 mL of sample and 1 mg of residue. The analytical balances used by the laboratory are capable of accurate quantitation of 1 mg of residue. Affected data are qualified with an asterisk *.**

Table 8 – WSTF Blank Sample Detections

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
PL-1-486	4/19/2021	Carboy G3	8260_LL	VOA-FB	67-63-0	2-Propanol	13	ug/L	J FB
PFE-4A	4/15/2021		8260	VOA-FB	67-63-0	2-Propanol	11	ug/L	J FB
JER-1-683	4/8/2021		8260_LL	VOA-FB	67-63-0	2-Propanol	9.6	ug/L	J FB
BLM-40-688	4/14/2021	Carboy G3	8260_LL	VOA-TB	67-63-0	2-Propanol	9.3	ug/L	J TB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	TIC	Unknown	5.9	ug/L	TIC FB
WW-5-809	4/13/2021	Carboy G5	8260_LL	VOA-FB	67-63-0	2-Propanol	5.7	ug/L	J FB
PFE-7	4/15/2021		8260	VOA-FB	TIC	Unknown	5.2	ug/L	TIC FB
BLM-40-595	4/12/2021	Carboy G3	8260_LL	VOA-TB	67-63-0	2-Propanol	5.2	ug/L	J TB
PFE-5	4/15/2021		8260	VOA-FB	TIC	Unknown	5.2	ug/L	TIC FB
JP-2-447	4/13/2021	Carboy G3	8260_LL	VOA-FB	67-63-0	2-Propanol	4.4	ug/L	J FB
600-G-138	4/27/2021	Carboy G3	8260	VOA-FB	67-63-0	2-Propanol	4.4	ug/L	J FB
B655-EFF-2	4/14/2021		8260_LL	VOA-FB	67-63-0	2-Propanol	4	ug/L	J FB
JER-2-504	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.3	ng/L	RB FB
PL-6-725	4/8/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1.2	ng/L	RB EB
PL-1-486	4/19/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	1.1	ng/L	RB TB
B655-EFF-2	4/14/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	1.1	ng/L	* FB
PL-6-545	4/8/2021	Carboy G2	NDMA_LL	NDMA_LL-EB	62-75-9	N-Nitrosodimethylamine	1	ng/L	RB EB
JER-2-584	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.94	ng/L	RB FB
JER-1-563	4/8/2021		NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.87	ng/L	RB FB
PFE-7	4/15/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.79	ng/L	* FB
JER-2-684	4/20/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.75	ng/L	RB FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.75	ug/L	J FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.75	ug/L	J FB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7440-23-5	Sodium, Total	0.7	mg/L	J EB
BLM-41-420	4/20/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.69	ng/L	RB FB
ST-7-779	4/6/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.67	ng/L	RB FB
WW-5-809	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.66	ng/L	* FB
ST-7-970	4/6/2021		NDMA_LL	NDMA-FB	62-75-9	N-Nitrosodimethylamine	0.61	ng/L	RB FB
JER-1-683	4/8/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.57	ng/L	RB FB

Well ID	Event Date	Comment	Analysis	Sample Type	CAS No.	Analyte	Result	Units	QA flag
WW-5-909	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.52	ng/L	* FB
ST-1-473	4/12/2021	Carboy G3	8260	VOA-FB	75-69-4	Trichlorofluoromethane (CFC 11)	0.51	ug/L	J FB
JP-3-689	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.49	ng/L	* FB
JP-3-509	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.48	ng/L	* TB FB
JP-1-424	4/13/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.43	ng/L	J FB
JER-1-563	4/8/2021		NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.42	ng/L	J FB
JER-1-483	4/8/2021		NDMA_LL	NDMA_LL-TB	62-75-9	N-Nitrosodimethylamine	0.41	ng/L	J RB TB
JP-3-509	4/15/2021	Carboy G3	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.4	ng/L	J * TB FB
WW-5-459	4/13/2021	Carboy G5	NDMA_LL	NDMA_LL-FB	62-75-9	N-Nitrosodimethylamine	0.35	ng/L	J * FB
PFE-5	4/15/2021		8260	VOA-FB	79-01-6	Trichloroethene (TCE)	0.27	ug/L	J FB
B655-EFF-2	4/14/2021		NDMA_LL	NDMA_LL-FB	4164-28-7	N-Nitrodimethylamine	0.26	ng/L	J FB
JER-1-483	4/8/2021		NDMA_LL	NDMA_LL-TB	4164-28-7	N-Nitrodimethylamine	0.2	ng/L	J TB
600-G-138	4/27/2021	Carboy G3	607	NDMA-FB	314-40-9	Bromacil	0.12	µg/L	FB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7439-95-4	Magnesium, Total	0.07	mg/L	J EB
BLM-39-560	4/7/2021	Carboy G2	METALS	METALS-EB	7440-24-6	Strontium, Total	0.006	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	3/15/2021	607	2103151005C	N-Nitrosodimethylamine	0.14	µg/L	0.0097	0.0049	38	
200-F-225	2/23/2021	607	2102231041Y	N-Nitrosodimethylamine	0.0057	µg/L	0.0094	0.0047	1.4	J A
300-A-170	2/18/2021	607	2102181022B	N-Nitrosodimethylamine	1.5	µg/L	0.0094	0.0047	39	
300-B-166	2/3/2021	607	2102031457C	N-Nitrosodimethylamine	2.8	µg/L	0.0094	0.0047	36	
300-E-138	2/23/2021	607	2102231501Y	N-Nitrosodimethylamine	0.69	µg/L	0.0094	0.0047	1.4	A
BLM-14-327	3/15/2021	607	2103151505C	N-Nitrosodimethylamine	0.23	µg/L	0.0094	0.0047	38	
BLM-21-400	2/8/2021	607	2102080908C	N-Nitrosodimethylamine	0.37	µg/L	0.0095	0.0048	34	
BLM-23-431	2/4/2021	607	2102041307C	N-Nitrosodimethylamine	0.2	µg/L	0.0096	0.0048	34	
BLM-23-431	2/4/2021	607	2102041308C	N-Nitrosodimethylamine	0.2	µg/L	0.0094	0.0047	34	
BLM-32-543	2/2/2021	NDMA_LL	2102021027A	N-Nitrosodimethylamine	2.7	ng/L	0.48	0.33		FB
BLM-32-571	2/2/2021	NDMA_LL	2102021004A	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		
BLM-39-385	4/7/2021	607	2104071431Y	N-Nitrosodimethylamine	2.3	µg/L	0.0095	0.0048	46	
BLM-39-560	4/7/2021	607	2104071017Y	N-Nitrosodimethylamine	0.01	µg/L	0.0095	0.0048	46	
BLM-41-670	4/20/2021	NDMA_LL	2104200927C	N-Nitrosodimethylamine	1.4	ng/L	0.48	0.33		RB Q
BLM-41-670	4/20/2021	NDMA_LL	2104200928C	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		RB * Q
BLM-5-527	3/15/2021	607	2103151348B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
BLM-5-527	3/15/2021	607	2103151349B	N-Nitrosodimethylamine	0.08	µg/L	0.0094	0.0047	38	
BLM-9-419	3/2/2021	607	2103021335C	N-Nitrosodimethylamine	0.0076	µg/L	0.0095	0.0048	36	J
BLM-9-419	3/2/2021	607	2103021336C	N-Nitrosodimethylamine	0.0075	µg/L	0.0094	0.0047	36	J
BW-1-268	3/9/2021	607	2103091318B	N-Nitrosodimethylamine	4.5	µg/L	0.0094	0.0047	40	
JER-1-563	4/8/2021	NDMA_LL	2104080853A	N-Nitrosodimethylamine	1.8	ng/L	0.48	0.34		RB FB
JER-1-683	4/8/2021	NDMA_LL	2104080913A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		RB FB
JER-2-504	4/20/2021	NDMA_LL	2104200953A	N-Nitrosodimethylamine	2.5	ng/L	0.48	0.33		RB FB
JER-2-584	4/20/2021	NDMA_LL	2104201018A	N-Nitrosodimethylamine	2.1	ng/L	0.48	0.33		RB FB
JER-2-584	4/20/2021	NDMA_LL	2104201020A	N-Nitrosodimethylamine	2.7	ng/L	0.47	0.33		RB FB
JER-2-684	4/20/2021	NDMA_LL	2104201033A	N-Nitrosodimethylamine	4	ng/L	0.47	0.33		FB
PL-10-484	4/6/2021	NDMA_LL	2104060946Y	N-Nitrosodimethylamine	1.1	ng/L	0.48	0.33		RB
PL-10-813	4/1/2021	NDMA_LL	2104050830Y	N-Nitrosodimethylamine	5.7	ng/L	0.48	0.33		
PL-10-962	4/5/2021	NDMA_LL	2104051052Y	N-Nitrosodimethylamine	1.2	ng/L	0.48	0.33		RB
PL-11-470	3/2/2021	NDMA_LL	2103021018A	N-Nitrosodimethylamine	2.4	ng/L	0.48	0.33		RB
PL-11-530	3/2/2021	NDMA_LL	2103021033A	N-Nitrosodimethylamine	1.9	ng/L	0.48	0.34		RB FB
PL-11-710	3/2/2021	NDMA_LL	2103021048A	N-Nitrosodimethylamine	1.6	ng/L	0.47	0.33		RB FB
PL-12-570	2/8/2021	NDMA_LL	2102081514B	N-Nitrosodimethylamine	5	ng/L	0.48	0.33		FB
PL-12-570	2/8/2021	NDMA_LL	2102081516B	N-Nitrosodimethylamine	5.2	ng/L	0.48	0.33		FB

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
PL-12-800	2/8/2021	NDMA_LL	2102080953B	N-Nitrosodimethylamine	6.8	ng/L	0.47	0.33		FB Q
PL-2-504	3/15/2021	607	2103150957B	N-Nitrosodimethylamine	0.078	µg/L	0.0095	0.0048	38	
PL-7-480	2/3/2021	NDMA_LL	2102031021Y	N-Nitrosodimethylamine	4.9	ng/L	0.5	0.35		
ST-1-473	4/12/2021	607	2104120934C	N-Nitrosodimethylamine	0.41	µg/L	0.0096	0.0048	50	
ST-1-473	4/12/2021	607	2104120933C	N-Nitrosodimethylamine	0.42	µg/L	0.0094	0.0047	50	
WW-5-459	4/13/2021	NDMA_LL	2104130910A	N-Nitrosodimethylamine	1.1	ng/L	0.47	0.33		* FB
WW-5-579	4/13/2021	NDMA_LL	2104130920A	N-Nitrosodimethylamine	1.5	ng/L	0.48	0.33		*
WW-5-809	4/13/2021	NDMA_LL	2104130930A	N-Nitrosodimethylamine	1.4	ng/L	0.47	0.33		* FB
WW-5-909	4/13/2021	NDMA_LL	2104130945A	N-Nitrosodimethylamine	6.5	ng/L	0.47	0.33		*

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	4/7/2021	8260	2104071430Y	Tetrachloroethene (PCE)	6.1	ug/L	1	0.21		
ST-1-473	4/12/2021	8260	2104120930C	Tetrachloroethene (PCE)	8.1	ug/L	1	0.21		
ST-1-473	4/12/2021	8260	2104120931C	Tetrachloroethene (PCE)	7.8	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	3/15/2021	8260	2103151003C	Trichloroethene (TCE)	61	ug/L	1	0.2		
200-D-240	3/16/2021	8260	2103161015C	Trichloroethene (TCE)	14	ug/L	1	0.2		
200-F-225	2/23/2021	8260	2102231040Y	Trichloroethene (TCE)	21	ug/L	1	0.2		
200-KV-150	3/10/2021	8260	2103101436C	Trichloroethene (TCE)	13	ug/L	1	0.2		
200-KV-150	3/10/2021	8260	2103101435C	Trichloroethene (TCE)	14	ug/L	1	0.2		
600-G-138	4/27/2021	8260	2104270815B	Trichloroethene (TCE)	40	ug/L	1	0.2		Q
BLM-14-327	3/15/2021	8260	2103151503C	Trichloroethene (TCE)	63	ug/L	1	0.2		
BLM-21-400	2/8/2021	8260	2102080906C	Trichloroethene (TCE)	9.2	ug/L	1	0.2		Q
BLM-23-431	2/4/2021	8260	2102041305C	Trichloroethene (TCE)	48	ug/L	1	0.2		
BLM-39-385	4/7/2021	8260	2104071430Y	Trichloroethene (TCE)	150	ug/L	1	0.2		
BLM-39-560	4/7/2021	8260	2104071016Y	Trichloroethene (TCE)	11	ug/L	1	0.2		
BLM-39-560	4/7/2021	8260	2104071015Y	Trichloroethene (TCE)	12	ug/L	1	0.2		
BLM-5-527	3/15/2021	8260	2103151345B	Trichloroethene (TCE)	24	ug/L	1	0.2		
BLM-5-527	3/15/2021	8260	2103151346B	Trichloroethene (TCE)	25	ug/L	1	0.2		
PL-12-570	2/8/2021	8260	2102081510B	Trichloroethene (TCE)	16	ug/L	1	0.2		
PL-12-570	2/8/2021	8260	2102081511B	Trichloroethene (TCE)	17	ug/L	1	0.2		
PL-12-800	2/8/2021	8260	2102080950B	Trichloroethene (TCE)	14	ug/L	1	0.2		
PL-2-504	3/15/2021	8260	2103150955B	Trichloroethene (TCE)	65	ug/L	1	0.2		
ST-1-473	4/12/2021	8260	2104120931C	Trichloroethene (TCE)	220	ug/L	2	0.4		
ST-1-473	4/12/2021	8260	2104120930C	Trichloroethene (TCE)	200	ug/L	2	0.4		

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 **Source GMP**

Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B650-EFF-1	4/14/2021	NDMA_LL	2104141409	N-Nitrosodimethylamine	3.5	ng/L	0.48	0.33		*
B650-INF-1	3/5/2021	607	2103050558	N-Nitrosodimethylamine	0.064	µg/L	0.01	0.005	40	
B650-INF-1	4/14/2021	607	2104141419	N-Nitrosodimethylamine	0.045	µg/L	0.0098	0.0049	50	
B650-INF-1	2/9/2021	607	2102091407	N-Nitrosodimethylamine	0.078	µg/L	0.0097	0.0049	40	
B650-INF-1	3/5/2021	607	2103050557	N-Nitrosodimethylamine	0.062	µg/L	0.0096	0.0048	40	
PFE-3	4/15/2021	607	2104150932	N-Nitrosodimethylamine	0.16	µg/L	0.0098	0.0049	40	
PFE-4A	4/15/2021	607	2104150953	N-Nitrosodimethylamine	0.0078	µg/L	0.0097	0.0049	40	J
PFE-4A	4/15/2021	607	2104150954	N-Nitrosodimethylamine	0.0068	µg/L	0.0097	0.0049	40	J
PFE-5	4/15/2021	607	2104151032	N-Nitrosodimethylamine	0.38	µg/L	0.0099	0.005	40	
PFE-7	4/15/2021	NDMA_LL	2104151323	N-Nitrosodimethylamine	2.9	ng/L	0.5	0.35		* FB
PFE-7	4/15/2021	NDMA_LL	2104151325	N-Nitrosodimethylamine	2.8	ng/L	0.48	0.33		* FB

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	3/5/2021	8260	2103050555	Trichloroethene (TCE)	17	ug/L	1	0.2		
B650-INF-1	4/14/2021	8260	2104141416	Trichloroethene (TCE)	14	ug/L	1	0.2		
B650-INF-1	4/14/2021	8260	2104141418	Trichloroethene (TCE)	14	ug/L	1	0.2		
B650-INF-1	2/9/2021	8260	2102091405	Trichloroethene (TCE)	17	ug/L	1	0.2		
B650-INF-1	3/5/2021	8260	2103050554	Trichloroethene (TCE)	17	ug/L	1	0.2		
PFE-3	4/15/2021	8260	2104150930	Trichloroethene (TCE)	45	ug/L	1	0.2		
PFE-5	4/15/2021	8260	2104151030	Trichloroethene (TCE)	59	ug/L	1	0.2		
PFE-7	4/15/2021	8260	2104151320	Trichloroethene (TCE)	5.3	ug/L	1	0.2		

Appendix D.3
MPITS

Analytical Results for MPITS and MPE Wells that Exceed Clean Up Levels

CAS Number 62-75-9 **Analyte N-Nitrosodimethylamine**

Clean Up Level 0.0011 ug/L **Source GMP**

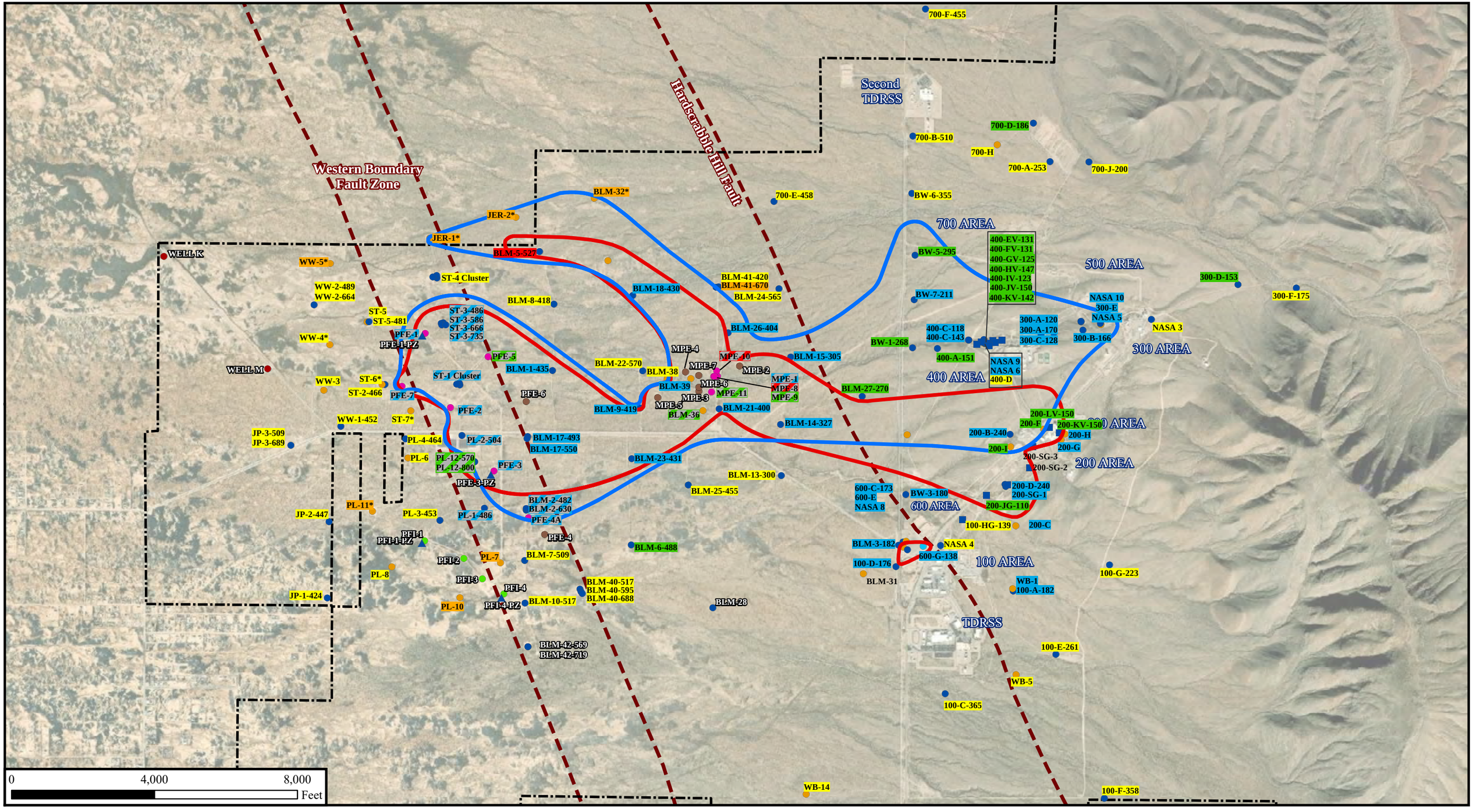
Well ID	Event Date	Analysis Method	Sample	Constituent	Result	Units	Quant Limit	Det Limit	Xtrct Effic	QA Flag
B655-INF-2	3/5/2021	607	2103050808	N-Nitrosodimethylamine	1.6	µg/L	0.0095	0.0048	40	
B655-INF-2	4/14/2021	607	2104141348	N-Nitrosodimethylamine	1.8	µg/L	0.0098	0.0049	50	
B655-INF-2	2/9/2021	607	2102090846	N-Nitrosodimethylamine	2.2	µg/L	0.0095	0.0048	40	
MPE-1	2/10/2021	607	2102100903	N-Nitrosodimethylamine	3.9	µg/L	0.0096	0.0048	40	
MPE-10	2/10/2021	607	2102100948	N-Nitrosodimethylamine	3.4	µg/L	0.0095	0.0048	40	
MPE-11	2/10/2021	607	2102101103	N-Nitrosodimethylamine	0.26	µg/L	0.0096	0.0048	40	
MPE-8	2/10/2021	607	2102100934	N-Nitrosodimethylamine	2.6	µg/L	0.0096	0.0048	40	
MPE-9	2/10/2021	607	2102100918	N-Nitrosodimethylamine	4.6	µg/L	0.0097	0.0049	40	
MPE-9	2/10/2021	607	2102100919	N-Nitrosodimethylamine	4.9	µg/L	0.0097	0.0049	40	

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	3/5/2021	8260	2103050806	Trichloroethene (TCE)	44	ug/L	1	0.2		
B655-INF-2	4/14/2021	8260	2104141346	Trichloroethene (TCE)	44	ug/L	1	0.2		
B655-INF-2	2/9/2021	8260	2102090844	Trichloroethene (TCE)	53	ug/L	1	0.2		
MPE-1	2/10/2021	8260	2102100901	Trichloroethene (TCE)	82	ug/L	1	0.2		
MPE-10	2/10/2021	8260	2102100946	Trichloroethene (TCE)	61	ug/L	1	0.2		
MPE-11	2/10/2021	8260	2102101101	Trichloroethene (TCE)	5.3	ug/L	1	0.2		
MPE-8	2/10/2021	8260	2102100931	Trichloroethene (TCE)	77	ug/L	1	0.2		
MPE-8	2/10/2021	8260	2102100933	Trichloroethene (TCE)	75	ug/L	1	0.2		
MPE-9	2/10/2021	8260	2102100916	Trichloroethene (TCE)	96	ug/L	1	0.2		

Appendix E
Time Concentration Plots



Time Concentration Plot Interpretations for Second Quarter 2021

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

N W E S

July 2021

Appendix E:

Reporting Period: 2Q/2021

Summary of Maximum Concentrations, Current Concentrations and T-C Plot Interpretations for WSTF Monitoring Well Network

Upgradient 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	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2012	0.004 DL	NP	2021	N/A		N/A	
100-G-223 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2012	0.004 DL	NP	2021	N/A		N/A	
300-F-175 Conv	2005	Non Detect	0.48 DL	2010	0.24 DL	2021	0.43 DL	2010	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.005 DL	NP	2016	0.004 DL	NP	2021	N/A		N/A	
NASA 3 Conv	1988	Non Detect	5.00 RL	1988	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	2020	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	2021	1.00 DL	2010	0.21 DL	2021	1.00 DL	2010	0.2 DL	2021	0.05 RL	NP	1992	0.004 DL	NP	2021	N/A		N/A	
100-D-176 Conv	1997	Natural Migration (Decreasing)	1.60 DL	2003	0.24 DL	2020	2.00 DL	1999	0.21 DL	2020	9.60	1999	2.50	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
100-HG-139 MSVGM	2011	Non Detect	0.79 J	2011	0.24 DL	2021	0.33 J	2015	0.21 DL	2021	10	2014	0.2 DL	2021	0.005 DL	NP	2020	0.004 DL	NP	2021	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	2020	2.50 RL	1996	0.21 DL	2020	9.00	1998	1.90	2020	0.1	NP	1988	0.004 DL	NP	2020	N/A		N/A	
600-E WestBay	1998	Natural Migration (Decreasing)	1.60 DL	2002	0.24 DL	2021	2.00 DL	1999	0.21 DL	2021	2.00 DL	1999	0.61 J	2021	0.005 DL	NP	2016	0.004 DL	NP	2021	N/A		N/A	
600-G-138 Conv	2011	Natural Migration (Decreasing)	5.10	2017	0.48 J Q	2021	0.3 DL	2018	0.21 DL	2021	130	2012	40 Q	2021	0.1 DL	NP	2021	0.1 DL	NP	2021	0.96 RB FB	2012	0.96 RB FB	2012
BW-3-180 Conv	1988	Natural Migration (Decreasing)	10	1988	0.42 J	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	
NASA 4 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	3.50	2009	0.2 DL	2020	0.05 RL	NP	1997	0.024 DL	NP	2020	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	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.27 J	2020	0.05 RL	NP	1993	0.004 DL	NP	2020	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	92	2021	15 QD	1989	2.90	2021	290 QD	1989	61	2021	1.60	25	1993	0.37	38	2021	N/A		N/A	
200-C WestBay	1993	Natural Migration (Decreasing)	51	1996	17	2021	2.50 RL	1996	0.21 DL	2021	4.30	2003	2.60	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-D-240 Conv	1988	Natural Migration (Decreasing)	240 QD	1995	54	2021	2.50 RL	1995	0.31 J	2021	110	1990	14	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
200-F WestBay	1995	Natural Migration (No Overall Trend)	41	2005	5.50	2021	2.50 RL	1996	0.45 J	2021	34	2009	21	2021	0.41 J A	1	2021	0.41 J A	1	2021	N/A		N/A	
200-G WestBay	1995	Natural Migration (Decreasing)	55	1995	5.10	2020	2.50 RL	1996	0.21 DL	2020	4.80	2004	2.20	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
200-H WestBay	1994	Natural Migration (Decreasing)	6.00	2003	1.10	2020	2.50 RL	1996	0.21 DL	2020	3.00 J	1997	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
200-I WestBay	1997	Natural Migration (No Overall Trend)	2.40 J	1999	0.29 J	2020	2.00 DL	1999	0.62 J RB	2020	35	2019	26	2020	0.021 J	42	2006	0.004 DL	NP	2020	N/A		N/A	
200-JG-110 MSVGM	2012	Natural Migration (No Overall Trend)	17	2013	4.70	2020	2.20	2020	2.20	2020	25	2013	24	2020	0.005 DL	NP	2012	0.004 DL	NP	2020	0.93 J	2012	0.93 J	2012
200-KV-150 MSVGM	2015	Natural Migration (No Overall Trend)	90	2020	90	2020	0.3 DL	2015	0.21 DL	2020	22	2020	22	2020	0.005 DL	NP	2020	0.005 DL	NP	2020	N/A		N/A	
200-LV-150 Conv	2018	Natural Migration (No Overall Trend)	0.27 DL	2018	0.24 DL	2020	0.3 DL	2018	0.21 DL	2020	0.89 J Q	2018	0.54 J	2020	0.004 DL	NP	2018	0.004 DL	NP	2020	N/A		N/A	
200-SG-1 MSVGM	2004	Natural Migration (Decreasing)	81	2008	14	2020	17	2007	5.70	2020	380	2007	140	2020	0.016 J	44	2008	0.004 DL	NP	2020	N/A		N/A	
BLM-3-182 Conv	1988	Natural Migration (Decreasing)	10	1988	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	41	1991	2.80	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	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	18	2020	2.50 RL	1996	0.21 DL	2020	2.50	2004	0.2 DL	2020	46	24	1990	2.30	56	2020	N/A		N/A	
300-A-170 Conv	1988	Natural Migration (Decreasing)	6000	1988	320	2021	2.50 RL	1996	0.21 DL	2021	7.00	1988	1.10	2021	48 QD	21	1995	3.80	39	2021	N/A		N/A	
300-B-166 Conv	1988	Natural Migration (Decreasing)	1600	1988	190	2021	2.50 RL	1996	0.21 DL	2021	8.00	1988	0.2 DL	2021	14	39	1991	7.80	36	2021	N/A		N/A	
300-C-128 Conv	1988	Natural Migration (Decreasing)	3000	1988	450 Q	2019	2.50 RL	1996	0.21 DL	2019	3.70 J	1996	1.30 Q	2019	47	32	2000	9.40	34	2019	N/A		N/A	
300-D-153 Conv	1988	Natural Migration (No Overall Trend)	6.30	2013	3.80	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	N/A		N/A	
300-E WestBay	1995	Natural Migration (Decreasing)	180	1996	16	2021	2.50 RL	1996	0.21 DL	2021	9.30	1997	1.40	2021	49 A	1	2021	49 A	1	2021	N/A		N/A	
400-A-151 Conv	1989	Natural Migration (No Overall Trend)	450	1990	200	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	1.20	2021	280	18	1991	16	34	2021	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	190	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.97 J	2020	93	15	1989	6.50	34	2020	N/A		N/A	
400-EV-131 MSVGM	2017	Natural Migration (No Overall Trend)	520	2017	420	2021	0.3 DL	2018	0.21 DL	2021	13	2017	1.80	2021	3.30	46	2020	3.30	46	2020	N/A		N/A	
400-FV-131 MSVGM	2017	Natural Migration (No Overall Trend)	240	2021	190	2021	0.3 DL	2018	0.21 DL	2021	1.60	2021	1.20	2021	3.30	60	2020	3.30	60	2020	N/A		N/A	
400-GV-125 MSVGM	2017	Natural Migration (No Overall Trend)	250	2021	250	2021	0.3 DL	2018	0.21 DL	2021	1.80	2021	1.80	2021	3.90	41	2019	3.20	68	2020	N/A		N/A	
400-HV-147 MSVGM	2017	Natural Migration (No Overall Trend)	240	2021	160	2021	0.3 DL	2018	0.21 DL	2021	2.00	2017	0.59 J	2021	140 D	60	2020	140 D	60	2020	N/A		N/A	
400-IV-123 MSVGM	2017	Natural Migration (No Overall Trend)	430	2017	99	2020	0.93 J	2018	0.21 DL	2020	0.28 J	2020	0.2 DL	2020	0.041	87	2017	0.012 J	54	2019	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
400-JV-150 MSVGM	2017	Natural Migration (No Overall Trend)	790 T *	2020	650	2021	0.3 DL	2018	0.21 DL	2021	1.50	2017	0.96 J	2021	5.30	82	2018	3.50	68	2020	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	150	2021	2.50 RL	1996	0.21 DL	2021	5.00	1989	0.85 J	2021	130	18	1991	11	40	2021	N/A		N/A	
BW-5-295 Conv	1989	Natural Migration (No Overall Trend)	360	1989	60	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.37 J	2020	1.90	49	1997	1.20	38	2020	N/A		N/A	
BW-7-211 Conv	1989	Natural Migration (Decreasing)	2400	1991	97 Q	2020	2.50 RL	1995	0.21 DL	2020	13	1989	0.87 J Q	2020	17	34	1994	1.80	44	2020	N/A		N/A	
NASA 10 Conv	1988	Natural Migration (Decreasing)	250	1996	20	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	4.70	19	1996	0.38	34	2020	N/A		N/A	
NASA 5 Conv	1988	Natural Migration (Decreasing)	350	1991	25	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	13	19	1996	2.70	34	2020	N/A		N/A	
NASA 6 Conv	1988	Natural Migration (Decreasing)	1300	1996	200	2020	2.50 RL	1996	0.21 DL	2020	5.00	1990	0.23 J	2020	95	21	1996	35 D	60	2020	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	0.091 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.99 J RB FB	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-B-510 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
700-D-186 Conv	1990	Natural Migration (No Overall Trend)	2.50 RL	1995	0.52 J	2021	2.50 RL	1995	0.21 DL	2021	2.50 RL	1995	1.30 RB FB	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	N/A		N/A	
700-E-458 Conv	1990	Non Detect	2.50 RL	1996	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	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	

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
700-H WestBay	1999	Non Detect	1.60 DL	2003	0.091 DL	2021	0.62 DL	2004	0.31 J RB TB EB	2021	1.90 RB TB EB	2021	1.90 RB TB EB	2021	0.005 DL	NP	2013	0.004 DL	NP	2021	N/A		N/A	
700-J-200 Conv	1999	Non Detect	1.60 DL	2003	0.091 DL	2021	0.62 DL	2004	0.36 J RB FB	2021	3.70	2005	1.80 RB FB	2021	0.005 DL	NP	2017	0.004 DL	NP	2021	N/A		N/A	
BLM-24-565 Conv	1991	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-32 Westbay	1997	Fluctuating LL NDMA	1.60 DL	2002	0.24 DL	2021	2.00 DL	1999	0.21 DL	2021	2.00 DL	1999	0.2 DL	2021	0.016 J	36	2004	0.004 DL	NP	2021	21	2015	2.70 FB	2021
BLM-41-420 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2013	0.21 DL	2021	1.00	2013	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2020	5.40	2017	0.53 RB FB	2021
BLM-41-670 Conv	2013	Fluctuating LL NDMA	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2013	0.004 DL	NP	2020	5.50 FB	2017	1.50 RB * Q	2021
BW-6-355 Conv	1992	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	0.32	37	2004	0.004 DL	NP	2021	N/A		N/A	
JER-1 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.72	2011	0.2 DL	2021	0.014 J	41	2005	0.005 DL	NP	2020	360	2009	1.80 RB FB	2021
JER-2 Westbay	2004	Fluctuating LL NDMA	0.6 DL	2004	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.63 DL	2010	0.2 DL	2021	0.016 J	43	2005	0.005 DL	NP	2020	290 QD	2006	4.00 FB	2021

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	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.05 RL	NP	1996	0.004 DL	NP	2020	N/A		N/A	
BLM-13-300 Conv	1988	Non Detect	5.00 RL	1988	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-25-455 Conv	1991	Non Detect	2.50 RL	1996	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	N/A		N/A	
BLM-40-517 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2017	0.21 DL	2021	0.22 DL	2017	0.2 DL	2021	0.005 DL	NP	2018	0.004 DL	NP	2021	1.10	2017	0.33 DL	2021
BLM-40-595 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2019	0.004 DL	NP	2020	0.67 FB	2014	0.33 DL	2021
BLM-40-688 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.3 DL	2016	0.21 DL	2021	0.22 DL	2016	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2020	0.74	2016	0.34 DL	2021

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
BLM-6-488 Conv	1990	Natural Migration (No Overall Trend)	3.10 J	1999	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	14	1999	2.00	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	45 FB	2001	0.76 *	2021
WB-14 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.27 J	2020	0.05 RL	NP	1993	0.004 DL	NP	2020	N/A		N/A	
WB-5 Westbay	1990	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.05 RL	NP	1991	0.004 DL	NP	2020	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	79	2021	9.20	2002	2.90	2021	180	1995	63	2021	1.20	18	2002	0.6	38	2021	N/A		N/A	
BLM-15-305 Conv	1989	Natural Migration (Decreasing)	770	1991	120 Q	2021	2.50 RL	1996	0.21 DL	2021	22	1989	1.80	2021	150 A	8	1989	26	36	2021	N/A		N/A	
BLM-18-430 Conv	1989	Natural Migration (Decreasing)	120 QD	2005	28	2021	2.50 RL	1996	0.63 J	2021	58	2009	19	2021	0.15 QD	31	2009	0.055	36	2021	N/A		N/A	
BLM-21-400 Conv	1991	Natural Migration (Decreasing)	320	1996	25 Q	2021	12	1995	0.41 J Q	2021	220	1991	9.20 Q	2021	5.60	16	1995	1.10	34	2021	N/A		N/A	
BLM-22-570 Conv	1990	Non Detect	2.50 RL	1995	0.24 DL	2020	2.50 RL	1995	0.21 DL	2020	2.50 RL	1995	0.2 DL	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-23-431 Conv	1990	Natural Migration (Decreasing)	240	1995	43	2021	8.00	1991	1.30	2021	240	1995	48	2021	1.10	33	2006	0.59	34	2021	N/A		N/A	
BLM-26-404 Conv	1991	Natural Migration (Decreasing)	110	2008	53	2020	2.50 RL	1996	0.54 J	2020	28	2008	17	2020	1.20	50	1991	0.45	38	2020	N/A		N/A	
BLM-27-270 Conv	1991	Natural Migration (No Overall Trend)	500	2010	400	2020	2.50 RL	1996	0.21 DL	2020	2.50 RL	1996	1.00	2020	13	41	2006	3.00	90	2020	N/A		N/A	
BLM-36 FLUTe	2000	Pumping Related Migration (No Overall Trend)	98	2011	37	2020	4.40	2011	3.10	2020	97	2008	56	2020	2.00	43	2007	0.74	78	2020	N/A		N/A	
BLM-38 FLUTe	2000	Non Detect	1.60 DL	2003	0.24 DL	2020	0.62 DL	2004	0.21 DL	2020	0.7 DL	2003	0.2 DL	2020	0.024 J	33	2002	0.004 DL	NP	2020	N/A		N/A	
BLM-39 FLUTe	2000	Natural Migration (Decreasing)	340	2005	92	2021	10	2007	6.10	2021	330 QD	2002	150	2021	9.70	19	2002	5.00	46	2021	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
BLM-5-527 Conv	1988	Natural Migration (Increasing)	23	2020	17	2021	2.50 RL	1996	0.57 J	2021	29	2020	25	2021	0.21	38	2021	0.21	38	2021	220 G	2017	220 G	2017
BLM-8-418 Conv	1988	Non Detect	2.50 RL	1996	0.24 DL	2020	2.50 RL	1996	0.21 DL	2020	3.80 QD	2001	0.2 J	2020	0.05 RL	NP	1997	0.004 DL	NP	2020	N/A		N/A	
BLM-9-419 Conv	1989	Natural Migration (Decreasing)	320	1991	5.60	2021	12	1989	0.21 DL	2021	240	1989	3.00	2021	8.80	16	1995	0.021 J	36	2021	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	18	2020	31	1989	1.20	2020	430	1989	25	2020	11 A Q	7	1989	2.20	38	2020	N/A		N/A	
BLM-17-550 Conv	1990	Natural Migration (Decreasing)	440	1991	93	2021	20	1990	3.30	2021	390	1991	80	2021	8.10	16	1995	1.70	34	2021	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	Pumping Related Migration (Decreasing)	470 QD	1988	0.24 DL	2020	8.00	1991	0.21 DL	2020	310 QD	1988	0.85 J	2020	1.30	31	2002	0.004 DL	NP	2020	N/A		N/A	
PL-1-486 Conv	1988	Pumping Related Migration (Decreasing)	190	1996	0.27 J	2021	4.60	2004	0.21 DL	2021	180	2004	0.23 J	2021	0.093	43	2005	0.004 DL	NP	2021	260 QD	2002	0.49 RB TB	2021
PL-2-504 Conv	1989	Pumping Related Migration (Decreasing)	230	1996	41	2021	2.50 RL	1996	0.91 J	2021	180	2004	65	2021	0.2	38	2021	0.2	38	2021	300 G RB Q	2020	300 G RB Q	2020
ST-1-473 Conv	1989	Pumping Related Migration (Decreasing)	610	1996	180	2021	13	2010	8.10	2021	370	2005	220	2021	1.70	27	2009	0.84	50	2021	N/A		N/A	
ST-1-541 Conv	1992	Pumping Related Migration (Decreasing)	790	1995	97	2020	37	1995	3.90	2020	650	1995	91	2020	4.80 QD	37	2003	3.80	42	2020	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
ST-1-630 Conv	1992	Pumping Related Migration (Decreasing)	410	2006	140	2020	19 QD	2007	5.70	2020	440	2000	150	2020	1.90	40	2019	0.5	72	2020	N/A		N/A	
[1]ST-3-486	1991	Pumping Related Migration (Decreasing)	800	1996	3.90	2020	19	2003	0.24 J	2020	690	1991	4.20	2020	4.40	45	2011	0.2	34	2020	N/A		N/A	
ST-3-586 Conv	1992	Pumping Related Migration (Decreasing)	640 T TB Q	1996	8.20	2020	15	2007	0.52 J	2020	320	2005	14	2020	3.80 QD	37	2003	0.043	44	2020	N/A		N/A	
ST-3-666 Conv	1992	Pumping Related Migration (Decreasing)	280	2009	2.20	2020	15	2009	0.21 DL	2020	320	2009	0.99 J	2020	3.70	30	2006	0.48	44	2020	N/A		N/A	
ST-3-735 Conv	1992	Pumping Related Migration (Decreasing)	240	2005	3.80	2020	14	2007	0.31 J	2020	320	2005	9.50	2020	7.80 QD	32	2009	0.63	38	2020	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	2021	2.50 RL	1996	0.21 DL	2021	4.40	2012	0.2 DL	2021	0.095 RL	NP	1988	0.004 DL	NP	2021	5.90	2020	0.38 J *	2021
BLM-7-509 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.09 J	32	1996	0.004 DL	NP	2021	0.76 FB	2018	0.33 DL	2021
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	0.31 J	2020
PL-4-464 Conv	1990	Non Detect	28	2005	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	21	2005	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	2.70 RB FB	2005	0.33 DL	2021
PL-6 Westbay	1992	Non Detect	4.10 J	1996	0.24 DL	2021	5.60	1996	0.21 DL	2021	4.90 J	1996	0.2 DL	2021	0.64	28	1999	0.004 DL	NP	2021	23	2001	0.87 RB EB	2021
PL-7 Westbay	1993	Fluctuating LL NDMA	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	0.005 DL	NP	2021	4.90	2021	4.90	2021
ST-2-466 Conv	1989	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	2.60 RB	2004	0.33 DL	2021
ST-4-481 Conv	1992	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	2020	1.80 FB	2012	0.44 J RB	2021
ST-4-589 Conv	1992	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	2020	1.10 RB Q	2008	0.33 DL	2021

Reporting Period: 2Q/2021

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-4-690 Conv	1992	Non Detect	3.00 J	1998	0.24 DL	2021	2.50 RL	1995	0.21 DL	2021	10	1998	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	2.70	2008	0.78 RB FB	2021
ST-5 Westbay	1992	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.05 RL	NP	1997	0.005 DL	NP	2021	7.20	2017	0.46 J	2021
ST-5-481 Conv	1992	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	0.005 DL	NP	2021	0.7 FB	2002	0.34 DL	2021
ST-6 Westbay	1998	Non Detect	21 EB	2005	0.32 J	2021	2.00 DL	1999	0.21 DL	2021	67	2004	0.45 J	2021	0.012	90	2017	0.004 DL	NP	2020	28 RB FB Q	2005	0.90 *	2021
ST-7 Westbay	1999	Non Detect	1.60 DL	2003	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.82	2021	0.2 DL	2021	0.005 DL	NP	2013	0.004 DL	NP	2020	3.80 FB	2002	0.57	2021
WW-1-452 Conv	1988	Non Detect	5.00 RL	1988	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.3 T	30	2006	0.004 DL	NP	2021	3.20 RB FB	2012	0.33 DL	2021

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	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	
400-D WestBay	1995	Non Detect	3.30 J EB	1996	0.24 DL	2020	3.50 J	1998	0.21 DL	2020	2.50 RL	1996	0.2 DL	2020	0.29	34	1996	0.004 DL	NP	2020	N/A		N/A	
JP-1-424 Conv	1988	Non Detect	5.50	2001	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	2.50 RL	1996	0.2 DL	2021	0.061 J	36	1998	0.005 DL	NP	2021	15 RB QD	2004	0.37 J * FB	2021
JP-2-447 Conv	1988	Non Detect	2.50 RL	1996	0.24 DL	2021	2.50 RL	1996	0.21 DL	2021	4.50	2001	0.2 DL	2021	0.05 RL	NP	1997	0.004 DL	NP	2021	14	2000	0.33 DL	2021
JP-3-509 Conv	2013	Non Detect	0.27 DL	2019	0.24 DL	2021	0.28 DL	2019	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.004 DL	NP	2017	0.004 DL	NP	2021	0.66	2017	0.33 DL	2021
JP-3-689 Conv	2014	Non Detect	0.27 DL	2019	0.24 DL	2021	0.28 DL	2019	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.74	2016	0.56 * FB	2021
PL-10 Westbay	2002	Fluctuating LL NDMA	1.60 DL	2003	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.62 DL	2004	0.2 DL	2021	0.005 DL	NP	2017	0.004 DL	NP	2021	6.10	2019	5.70	2021
PL-11 FLUTe	2017	Fluctuating LL NDMA	0.45 J	2019	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.22 J	2019	0.2 DL	2021	0.005 DL	NP	2017	0.004 DL	NP	2020	5.90 SP	2019	2.4 RB	2021
PL-8 Westbay	2000	Non Detect	1.60 DL	2002	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.7 DL	2003	0.2 DL	2021	0.005 DL	NP	2015	0.004 DL	NP	2021	12 FB	2002	0.65	2021
WW-2-489 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.41 J FB	2016	0.33 DL	2021

Reporting Period: 2Q/2021

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
WW-2-664 Conv	2013	Non Detect	0.27 DL	2018	0.24 DL	2021	0.28 DL	2018	0.21 DL	2021	0.2 DL	2021	0.2 DL	2021	0.005 DL	NP	2014	0.004 DL	NP	2021	0.4 J	2018	0.33 DL	2021
WW-3 Westbay	2001	Non Detect	1.60 DL	2002	0.24 DL	2021	0.62 DL	2004	0.21 DL	2021	0.7 DL	2003	0.2 DL	2021	0.012 J	40	2004	0.004 DL	NP	2021	95 RB *	2007	0.86 RB	2021
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	2021	0.62 DL	2004	0.21 DL	2021	0.62 DL	2004	0.2 DL	2021	0.005 DL	NP	2016	0.004 DL	NP	2020	6.50	2021	6.50 *	2021

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	180	2021	8.70	2010	4.00	2021	180	2010	82	2021	25	30	2009	9.80	40	2021	N/A		N/A	
MPE-10 Conv*	2004	Pumping Related Migration (Increasing)	150	2017	97	2021	3.50	2020	3.10	2021	65	2017	61	2021	8.50	40	2021	8.50	40	2021	N/A		N/A	
MPE-11 Conv*	2004	Pumping Related Migration (No Overall Trend)	65	2008	6.70	2021	1.60	2008	0.25 J	2021	41	2008	5.30	2021	1.60	40	2007	0.65	40	2021	N/A		N/A	
MPE-8 Conv*	2003	Pumping Related Migration (Increasing)	200	2020	160	2021	4.20	2020	3.40	2021	83	2020	77	2021	6.50	40	2021	6.50	40	2021	N/A		N/A	
MPE-9 Conv*	2004	Pumping Related Migration (No Overall Trend)	250	2015	110	2021	5.60	2018	4.20	2021	130	2018	96	2021	13	35	2019	12	40	2021	N/A		N/A	
PFE-1 Conv*	2000	Pumping Related Migration (Decreasing)	110	2010	7.40	2020	4.80	2010	0.45 J	2020	140	2005	11	2020	0.39	36	2017	0.24	36	2020	N/A		N/A	
PFE-2 Conv*	2000	Pumping Related Migration (Decreasing)	170	2007	0.31 J	2021	7.60	2007	0.21 DL	2021	220	2007	0.3 J	2021	0.3	36	2017	0.004 DL	NP	2021	N/A		N/A	
PFE-3 Conv*	1991	Pumping Related Migration (Decreasing)	290	2006	45	2021	18	2004	2.10	2021	340	2004	45	2021	3.90	18	1991	0.4	40	2021	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-4A Conv*	2001	Pumping Related Migration (Decreasing)	190	2004	0.83 J	2021	8.40	2007	0.21 DL	2021	240	2004	1.20	2021	0.26	36	2010	0.019 J	40	2021	N/A		N/A	
[2]PFE-5	2000	Pumping Related Migration (No Overall Trend)	120	2009	32	2021	7.70	2006	2.80	2021	180	2009	59	2021	2.40	33	2006	0.95	40	2021	N/A		N/A	
PFE-7 Conv*	2001	Pumping Related Migration (Decreasing)	32	2004	4.80	2021	0.81 J	2004	0.21 DL	2021	41	2004	5.30	2021	0.022	44	2004	0.004 DL	NP	2021	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.

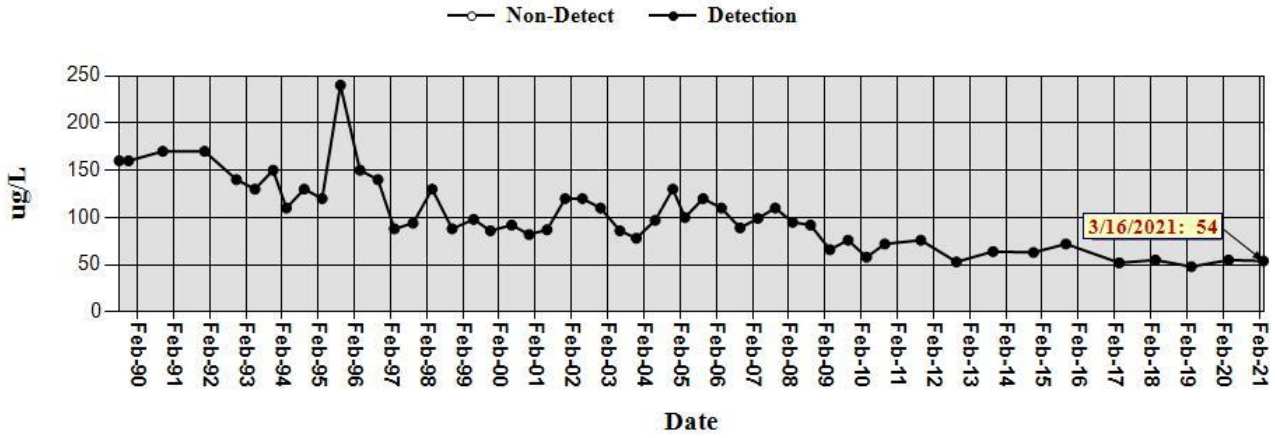
DL = Maximum detection limit and most recent year they were used are reported in the table. Detection limits can change over time, typically decreasing as analytical techniques improve.

[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.

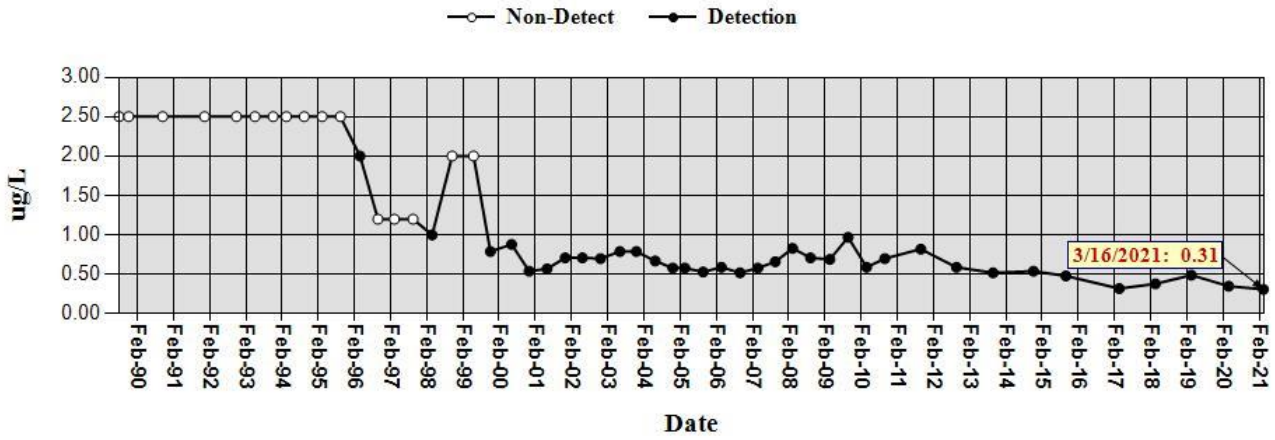
Well ID: 200-D-240
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



Well ID: 200-D-240
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



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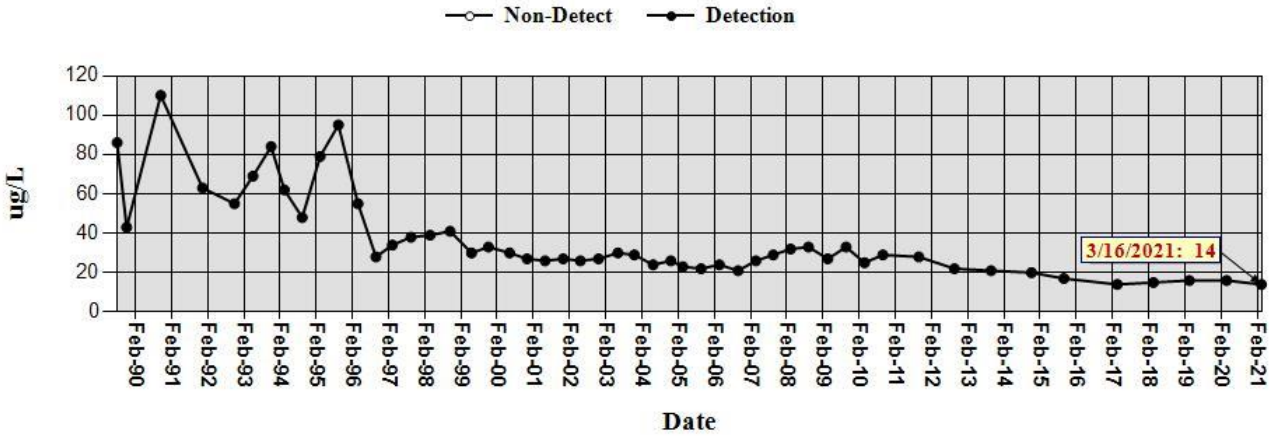
CAS RN: 79-01-6 Trichloroethene

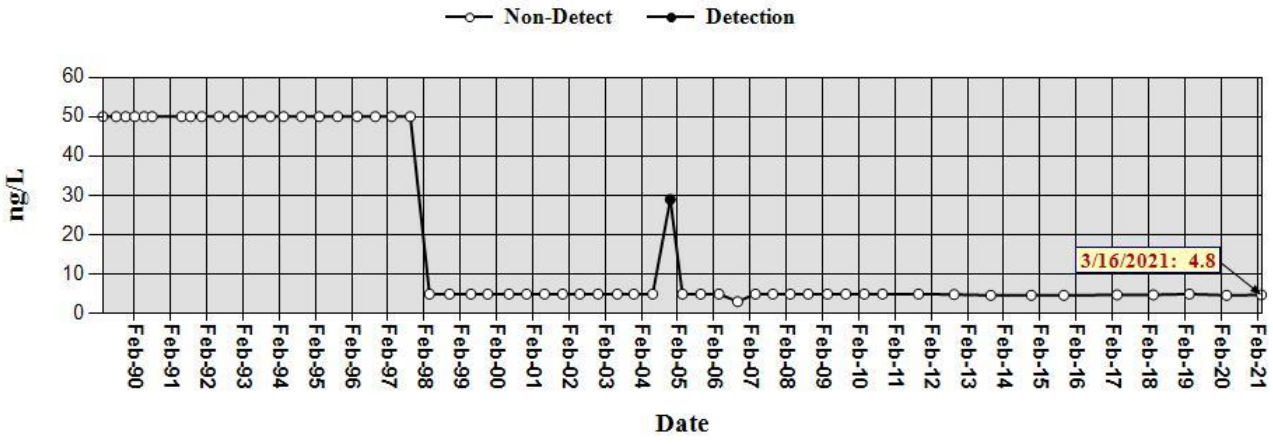
Analysis: 8260



Well ID: 200-D-240
CAS RN: 62-75-9 N-Nitrosodimethylamine

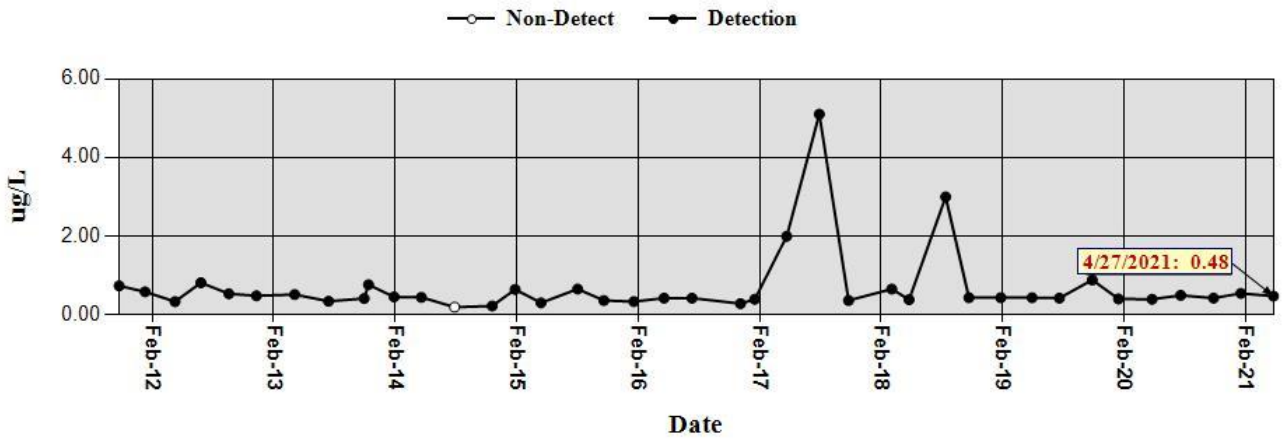
Analysis: 607

Results are Corrected for Extraction Efficiency



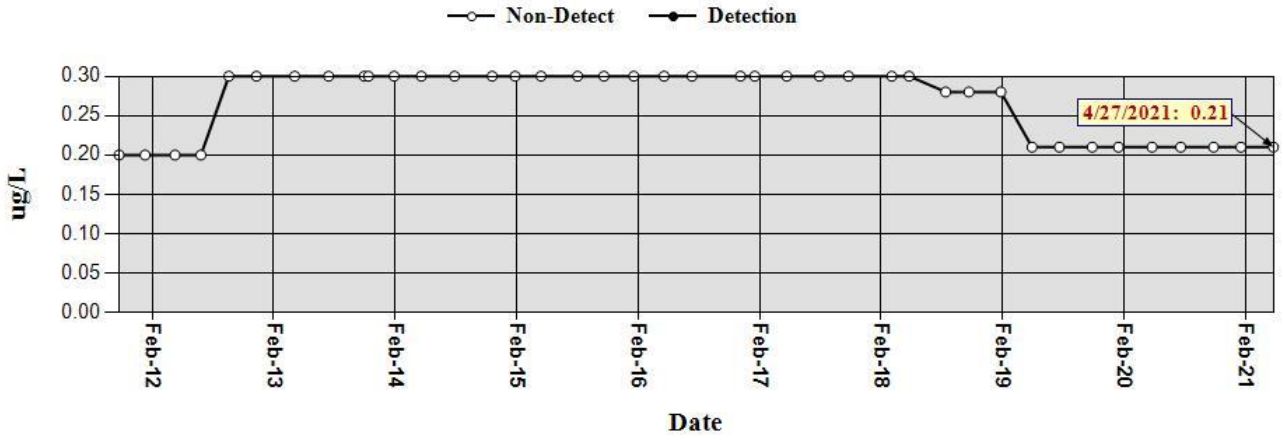
Well ID: 600-G-138
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



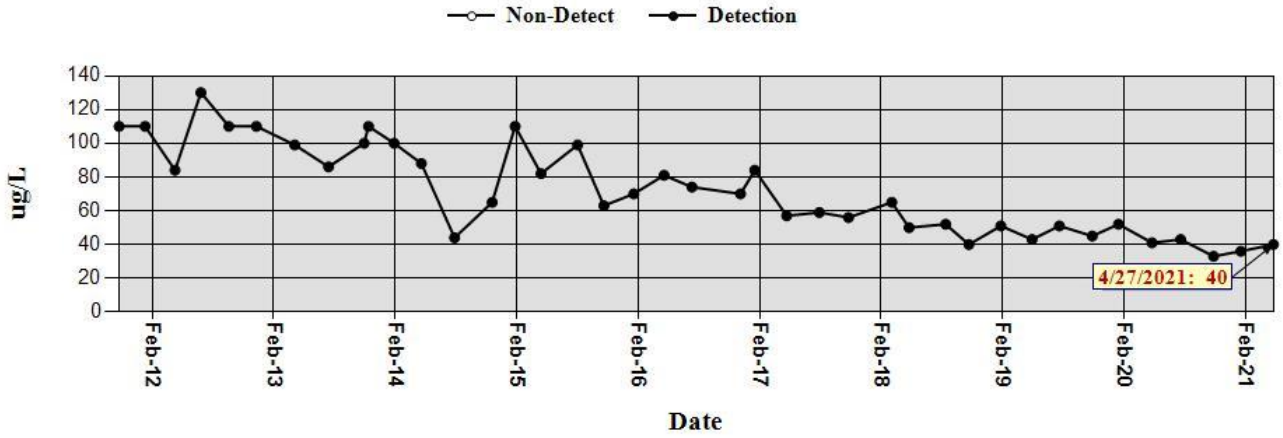
Well ID: 600-G-138
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



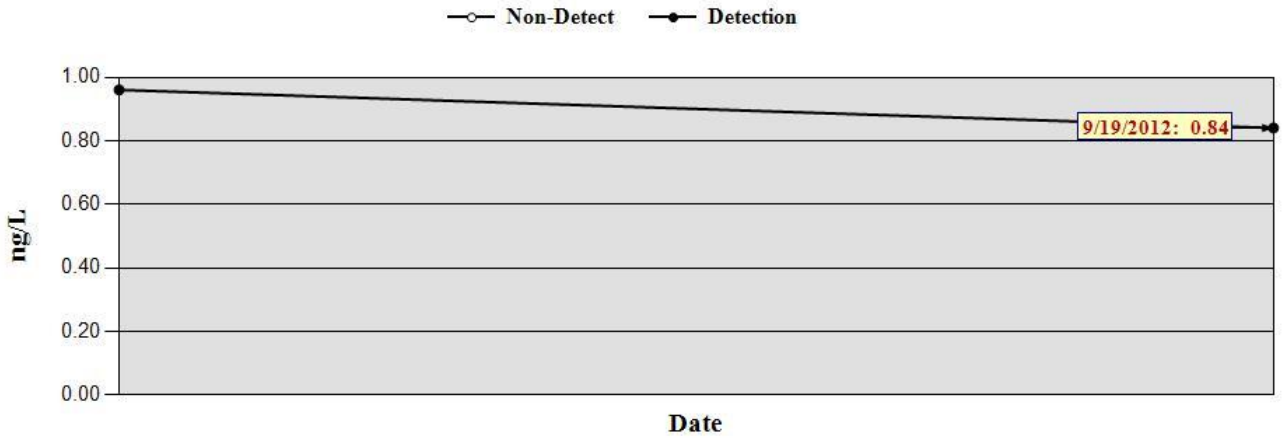
Well ID: 600-G-138
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



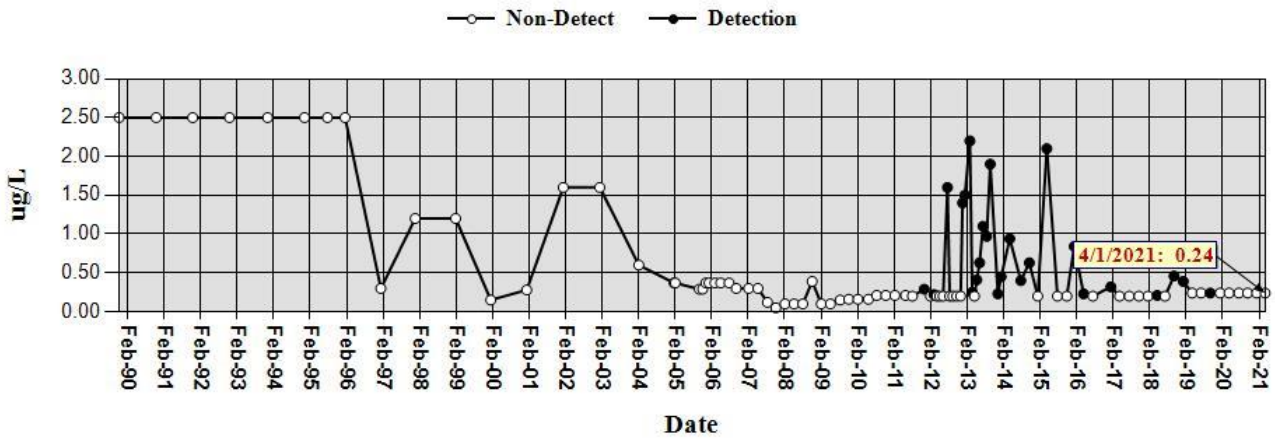
Well ID: 600-G-138
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



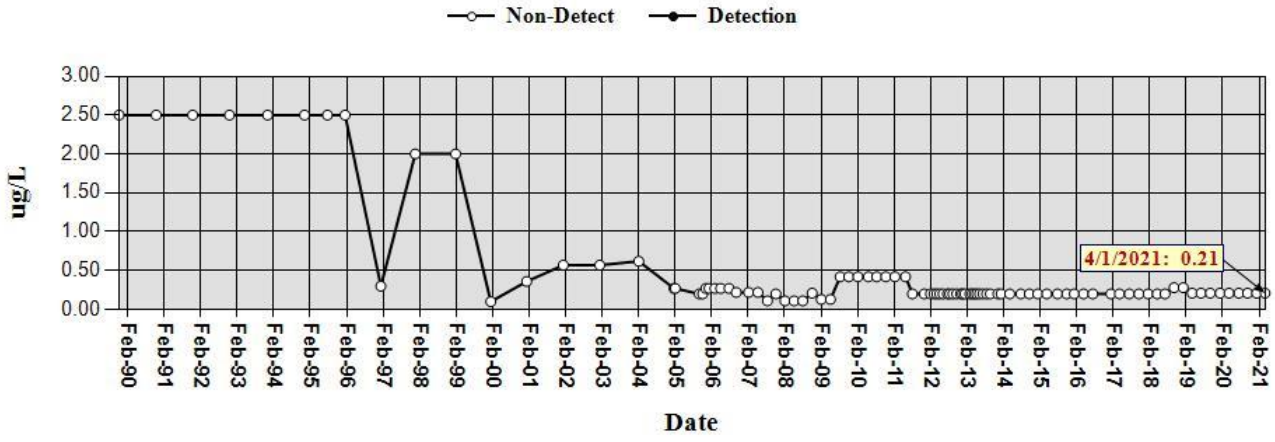
Well ID: BLM-10-517
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



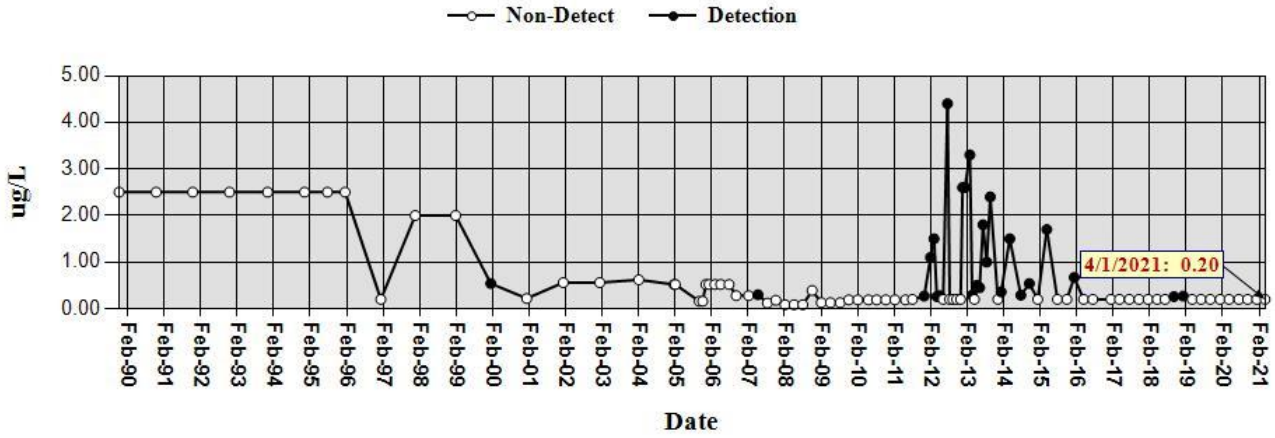
Well ID: BLM-10-517
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



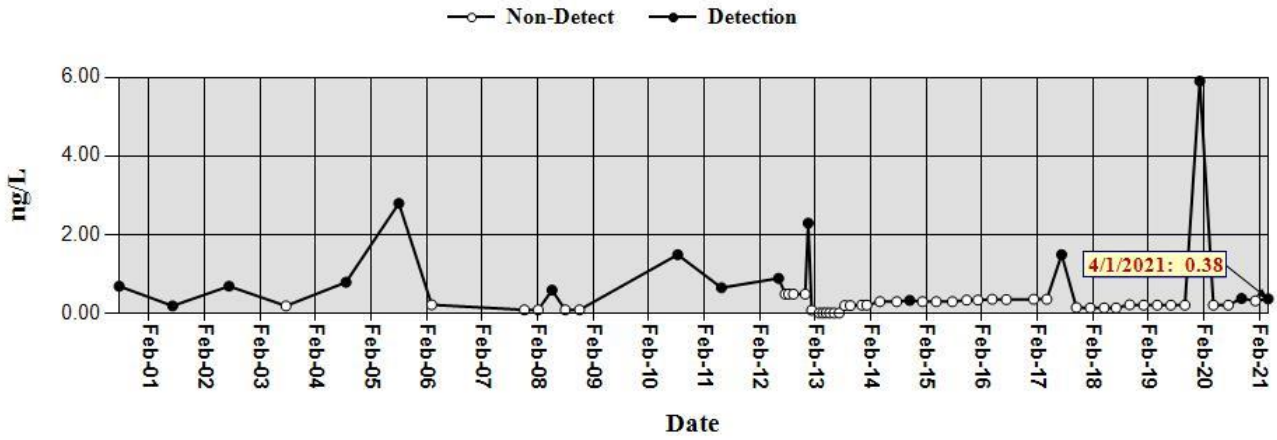
Well ID: BLM-10-517
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



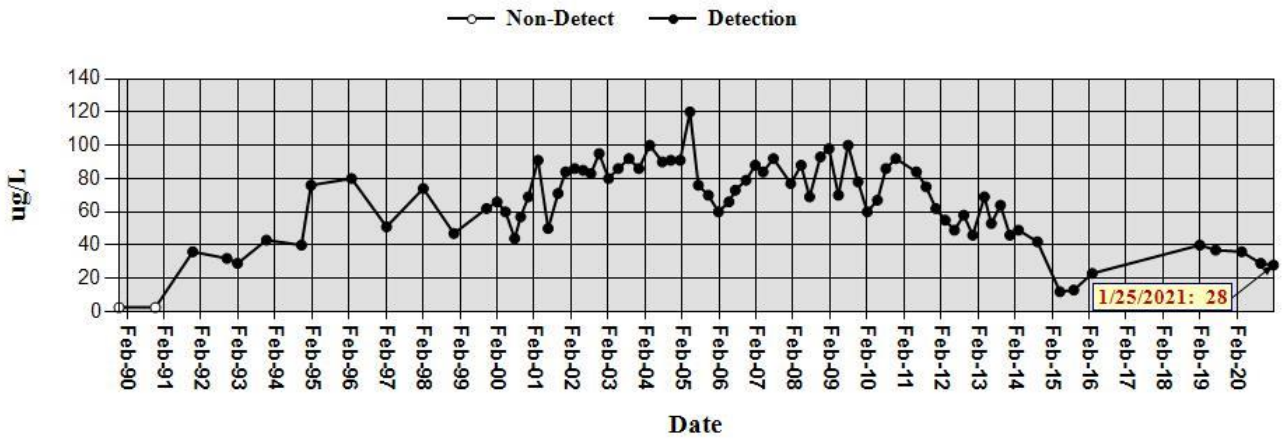
Well ID: BLM-10-517
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



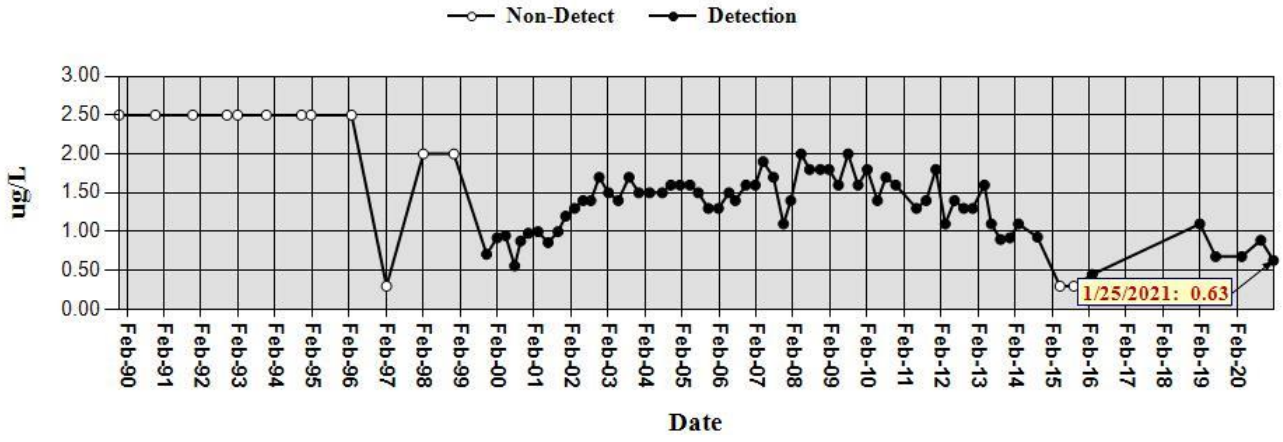
Well ID: BLM-18-430
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



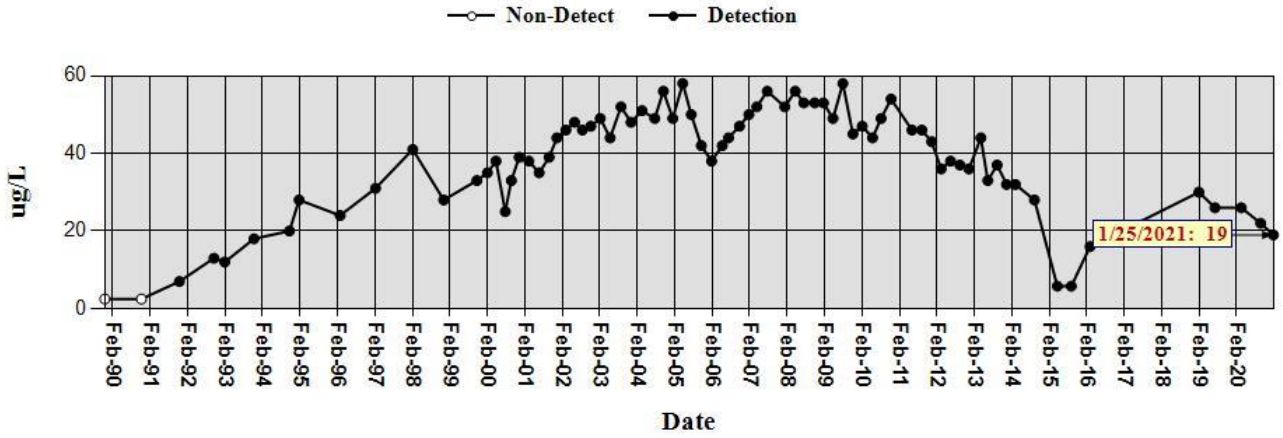
Well ID: BLM-18-430
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-18-430
CAS RN: 79-01-6 Trichloroethene

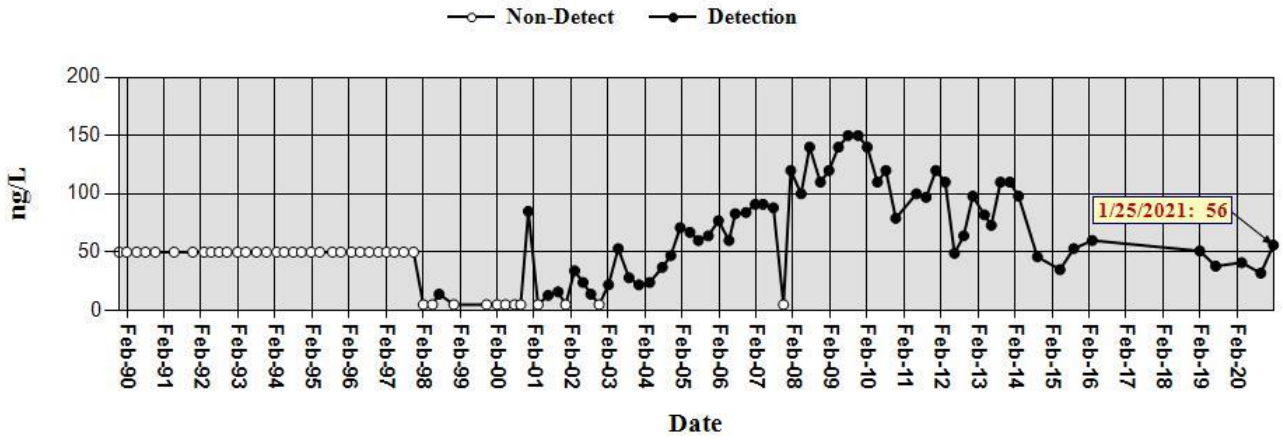
Analysis: 8260



Well ID: BLM-18-430
CAS RN: 62-75-9 N-Nitrosodimethylamine

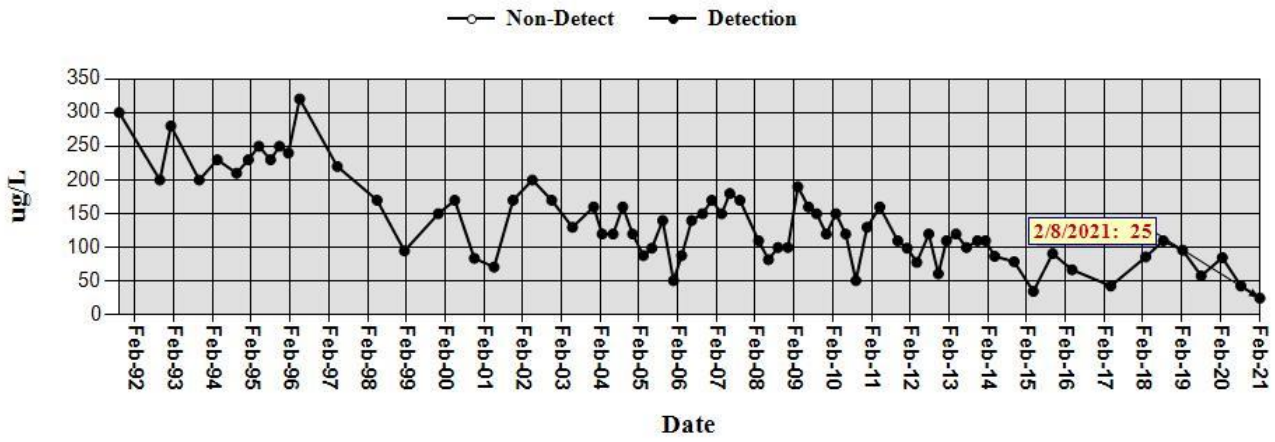
Analysis: 607

Results are Corrected for Extraction Efficiency



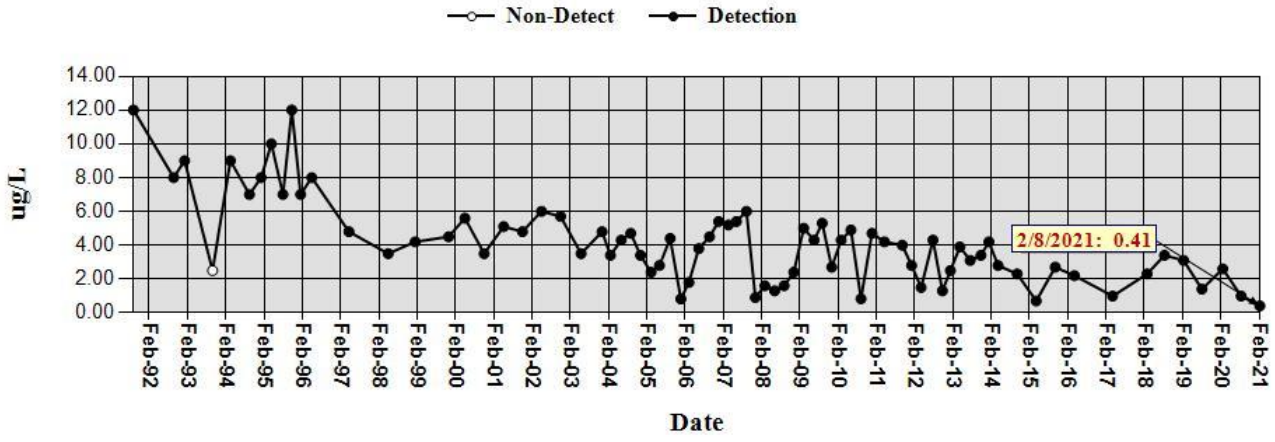
Well ID: BLM-21-400
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



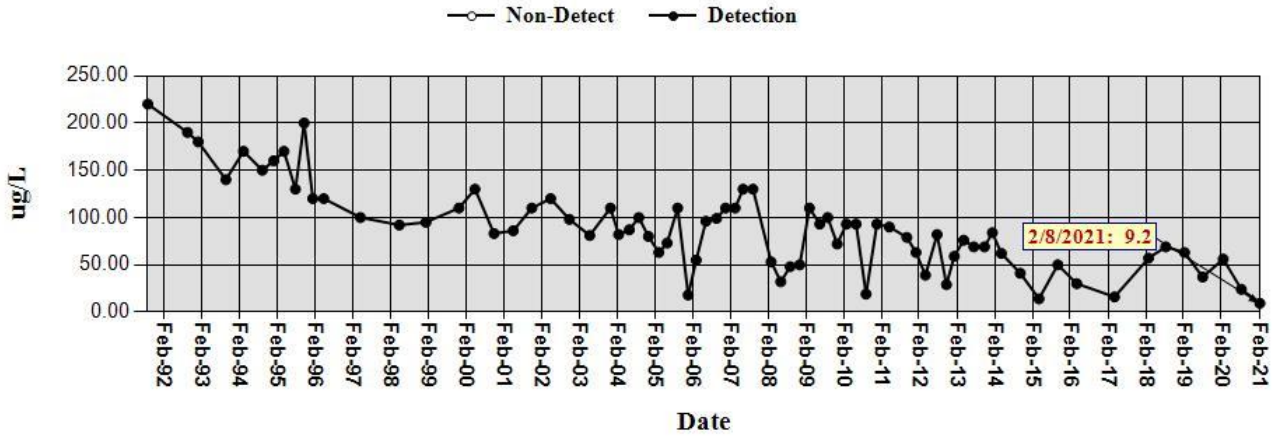
Well ID: BLM-21-400
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-21-400
CAS RN: 79-01-6 Trichloroethene

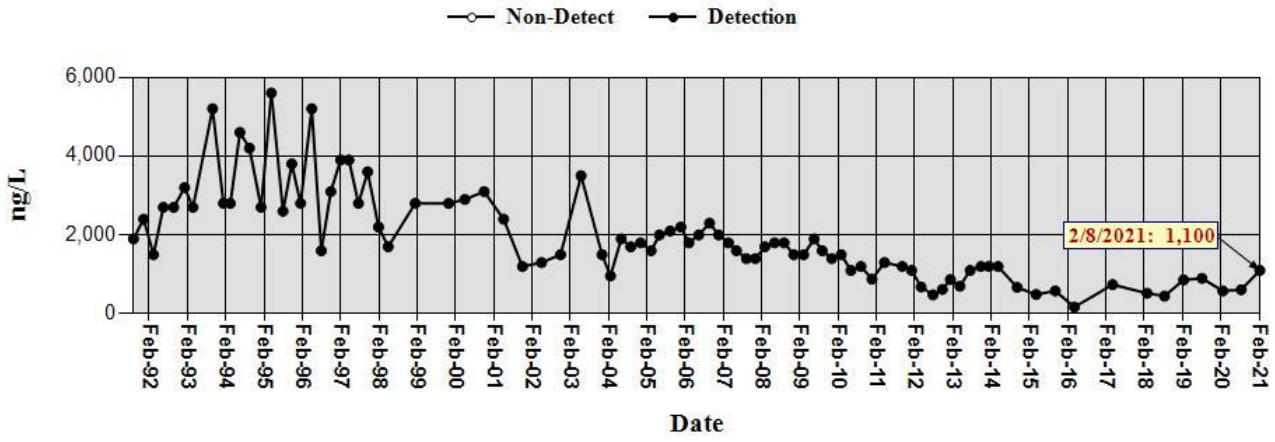
Analysis: 8260



Well ID: BLM-21-400
CAS RN: 62-75-9 N-Nitrosodimethylamine

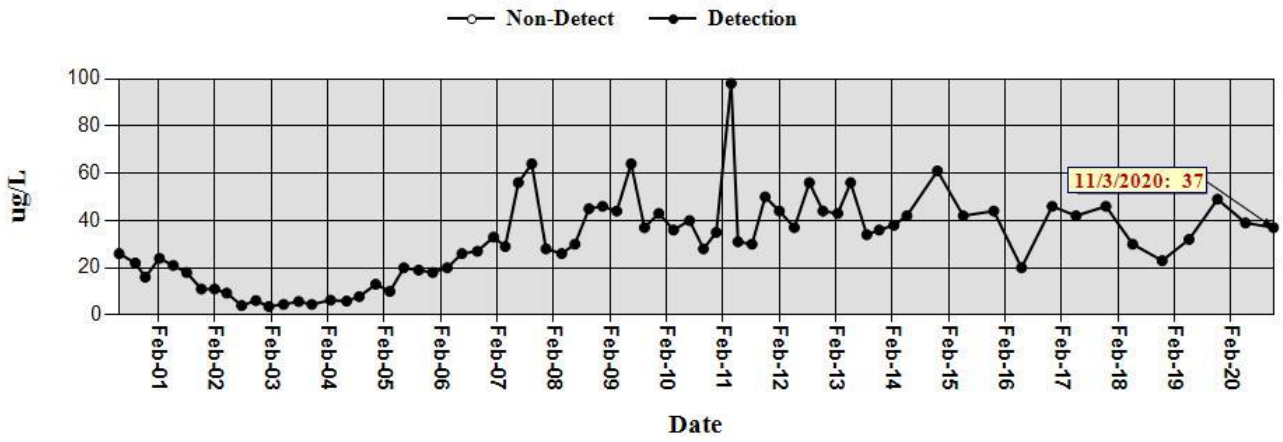
Analysis: 607

Results are Corrected for Extraction Efficiency



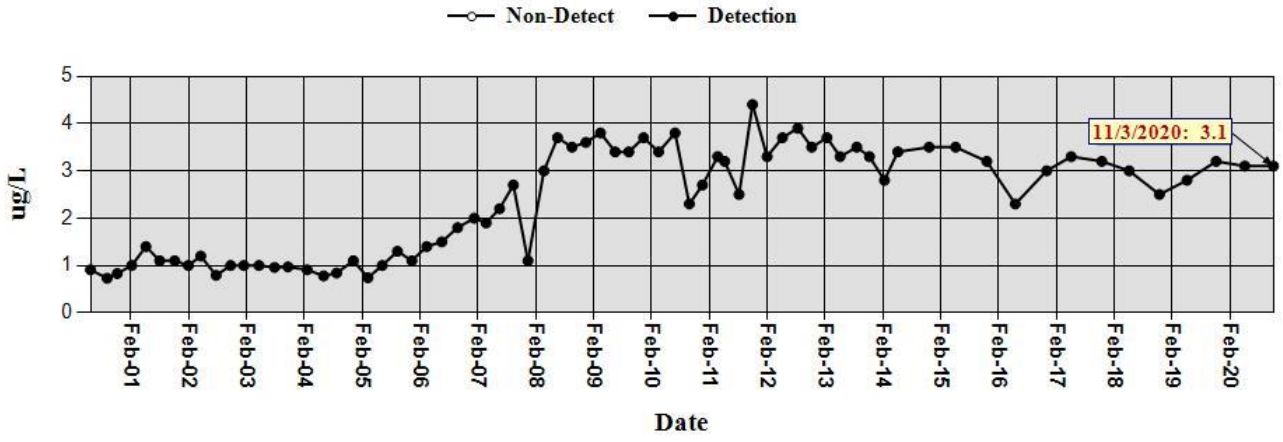
Well ID: BLM-36-350
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



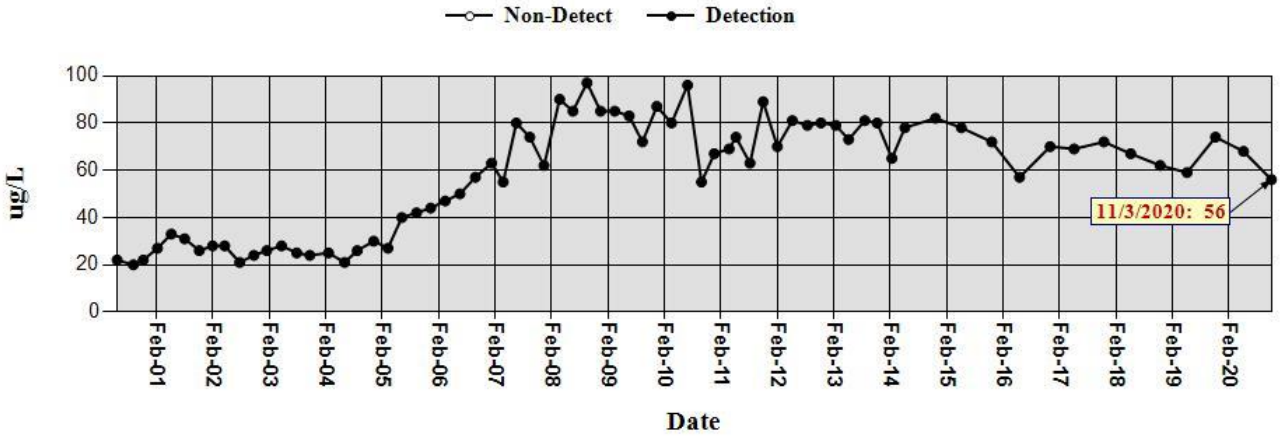
Well ID: BLM-36-350
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: BLM-36-350
CAS RN: 79-01-6 Trichloroethene

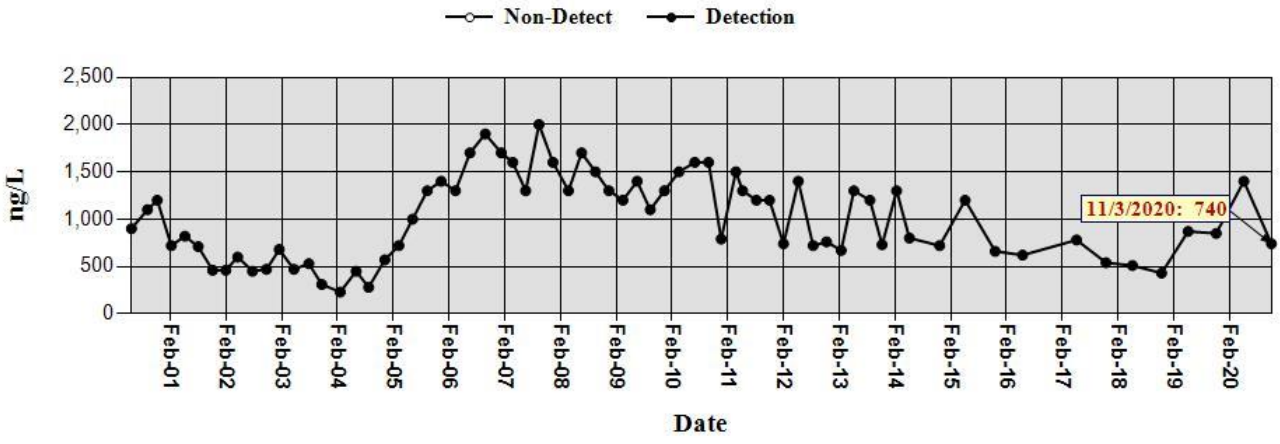
Analysis: 8260



Well ID: BLM-36-350
CAS RN: 62-75-9 N-Nitrosodimethylamine

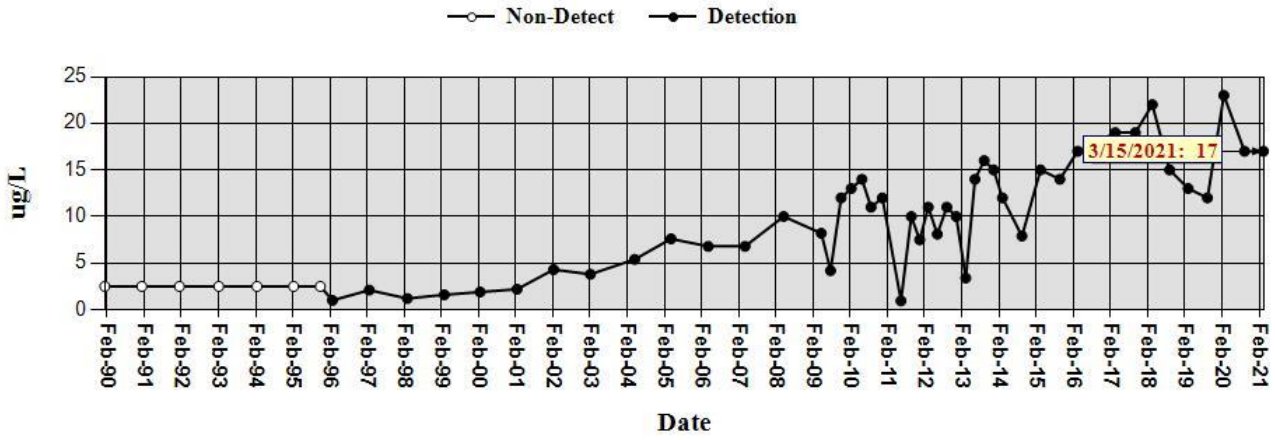
Analysis: 607

Results are Corrected for Extraction Efficiency



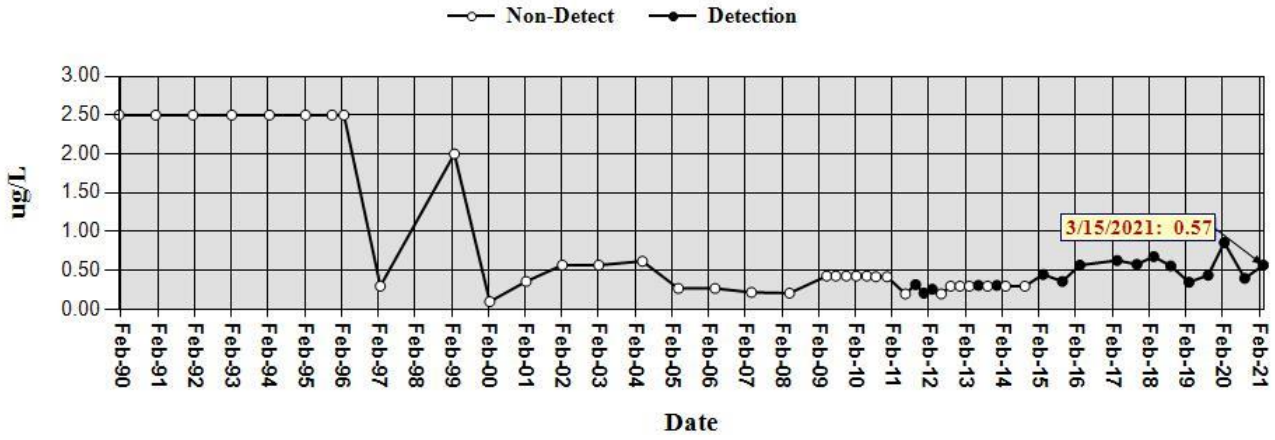
Well ID: BLM-5-527
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



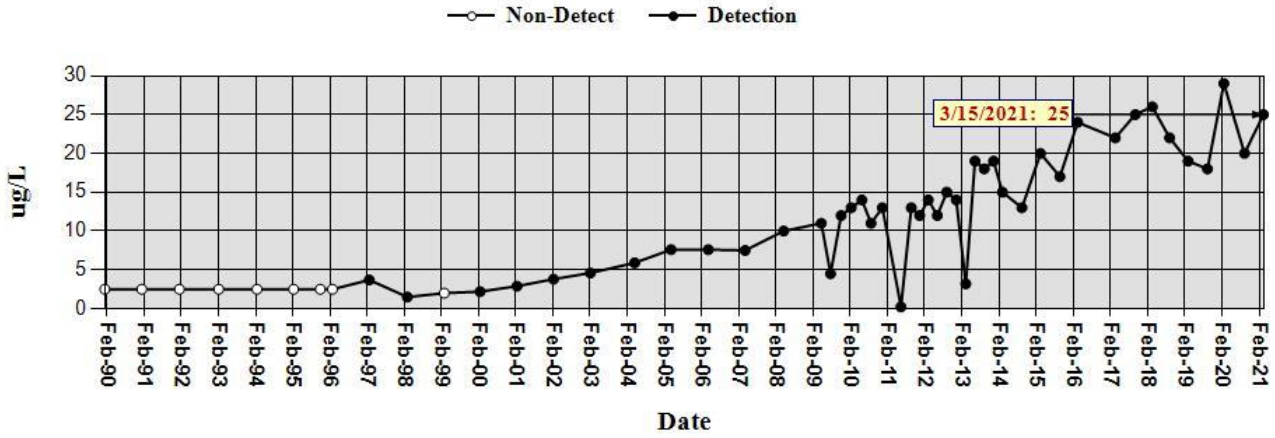
Well ID: BLM-5-527
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



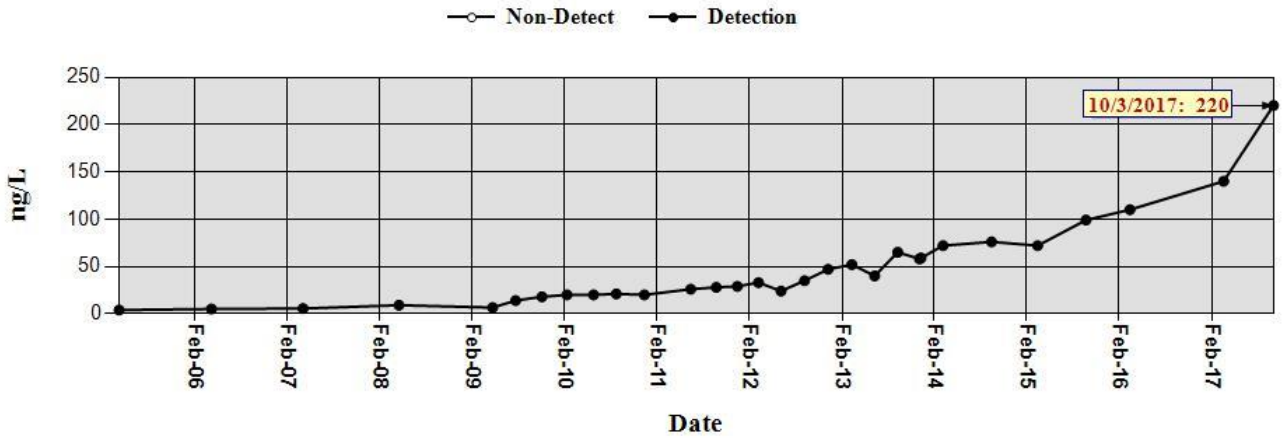
Well ID: BLM-5-527
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



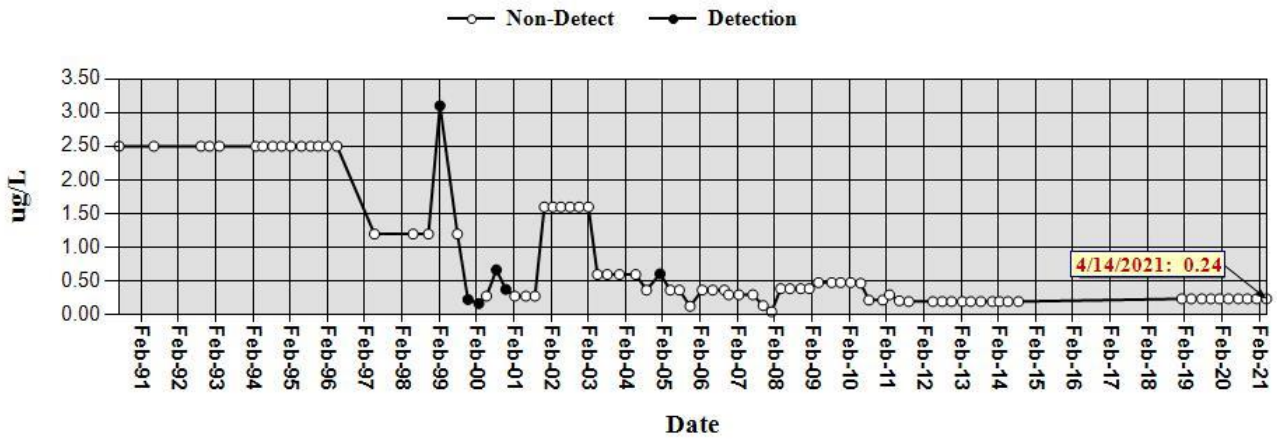
Well ID: BLM-5-527
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



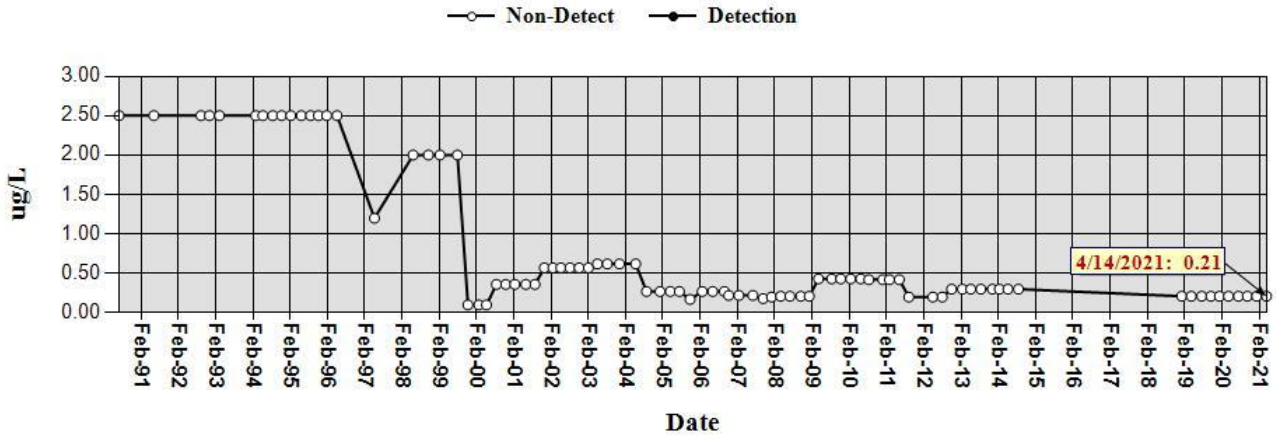
Well ID: BLM-6-488
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



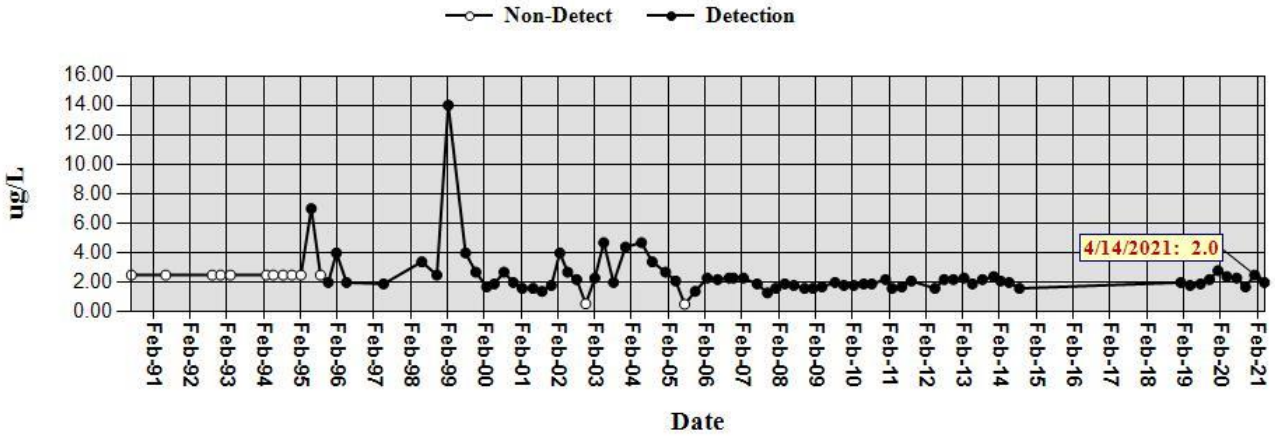
Well ID: BLM-6-488
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



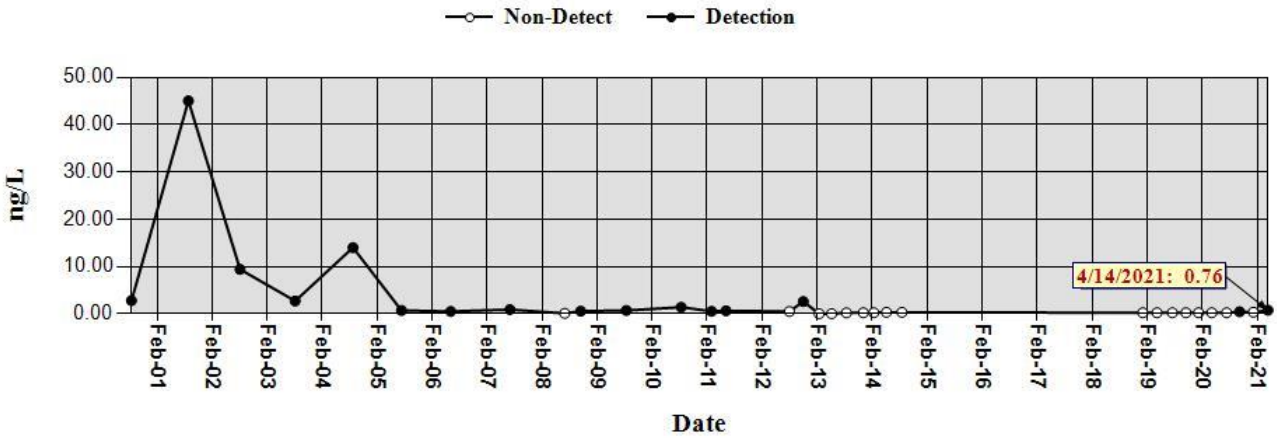
Well ID: BLM-6-488
CAS RN: 79-01-6 Trichloroethene

Analysis: 8260



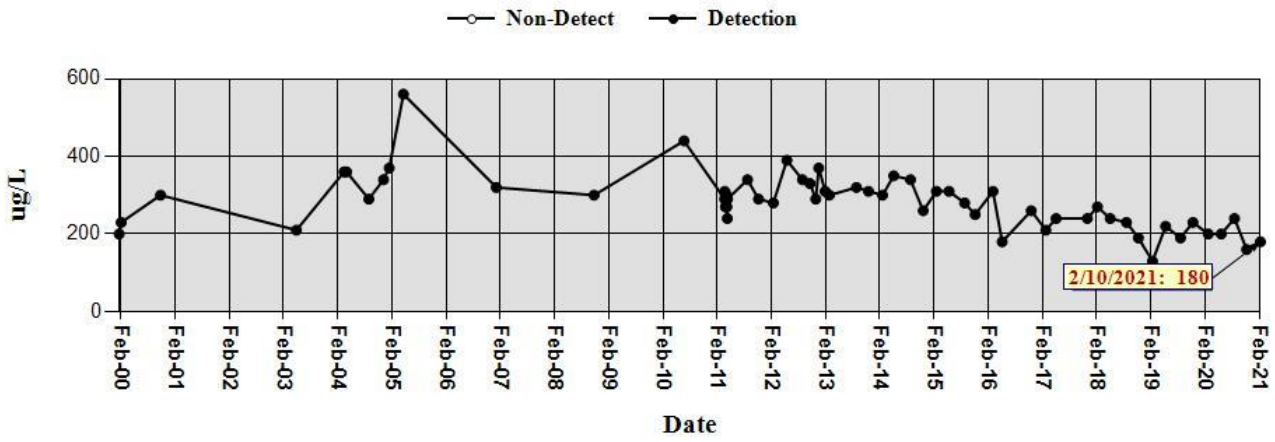
Well ID: BLM-6-488
CAS RN: 62-75-9 N-Nitrosodimethylamine

Analysis: NDMA_LL



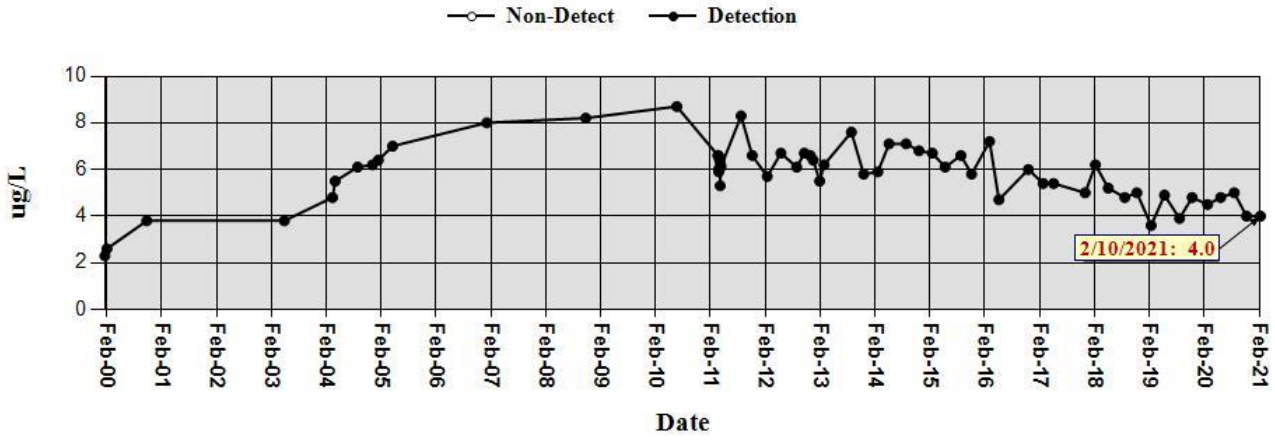
Well ID: MPE-1
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



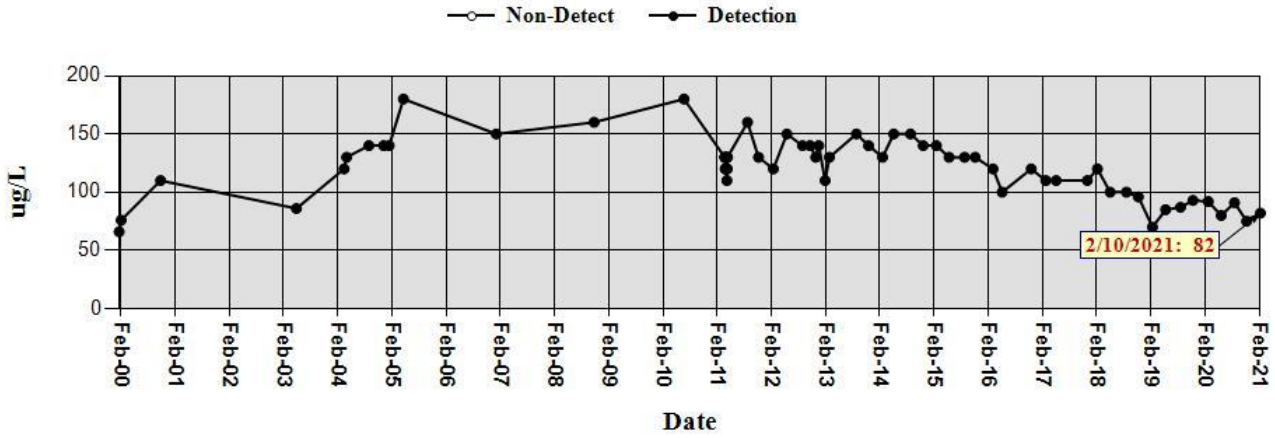
Well ID: MPE-1
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-1
CAS RN: 79-01-6 Trichloroethene

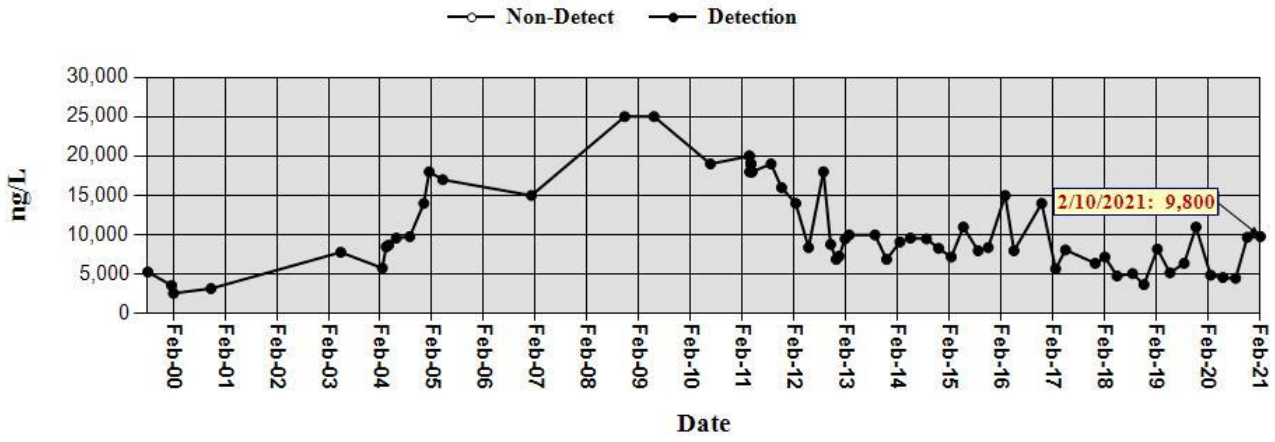
Analysis: 8260



Well ID: MPE-1
CAS RN: 62-75-9 N-Nitrosodimethylamine

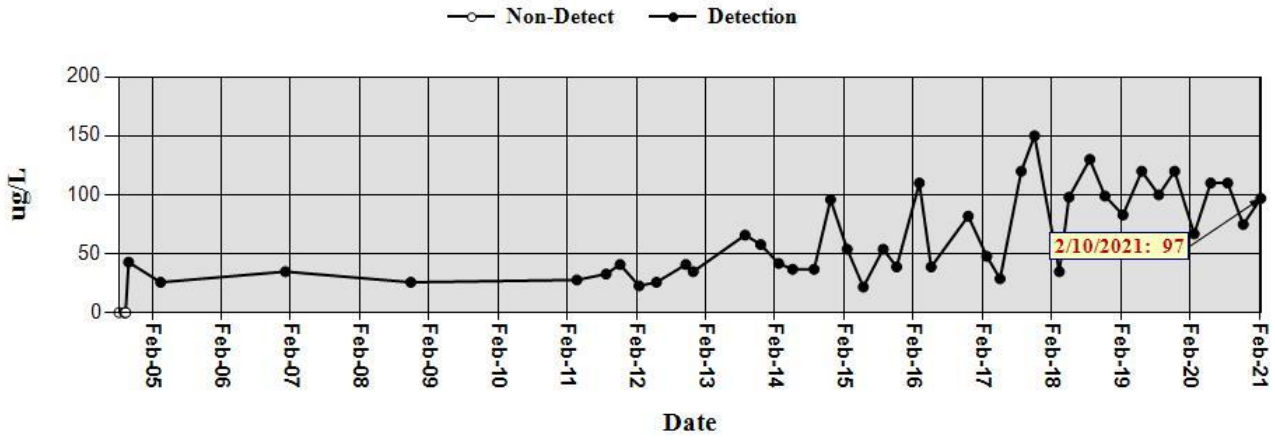
Analysis: 607

Results are Corrected for Extraction Efficiency



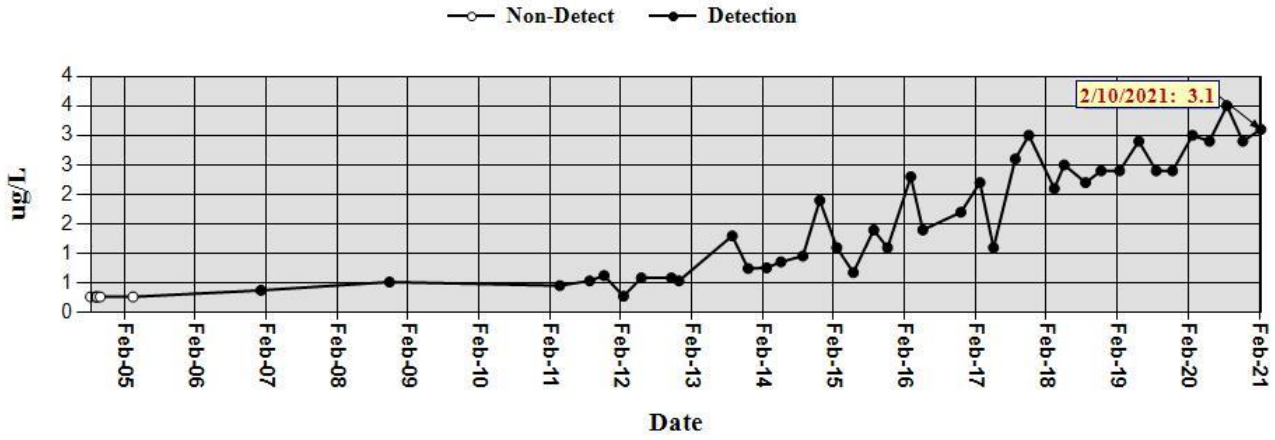
Well ID: MPE-10
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



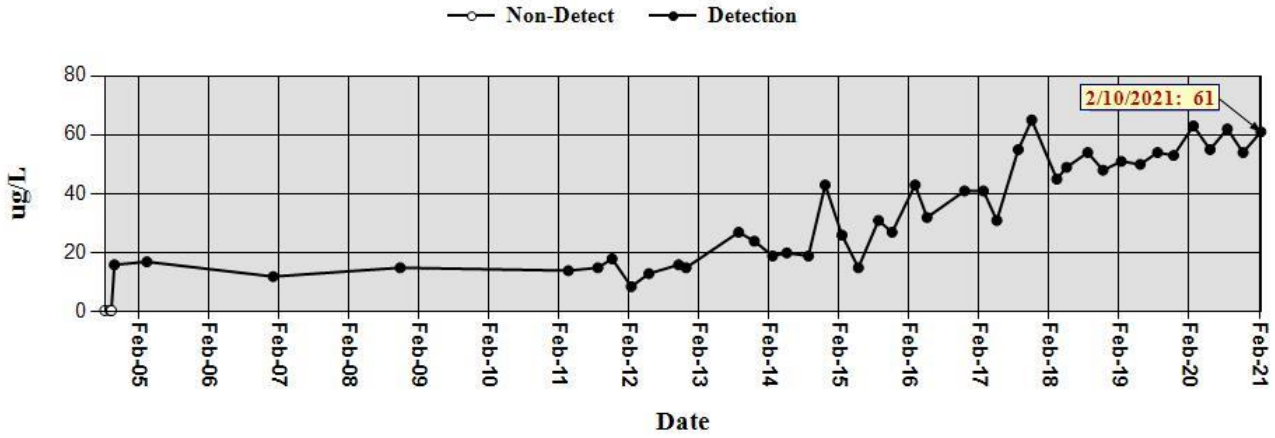
Well ID: MPE-10
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-10
CAS RN: 79-01-6 Trichloroethene

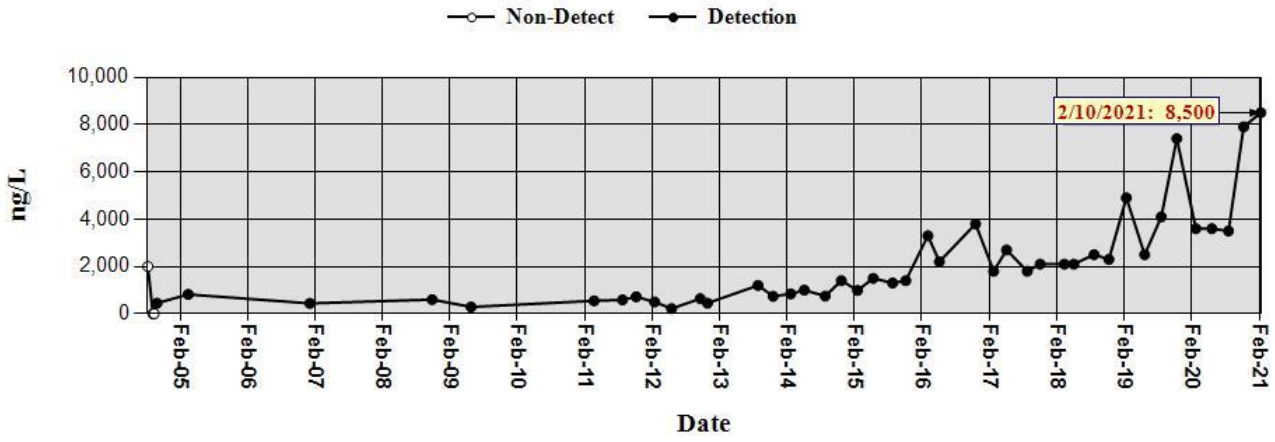
Analysis: 8260



Well ID: MPE-10
CAS RN: 62-75-9 N-Nitrosodimethylamine

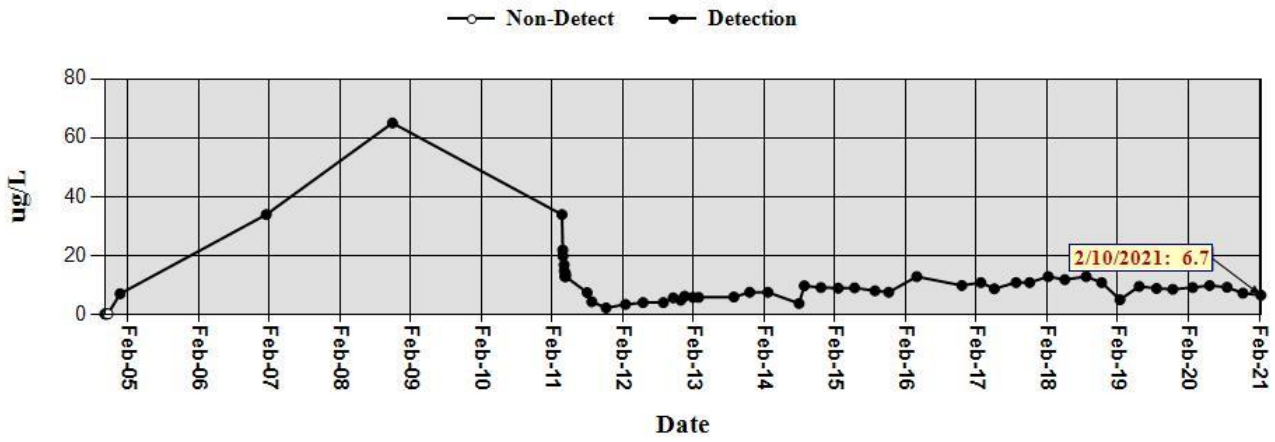
Analysis: 607

Results are Corrected for Extraction Efficiency



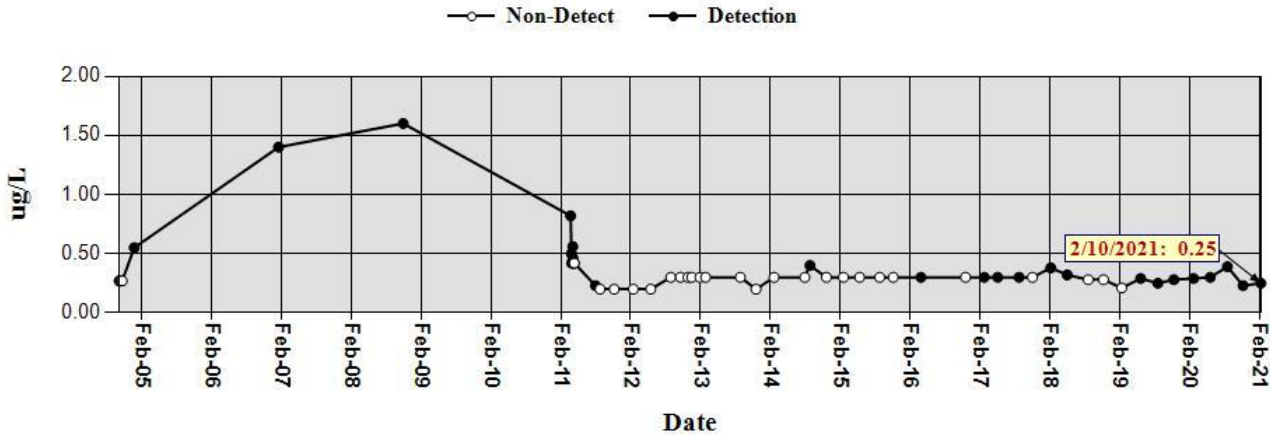
Well ID: MPE-11
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



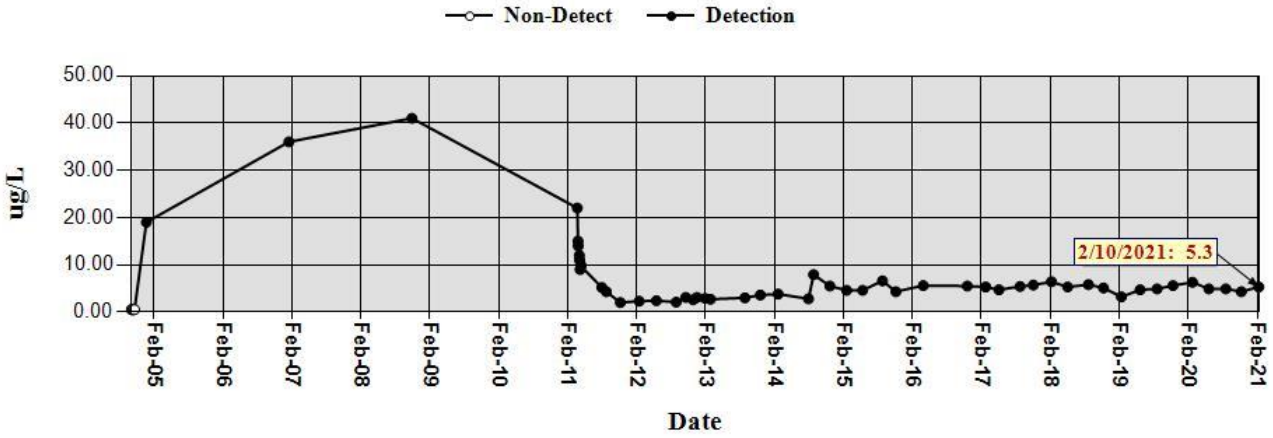
Well ID: MPE-11
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-11
CAS RN: 79-01-6 Trichloroethene

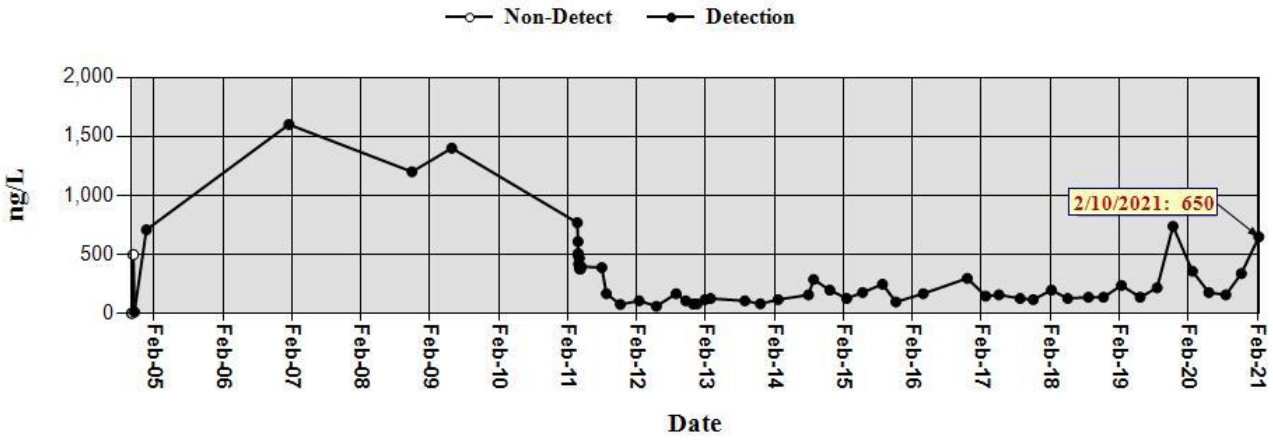
Analysis: 8260



Well ID: MPE-11
CAS RN: 62-75-9 N-Nitrosodimethylamine

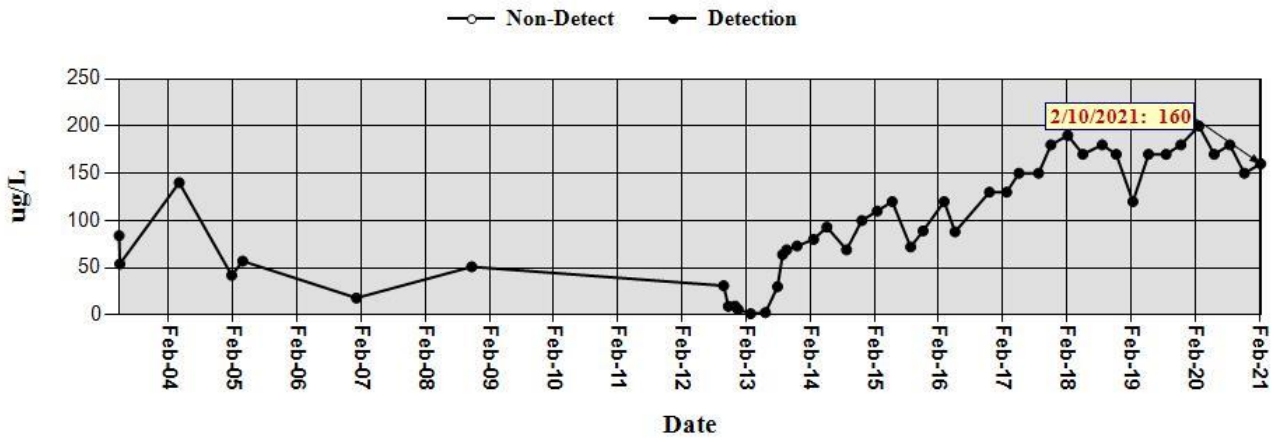
Analysis: 607

Results are Corrected for Extraction Efficiency



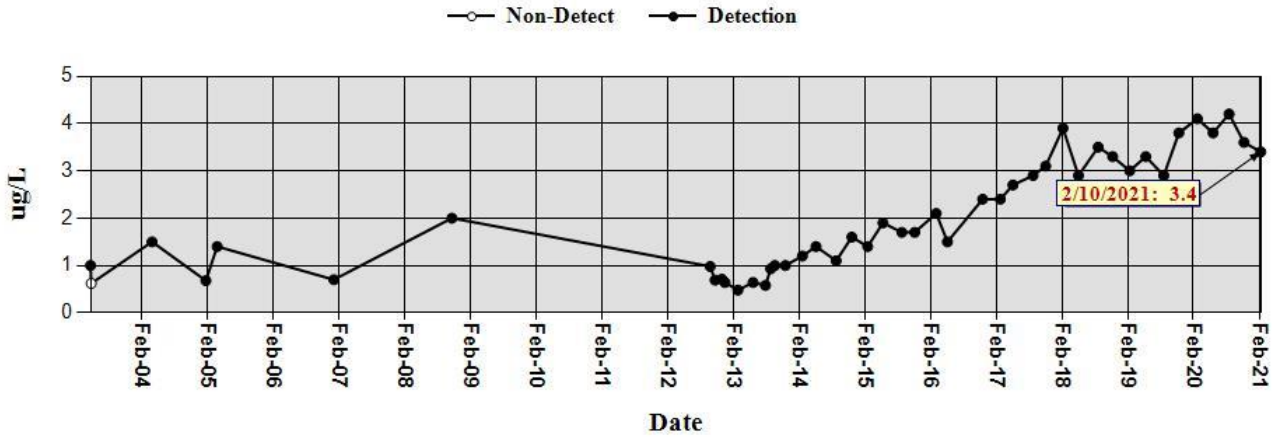
Well ID: MPE-8
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



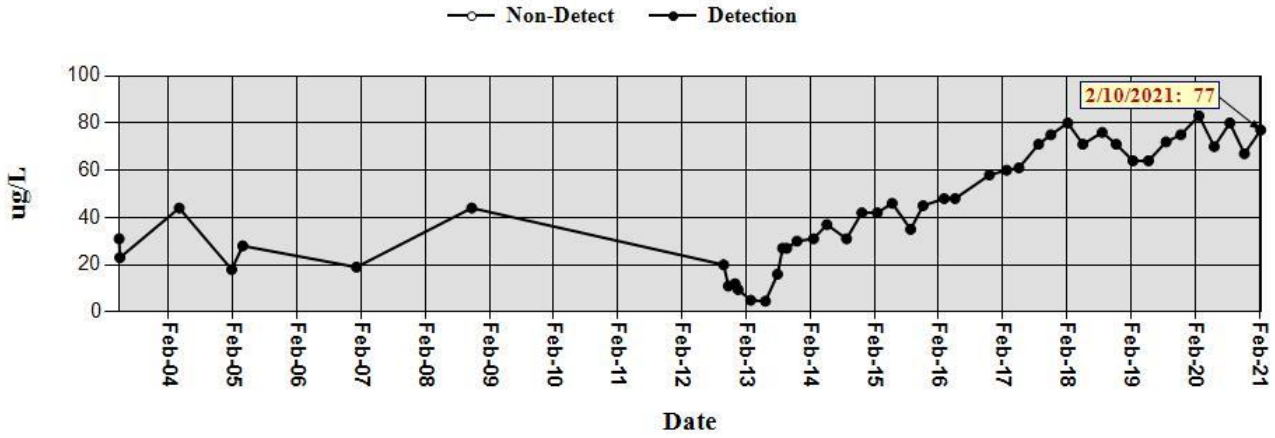
Well ID: MPE-8
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-8
CAS RN: 79-01-6 Trichloroethene

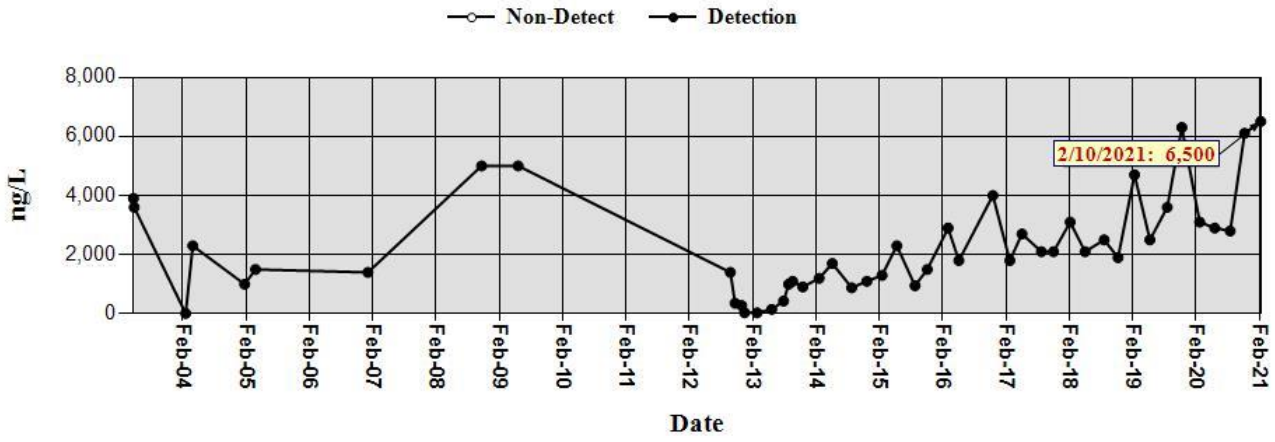
Analysis: 8260



Well ID: MPE-8
CAS RN: 62-75-9 N-Nitrosodimethylamine

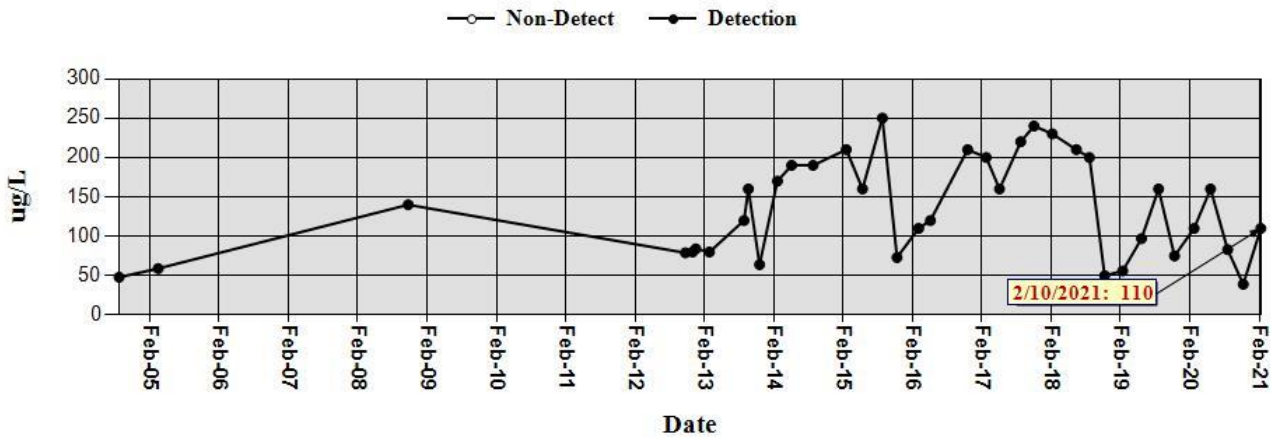
Analysis: 607

Results are Corrected for Extraction Efficiency



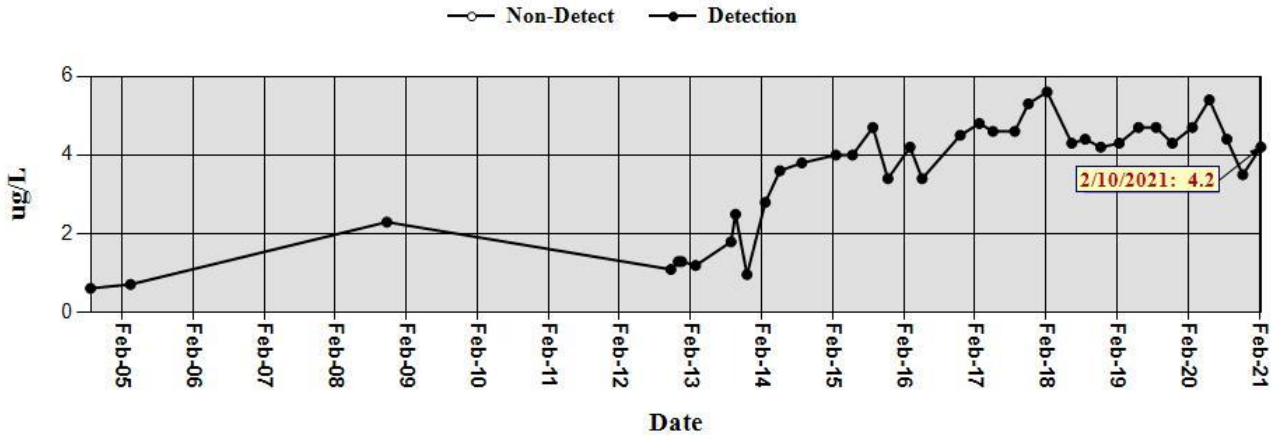
Well ID: MPE-9
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



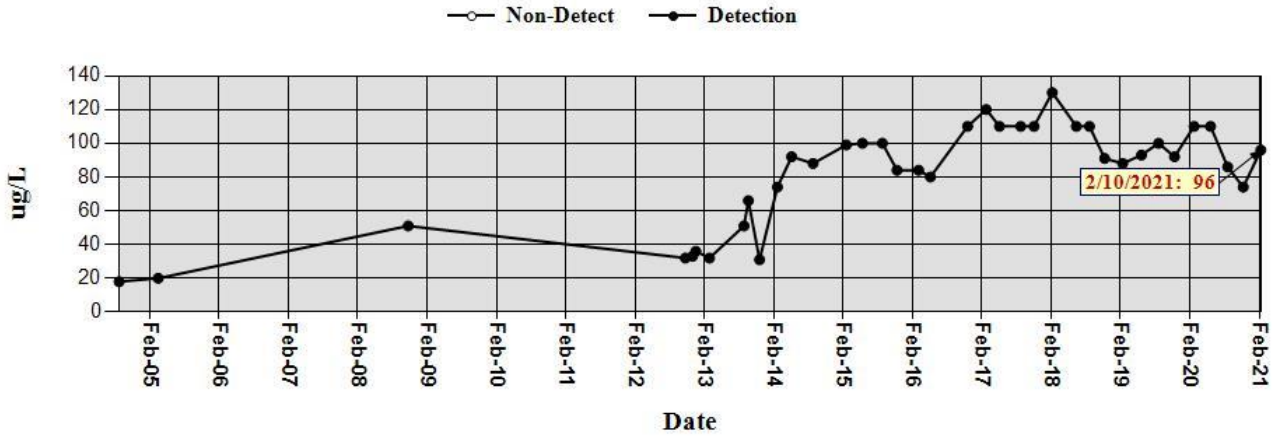
Well ID: MPE-9
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: MPE-9
CAS RN: 79-01-6 Trichloroethene

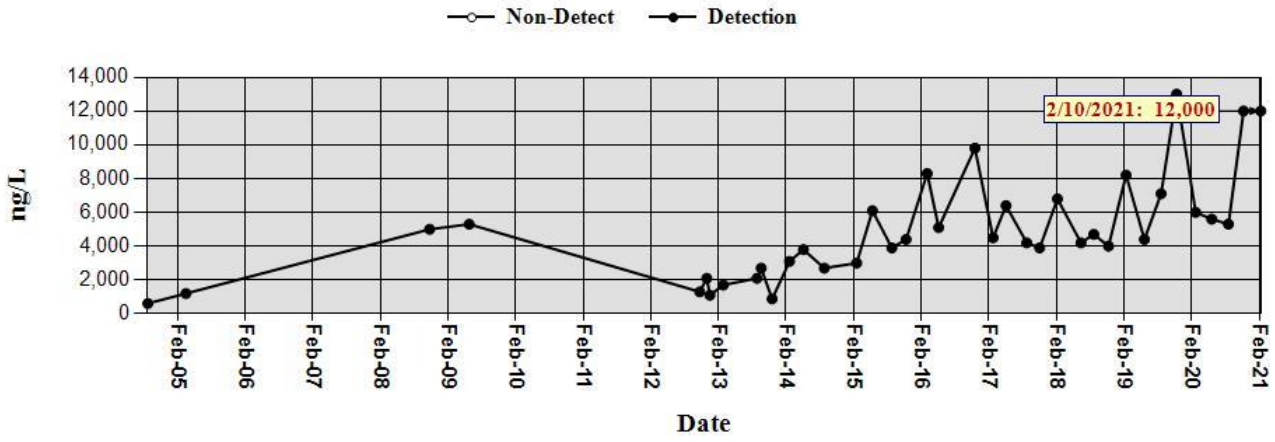
Analysis: 8260



Well ID: MPE-9
CAS RN: 62-75-9 N-Nitrosodimethylamine

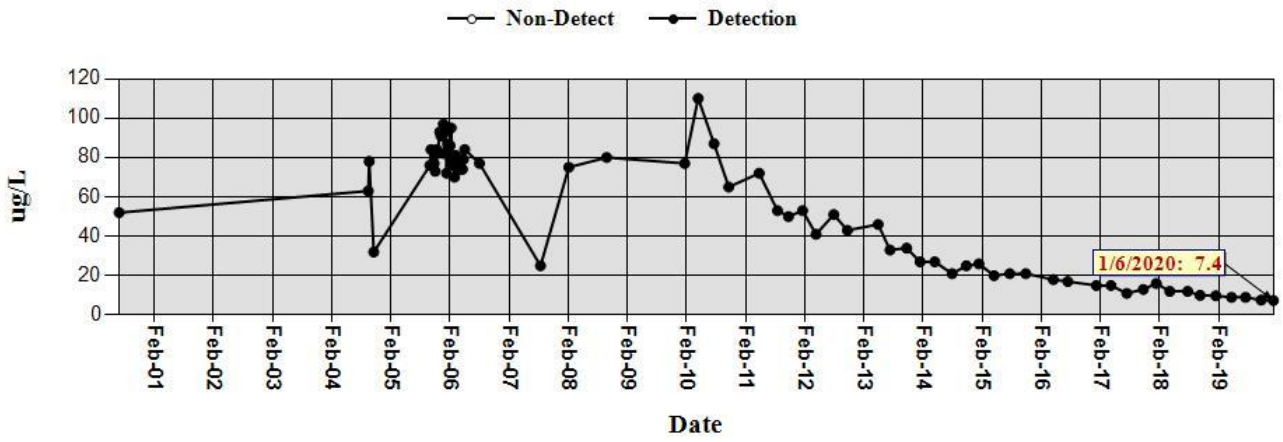
Analysis: 607

Results are Corrected for Extraction Efficiency



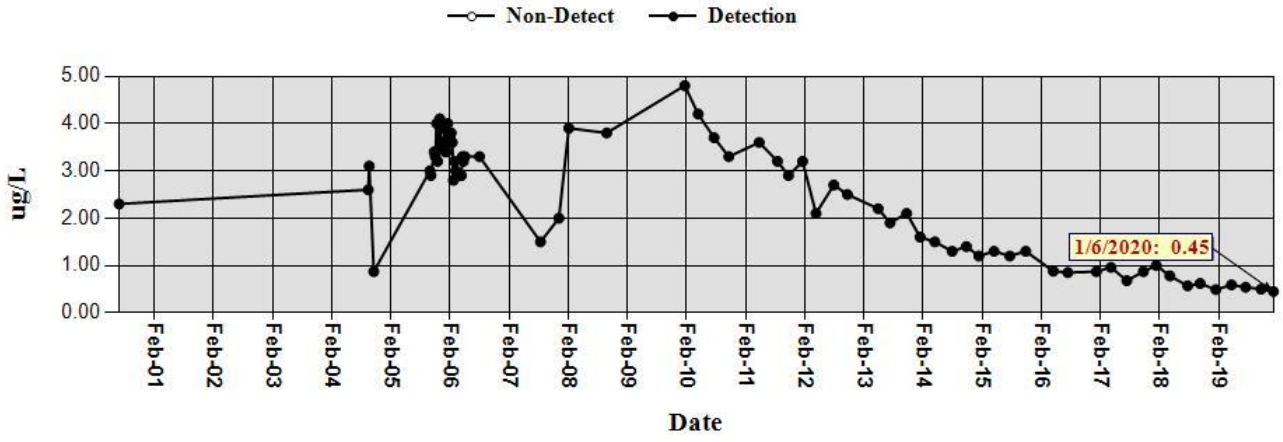
Well ID: PFE-1
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



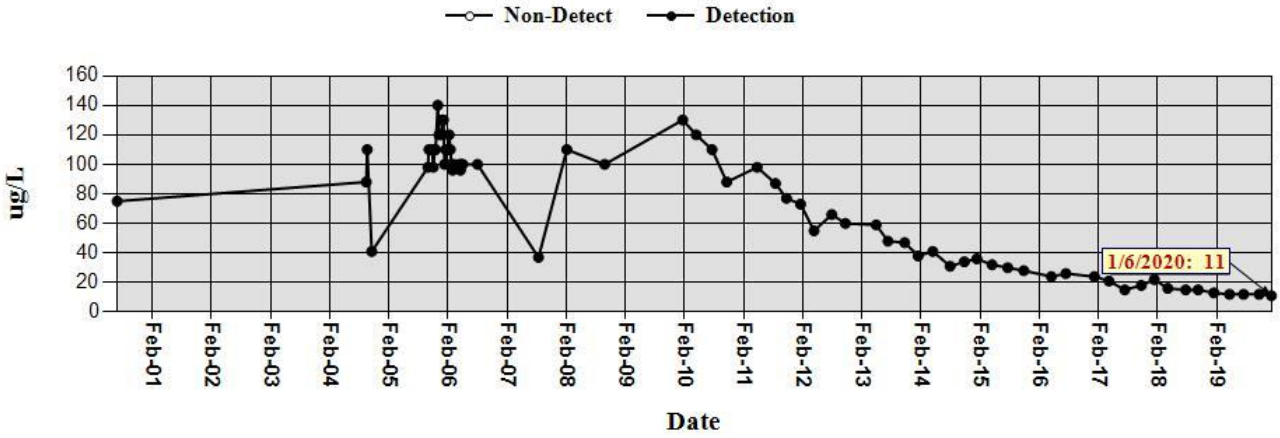
Well ID: PFE-1
CAS RN: 127-18-4 Tetrachloroethene

Analysis: 8260



Well ID: PFE-1
CAS RN: 79-01-6 Trichloroethene

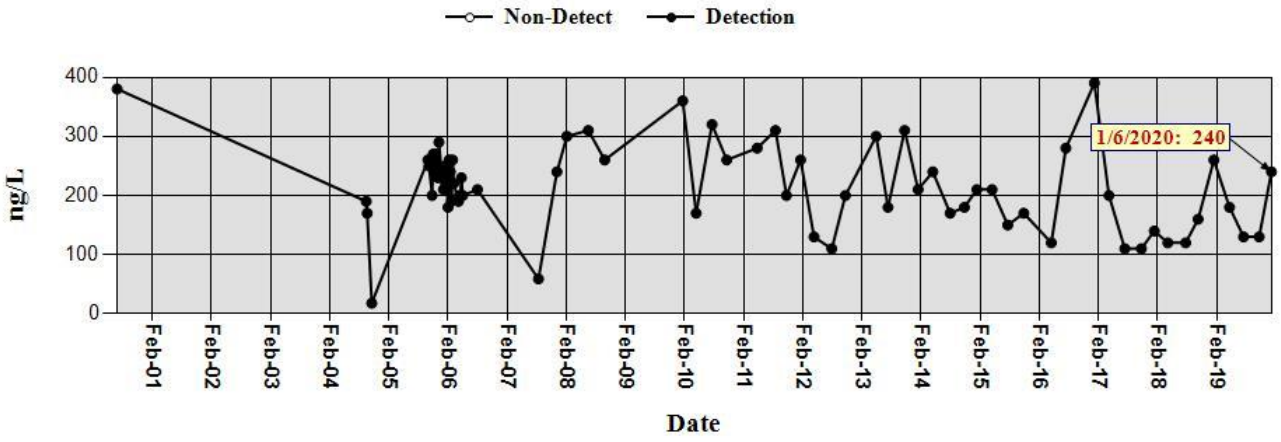
Analysis: 8260



Well ID: PFE-1
CAS RN: 62-75-9 N-Nitrosodimethylamine

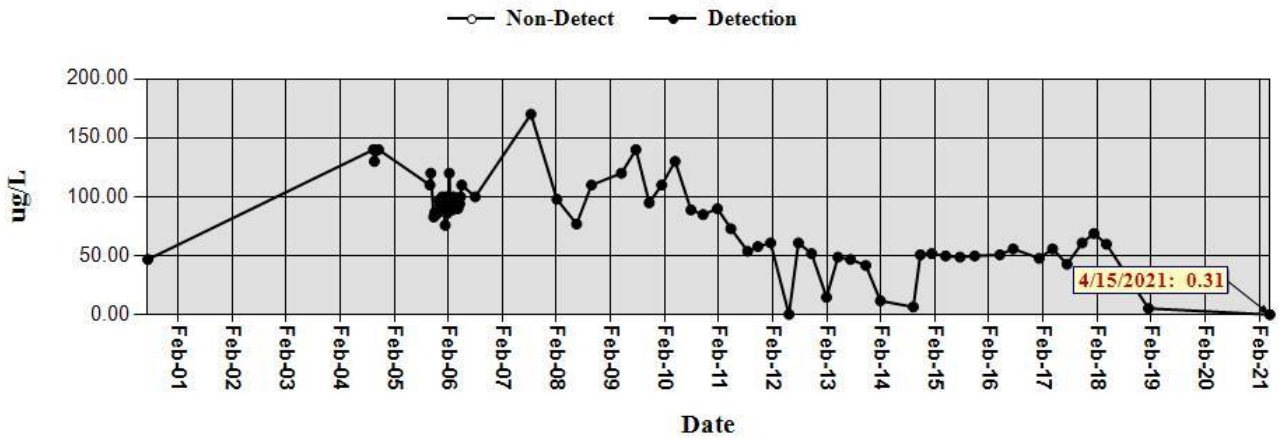
Analysis: 607

Results are Corrected for Extraction Efficiency



Well ID: PFE-2
CAS RN: 75-69-4 F11 - Trichlorofluoromethane

Analysis: 8260



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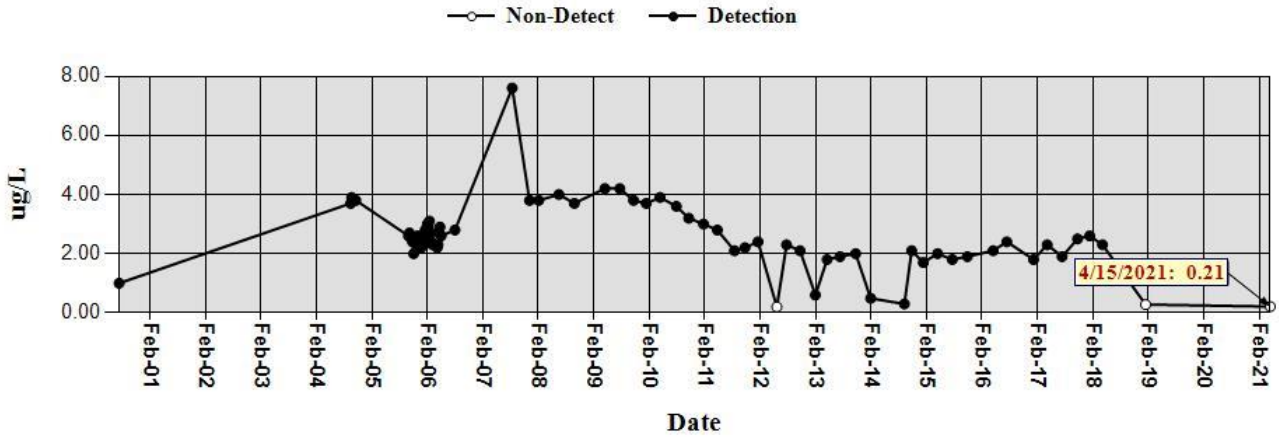

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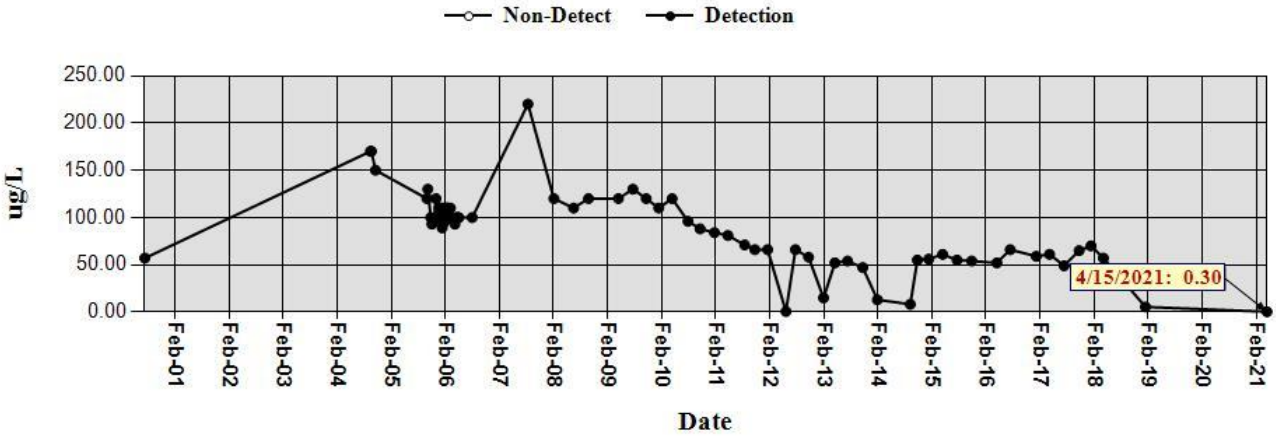

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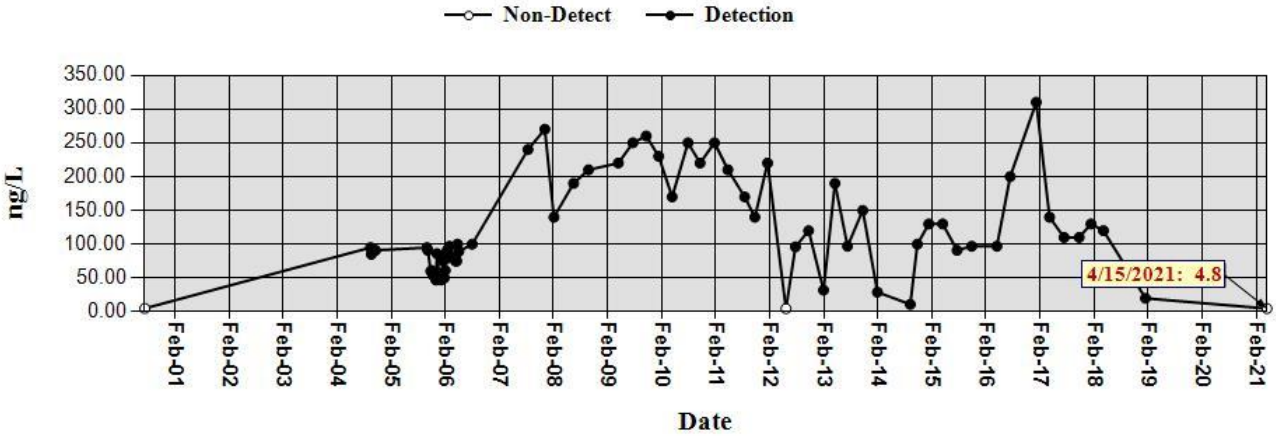
Analysis: 607

Results are Corrected for Extraction Efficiency



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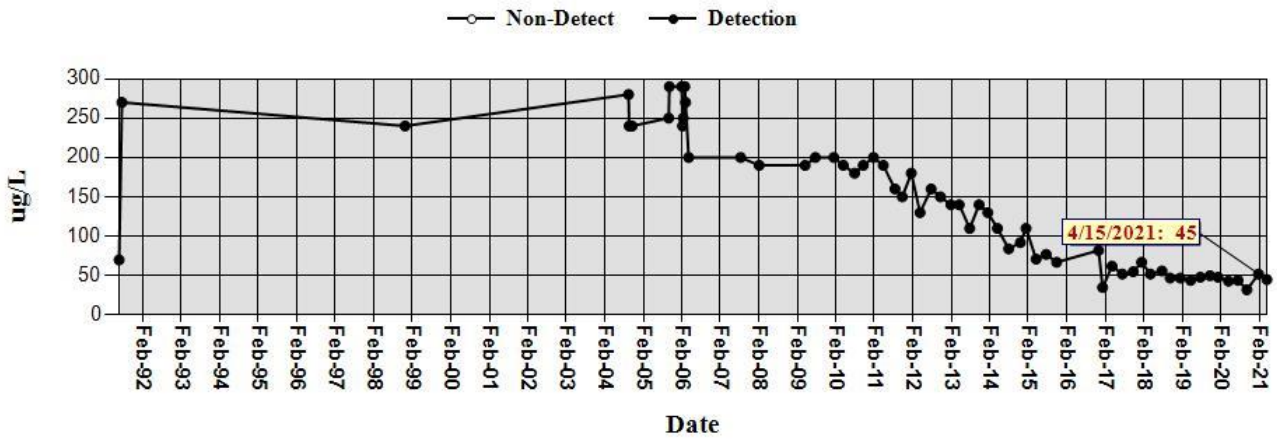

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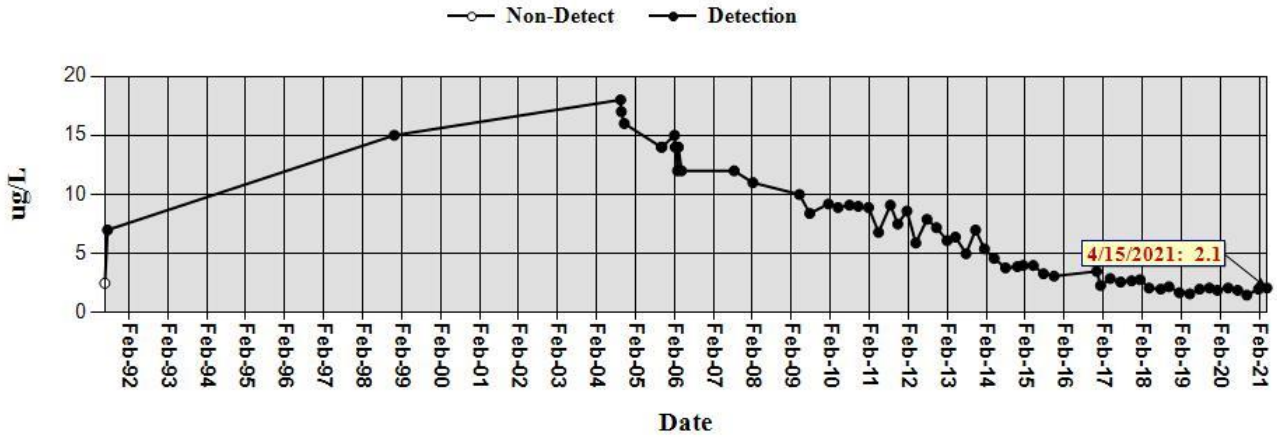

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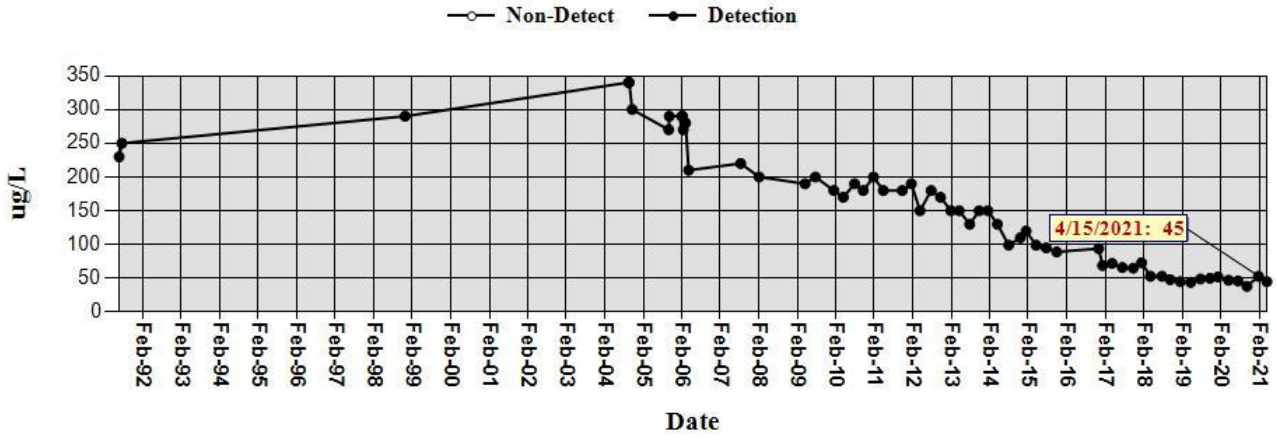

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Analysis: 607

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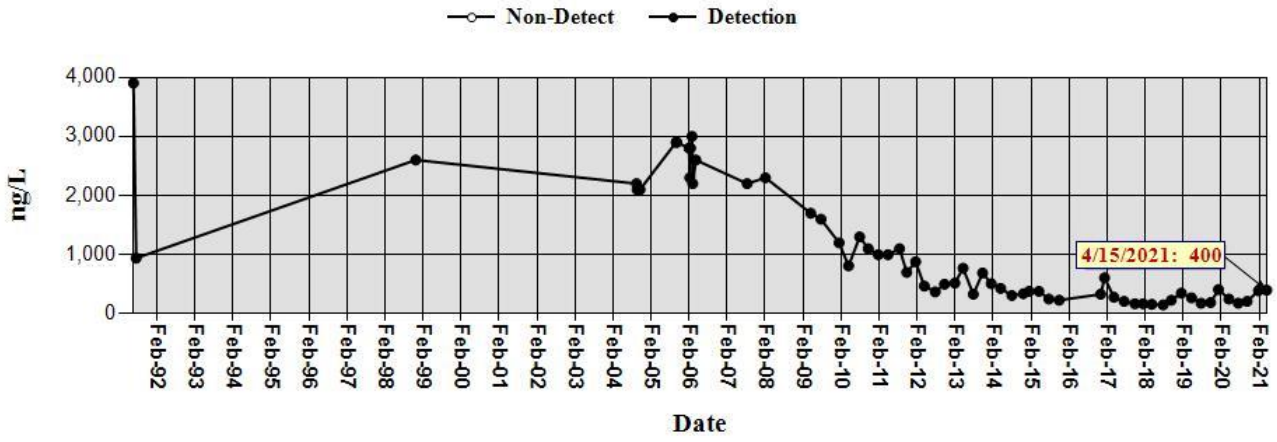

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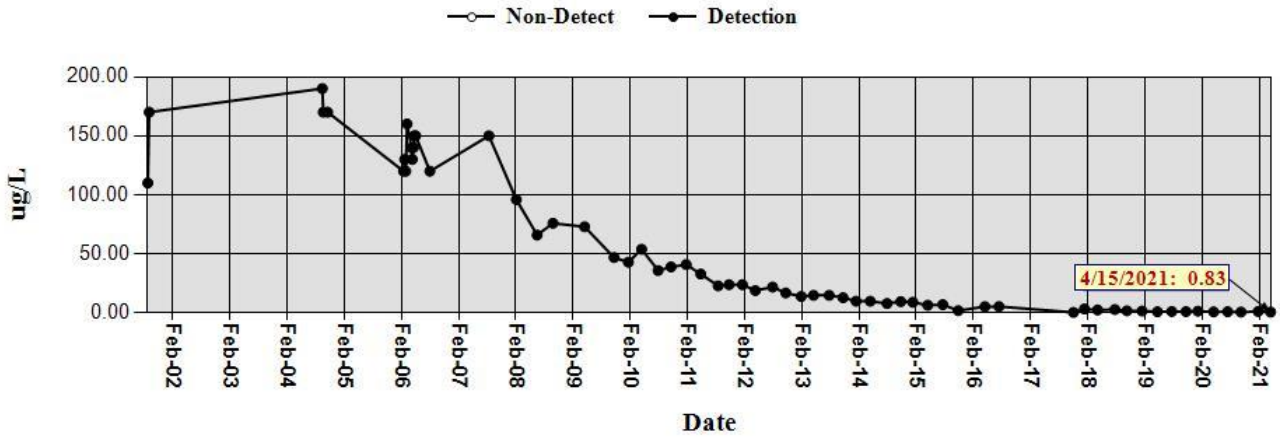
Analysis: 8260



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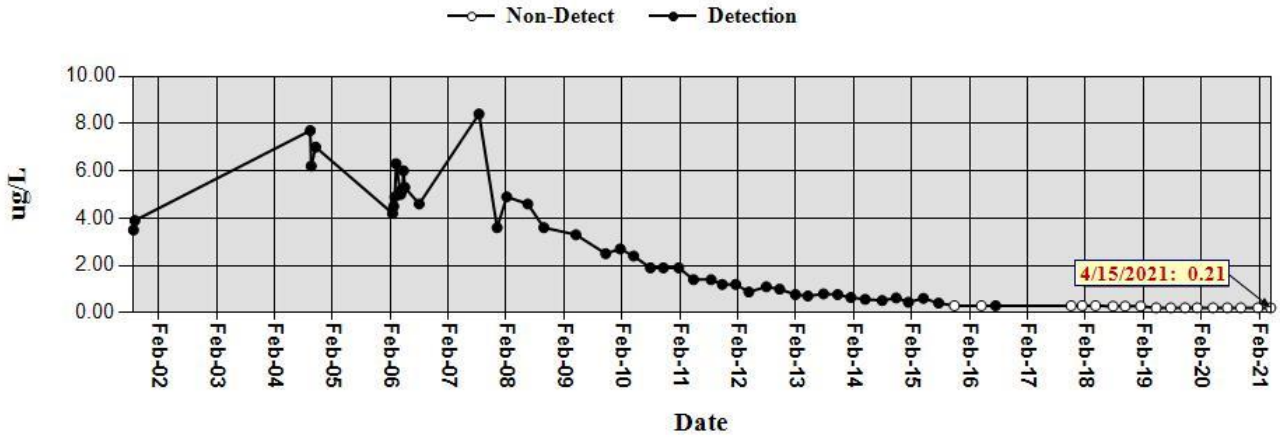

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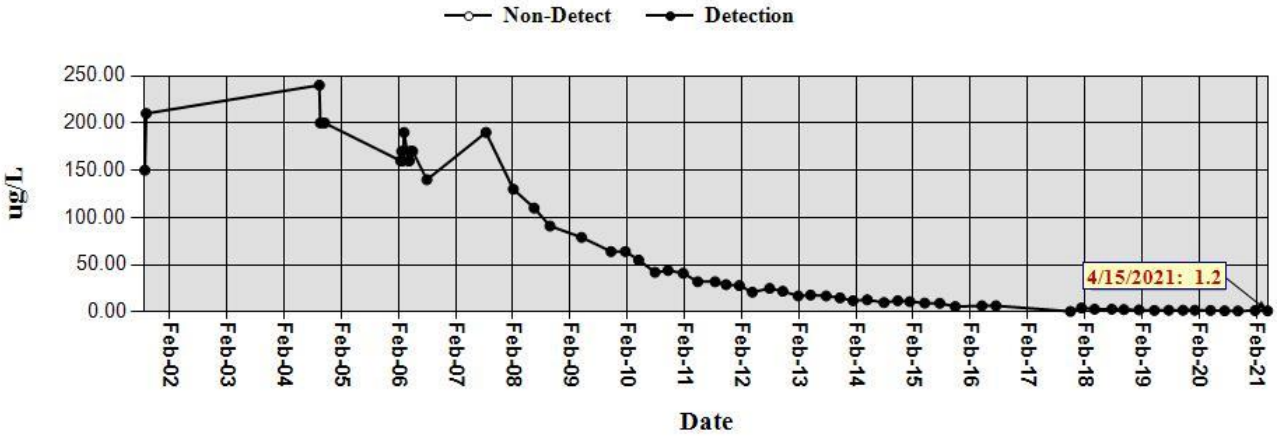

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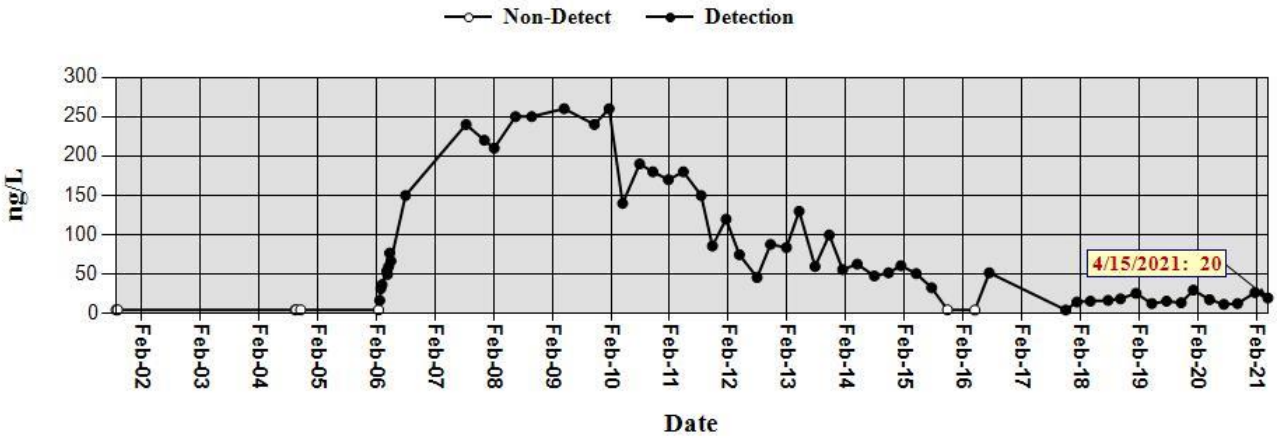
Analysis: 607

Results are Corrected for Extraction Efficiency



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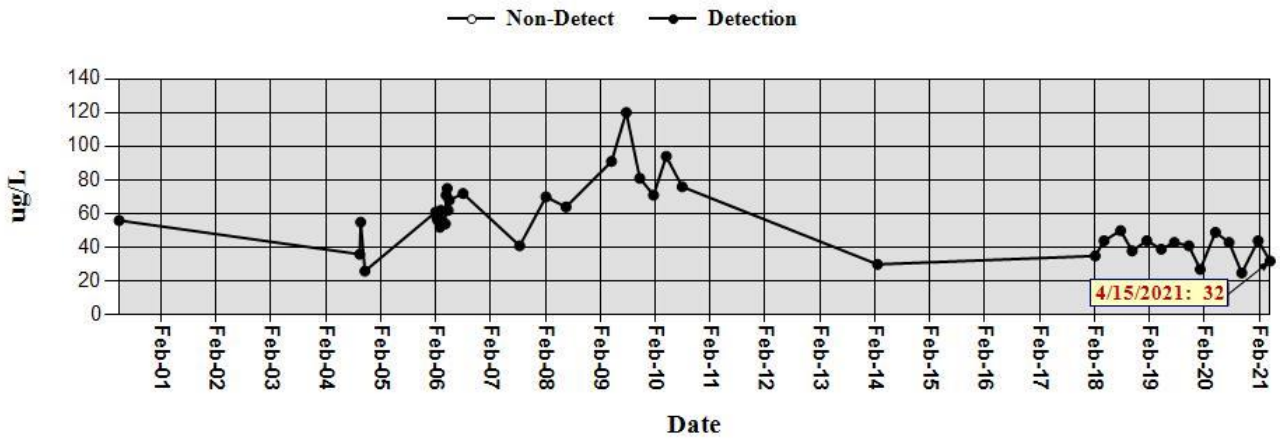
Analysis: 8260



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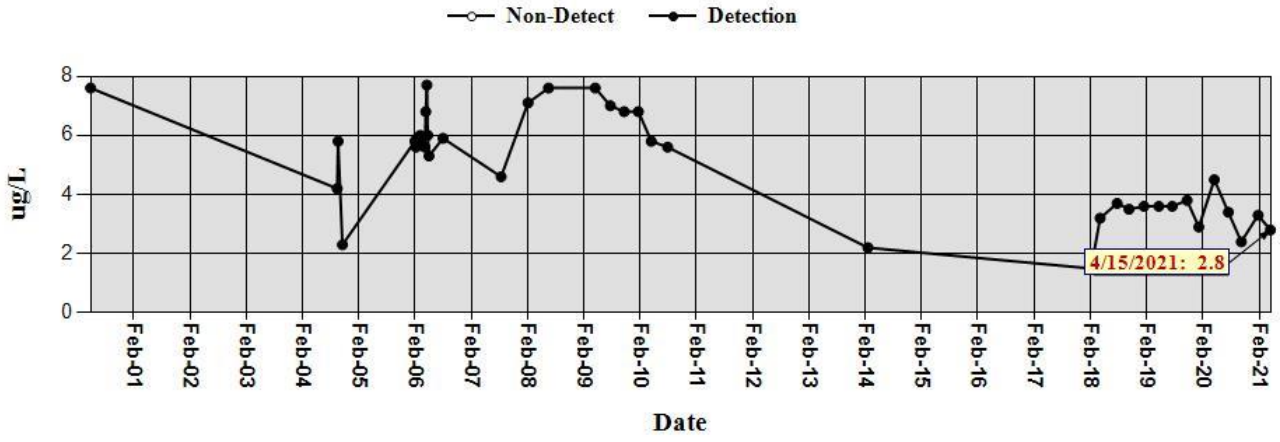

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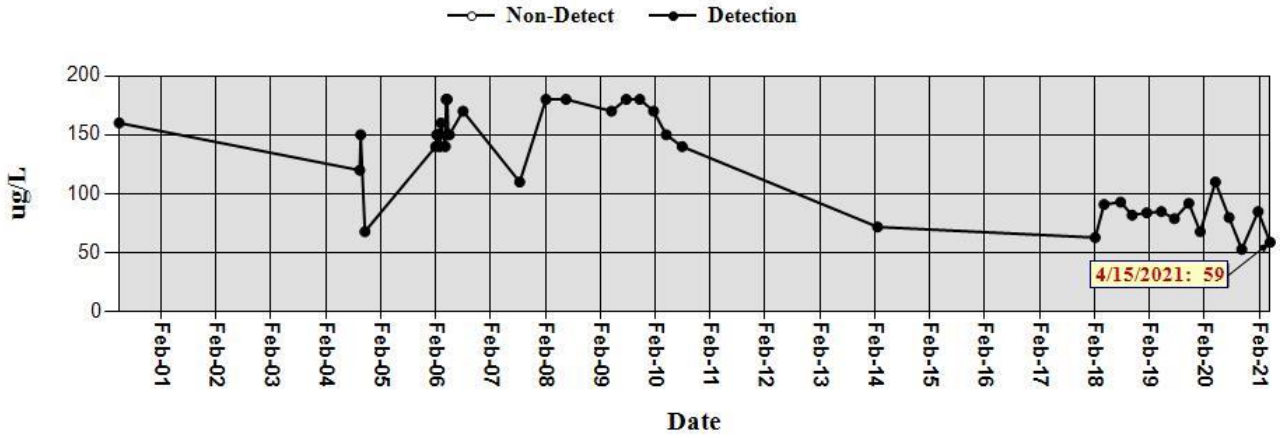

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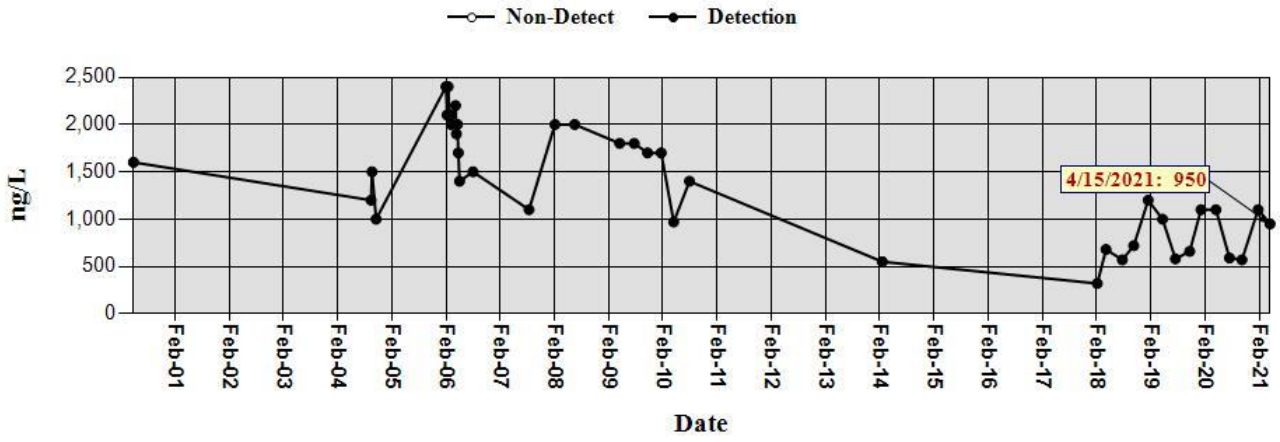

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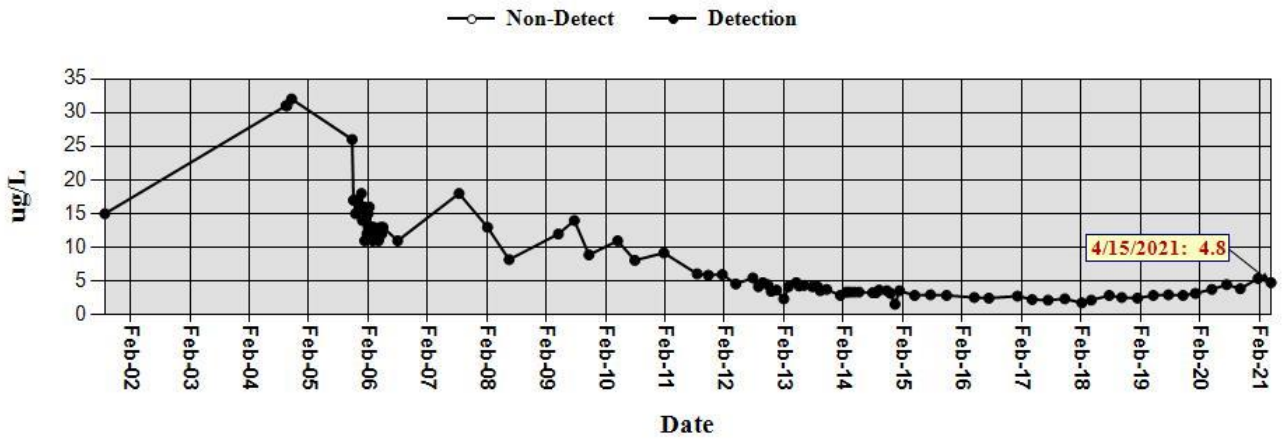
Analysis: 8260



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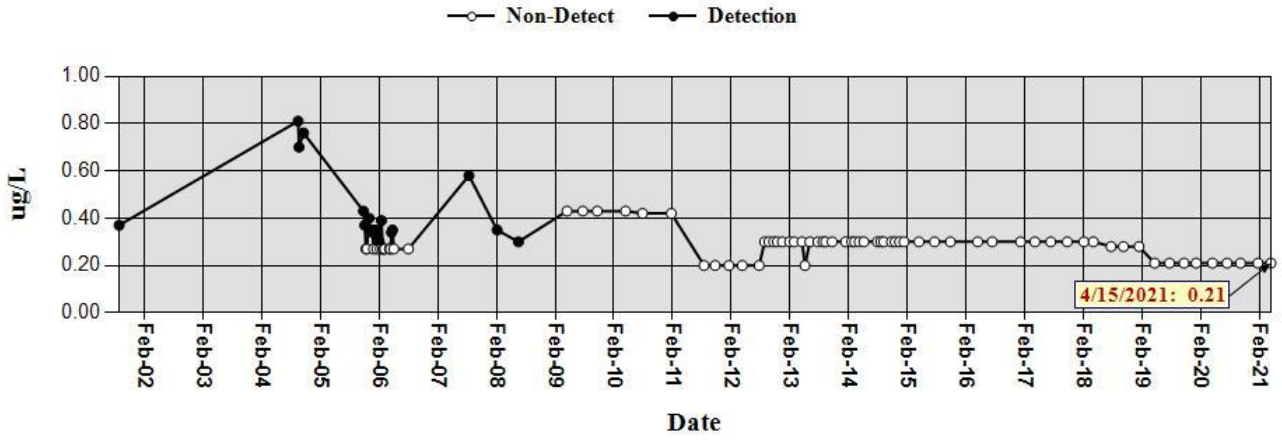

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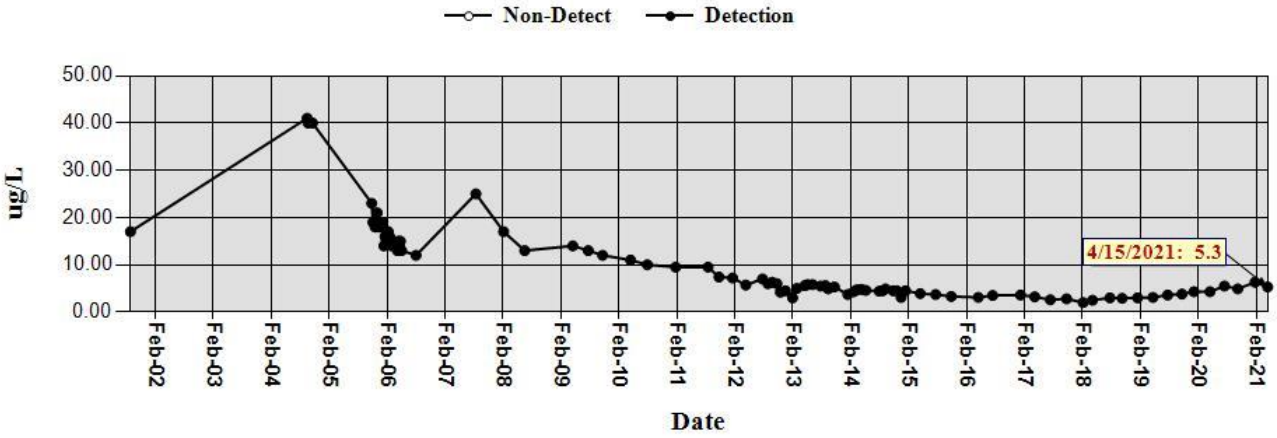

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Analysis: 607

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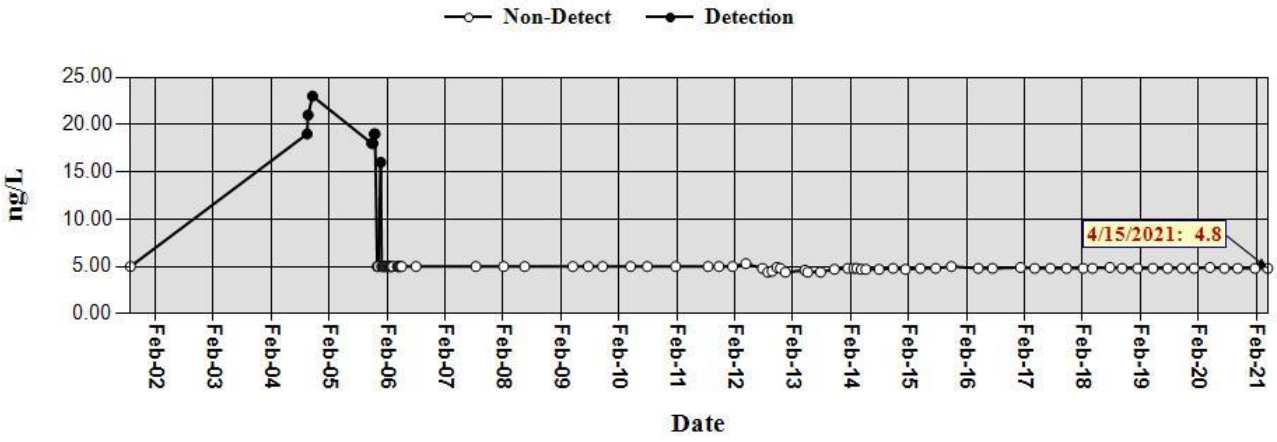

Appendix F
Summary of Source Area Investigations

Summary of Groundwater Monitoring Projects and Source Area Investigations

1.0 Groundwater Monitoring Projects

1.1 Monitoring Well Installation and Well Plugging and Abandonment

NASA submitted the NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12 (the replacement for well PL-5) on December 27, 2017 and the Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42 on January 30, 2018.NMED approved the drilling work plans on September 10, 2018 (NMED, 2018o, 2018p). During the third quarter 2019, NASA completed installation of wells BLM-42 and PL-12. As part of the process, NASA submitted the required letter report *NASA WSTF BLM-42 Monitoring Well Design* on June 24, 2019 (NASA, 2019k) after submitting the letter report via email on June 21, 2019 (NASA, 2019j). NMED approved the well construction design by email on June 24, 2019 (NMED, 2019m). NASA submitted the required letter report *NASA WSTF PL-12 Monitoring Well Design* on July 19, 2019 (NASA, 2019o) after submitting the letter report via email the same day. NMED approved the PL-12 design by email on July 19, 2019.

Vendors contracted to provide the sampling systems for these wells experienced delays in obtaining the specialized material necessary to fabricate the inflatable packers for inclusion in the systems. NASA requested additional time to complete installation of the sampling systems, collect initial groundwater samples from both monitoring wells, and receive and evaluate analytical data for inclusion in the required well completion reports. NASA submitted the *Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports* on February 6, 2020 (NASA, 2020c). NMED approved the extension on February 17, 2020 (NMED, 2020f), extending the due date for submittal of the report from February 28, 2020 to April 30, 2020.

In the first quarter of 2020, NASA installed dedicated low-flow groundwater sampling systems in new groundwater monitoring wells BLM-42 (the replacement for well BLM-37) and PL-12 (the replacement for well PL-5) and performed the required initial groundwater sampling. In the second quarter of 2020,

NASA submitted the Well Completion Report for BLM-42 on May 4, 2020 (NASA, 2020j). NMED issued its Fee Assessment Well Completion Report for BLM-42 on May 28, 2020 (NMED, 2020j). NASA paid the *Fee Assessment for BLM-42 Well Completion Report (NMED Invoice Number HWB-NASA-20-004)* on August 3, 2020 (NASA, 2020p).

NASA also submitted the *Well Completion Report for Well PL-12* on May 4, 2020 (NASA, 2020k). NMED issued its *Fee Assessment Well Completion Report for PL-12* on May 28, 2020 (NMED, 2020k). NASA paid the *Fee Assessment for PL-12 Well Completion Report (NMED Invoice Number HWB-NASA-20-005)* on August 3, 2020 (NASA, 2020q).

1.2 Westbay Well Reconfiguration

NASA converted Westbay monitoring wells JP-3 and WW-2 from four-zone Westbay wells to two-zone conventional wells equipped with dedicated low-flow sampling systems in late 2013. NASA installed a three-zone Water FLUTe sampling system in the borehole at BLM-32 in August 2015. NASA reconfigured Westbay wells WW-4 and WW-5 to purgeable Water FLUTe sampling systems in November 2015 in accordance with the NMED approved schedule (NMED, 2015e). NASA installed Water FLUTe sampling systems in the conventional wells casings in wells JER-1, JER-2, ST-6, and ST-7 in January 2017. NASA submitted the *Well Reconfiguration Report for Westbay Wells JER-1, JER-2, ST-6, and ST-7* (NASA, 2017c) on March 22, 2017. NMED approved the report on July 7, 2017 with a

modification requiring NASA to complete recovery of the lodged Westbay casing from monitoring well BLM-37 or submit a work plan for well abandonment and replacement by January 31, 2018 (NMED, 2017f). Only portions of the casing could be recovered and on January 30, 2018, NASA submitted the *Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42* (NASA, 2018b). Following NMED approval of that plan (NMED, 2018p), NASA prepared and submitted a plugging plan to the NMOSE (New Mexico Office of the State Engineer) and continued planning fieldwork (NASA, 2019a). NMOSE approved the plan on March 12, 2019 (NMOSE, 2019a). NASA and the drilling subcontractor plugged monitoring well BLM-37 on June 15 and 16, 2019, in accordance with the approved work plan and NMOSE plugging plan. NASA supported the drilling contractor with preparation and submittal of the NMOSE plugging report.

On March 29, 2016, NMED approved NASA's fourth quarter 2015 PMR (NMED, 2016a) with direction to convert wells BLM-30, PL-5, PL-6, PL-7, PL-8, PL-10, ST-6, and WW-3 to purgeable sampling systems. The work plan for reconfiguring these wells was due to NMED by March 31, 2017. NASA reviewed NMED's requirements in conjunction with the available analytical data and other information for these wells and responded to NMED's approval on March 30, 2017 (NASA, 2017e) with a document including: a work plan for reconfiguring well BLM-30; a proposal for the replacement of well PL-5; and an evaluation of NDMA results from wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3, and a request for an extension of time for the reconfiguration work plan. NASA submitted the *NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12* (the replacement for well PL-5) on December 27, 2017 (NASA, 2017t) and the *Well Reconfiguration Work Plan for Well BLM-30* on December 28, 2017 (NASA, 2017v). NMED approved the work plans on September 10, 2018 (NMED, 2018p) and September 13, 2018 (NMED, 2018r), respectively.

In December 2018, NASA removed the Westbay casing from well PL-5 in preparation for plugging and abandonment. NASA prepared and submitted a plugging plan to the NMOSE and continued planning fieldwork (NASA, 2019a). NMOSE approved the plan on March 13, 2019 (NMOSE, 2019b). NASA plugged well PL-5 in July 2019.

1.2.1 BLM-28

In April 2019, NASA received additional system components to complete modifications to the low-flow sampling system scheduled for installation in the borehole at monitoring well BLM-28. NASA assembled the sampling system and installed the equipment in the borehole. NASA had planned to perform initial sampling at the reconfigured well. Although the dedicated system worked properly during the function testing following installation, it failed to produce groundwater. The dedicated sampling system, including the inflatable packer, was lodged in the borehole. In October 2019, NASA acquired, tested, and verified additional field equipment necessary for further attempts to recover the dedicated sampling system from well BLM-28. Using a hydraulic hoist (cherry picker), NASA attempted to recover the dedicated sampling system from well BLM-28 in November 2019. NASA applied gradually increasing upward pressure on the steel cable supporting the sampling system. The complete sampling system appears to be irrecoverable, as only the steel support cable, dedicated bladder pump, and tubing were removed from the borehole. In December 2019, NASA performed a downhole video log of the borehole at former well BLM-28. Field personnel identified a significant borehole wall collapse zone at approximately 400 ft bgs that resulted in several feet of fill on top of the inflatable packer that remains in the borehole at approximately 500 ft bgs. NASA evaluated the BLM-28 borehole and determined that future reuse for groundwater monitoring is not feasible. NASA submitted the *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon* on May 4, 2020 (NASA, 2020m). On November 19, 2020, NMED provided requirements for abandonment and replacement of the well (NMED, 2020w). A work plan for abandonment of BLM-28 was to be submitted to NMED no later than April 30, 2021. Following 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.

1.2.2 BLM-30

NASA attempted to remove the Westbay casing from well BLM-30 in December 2018. After numerous attempts to retrieve the Westbay casing from the borehole, NASA and the off-site contractors determined that the borehole had sloughed and that there is approximately 40 ft of material on top of the top packer, preventing removal of the system. NASA evaluated methods for removing the Westbay casing from well BLM-30 and determined that overwashing the Westbay casing with correctly sized drilling pipe may be effective. Requirements for this work were included in procurements for other drilling activities. On April 25, 2019, NASA submitted the *Request for Extension of Time for Well BLM-30 Reconfiguration Status Report* (NASA, 2019d). NMED approved the request on May 2, 2019, extending the due date for submittal of the reconfiguration report from April 30, 2019 to August 31, 2019 (NMED, 2019h). During July and August 2019, NASA and the drilling subcontractor attempted restoration of the well. Although most of the Westbay casing was removed or drilled out, approximately 90 ft of casing was not recoverable. NASA determined that reconfiguration of this borehole is not feasible and on August 29, 2019, submitted the *NASA WSTF Drilling Work Plan for Abandonment of Well BLM-30 and Drilling of New Groundwater Monitoring Well BLM-43* (NASA, 2019w). NMED issued the fee assessment for this work plan on September 20, 2019 (NMED, 2019v). NASA paid the fee on October 31, 2019 (NASA, 2019cc). On November 5, 2020, NMED issued an approval with modifications (NMED, 2020s), which required geophysical logging and a due date as November 30, 2021 for the well completion report. NASA provided a response to the Approval with Modifications on February 3, 2021 (NASA, 2021a) and corresponded with the New Mexico Office of the State Engineer (NASA, 2021e; 2021f) on the plugging plan for well BLM-30 and application for a permit to drill well BLM-43.

1.2.3 Data Representativeness and Westbay Well Reconfiguration Plan

On December 20, 2018, NASA submitted the *Request for Extension of Time for Well Reconfiguration Work Plan* (NASA, 2018u), which requested an extension for submittal of a work plan to reconfigure Westbay wells PL-6, PL-7, PL-8, PL-10, ST-5, and WW-3. NMED approved the request on January 10, 2019 (NMED, 2019a). To support further Westbay reconfiguration efforts, NASA prepared and submitted the *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation* on December 21, 2018 (NASA, 2018v). NMED approved the work plan with modifications on May 13, 2019 (NMED, 2019i). NASA submitted the *Response to Approval with Modifications of Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation* (NASA, 2019k). 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, 2020b). NMED issued its *Fee Assessment Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report* on March 20, 2020 (NMED, 2020g) and NASA paid the fee on April 20, 2020 (NASA, 2020i).

NASA believed that further evaluation of groundwater and sampling system data from WSTF groundwater monitoring wells is required to support the selection of an appropriate replacement sampling system. As a result, NASA submitted the *Request for Second Extension of Time for Well Reconfiguration Work Plan* on December 11, 2019 (NASA, 2019hh). NMED approved the extension request to submit the well reconfiguration work plan no later than December 31, 2020 (NMED, 2020d). On November 30, 2020, NASA submitted a *Request for Fourth Extension of Time for Well Reconfiguration Work Plan* (NASA, 2020z). 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).

1.2.4 Summary

To date, NASA has 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. NASA has replaced two Westbay wells (BLM-37 and PL-5) with wells BLM-42 and PL-12, respectively. Each has dual-zone dedicated low-flow bladder pumps.

2.0 Source Area Investigations

2.1 200 Area

NASA submitted the *200 Area Phase II Investigation Report* to NMED on June 29, 2015 (NASA, 2015d). NMED approved the Phase II report with modifications on November 30, 2015 (NMED, 2015d). NMED determined that a "no further action or corrective action" status for the 200 Area was not possible until the nature and extent of the soil vapor plume has been defined and all identified COC have been assessed. In addition to several other comments on the report, NMED agreed with NASA's recommendation to develop and submit a work plan to perform a quantitative assessment of complete soil vapor pathways in the 200 Area.

NASA developed and submitted the *200 Area and 600 Area Vapor Intrusion Assessment Work Plan* on February 25, 2016 (NASA, 2016b). NMED approved the vapor intrusion assessment work plan on May 27, 2016 (NMED, 2016b). Risk-based concentrations for soil vapor and air were updated for residential and commercial/industrial exposures and current and potential future land use scenarios and were submitted to NMED on January 26, 2017 (NASA, 2017a). NMED approved the RBCs on April 12, 2017 (NMED, 2017d). In June 2017, NASA performed an evaluation of the indoor air sampling locations to identify potential sources of interference with the planned sampling. A significant number of potential interferences were identified within the laboratory environment of Building 200 within the 200 Area. NASA catalogued these sources photographically prior to the indoor air sampling to ensure the most accurate and up-to-date assessment of interference. In August 2017, NASA performed the first of two vapor intrusion assessment sampling events in the 200/600 Areas in accordance with the NMED-approved work plan. NASA performed the second sampling event in February 2018. Samples were collected at indoor and outdoor locations and from several soil vapor monitoring wells, and were submitted to the off-site laboratory for analysis. NASA received all analytical results, completed an evaluation of those results, and developed and submitted the *200 Area and 600 Area Vapor Intrusion Assessment Report* on June 18, 2018 (NASA, 2018j). NMED disapproved the report on June 5, 2019 and directed NASA to address 12 NMED comments and submit a revised investigation report by October 31, 2019 (NMED, 2019k). On September 17, 2019, NASA requested additional time to complete the response and submit a revised report by December 20, 2019 (NASA, 2019y). On December 17, 2019, NASA submitted the *Request for Second Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report* (NASA, 2019ii), formalizing a request submitted via email on December 17, 2019. NMED had approved the request for extension on January 16, 2020, extending the due date for the response and revised report from December 20, 2019 to February 3, 2020 (NMED, 2020e). 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).

2.2 300 Area

Work in the 300 Area is primarily related to investigation and closure of the adjacent 400 Area. The first 300-Area related submittal NASA made was for the *400 Area Supplemental Groundwater and Soil Vapor*

Monitoring Plan on May 28, 2019 (NASA, 2019g) and the related *300 Area Supplemental Abbreviated Drilling Work Plan* for two additional multiport soil vapor and groundwater monitoring wells in the 300 Area on May 30, 2019 (NASA, 2019i). NASA received NMED's fee assessment for review of the 300 Area supplemental drilling work plan plans on July 3, 2019 (NMED, 2019o). NASA paid the 300 Area Supplemental Abbreviated Drilling Work Plan fee on August 13, 2019 (NASA, 2019v). NMED disapproved the *300 Area Supplemental Abbreviated Drilling Work Plan* (5/30/19) on March 19, 2021 (NMED, 2021f). NMED directed NASA to address four comments and submit a revised work plan no later than July 30, 2021.

2.3 400 Area

NASA performed investigation fieldwork at the 400 Area in accordance with the NMED-approved 400 Area Closure Investigation Work Plan (NASA, 2011) and 400 Area Investigation Abbreviated Drilling Work Plan and Notification of Fieldwork Commencement (NASA, 2016e) between September 2016 and July 2017. On December 27, 2017, NASA submitted the *NASA WSTF 400 Area Closure Investigation Report* (NASA, 2017s). NASA received NMED's March 27, 2018, *Disapproval 400 Area Well Completion Summary Report* (NMED, 2018j), responded with a revised report on June 13, 2018 (NASA, 2018i), and received NMED's July 26, 2018 approval of the report (NMED, 2018l).

NASA received NMED's August 14, 2018 disapproval of the Closure Investigation Report (NMED, 2018m) and revised the report as required. NASA submitted the *NASA WSTF 400 Area Closure Investigation Report – NMED Disapproval Response* on November 29, 2018 (NASA, 2018r). NMED disapproved the revised 400 Area Closure Investigation Report on September 16, 2019 (NMED, 2019u). NASA prepared the required response to the 14 comments and submitted the *NASA WSTF 400 Area Closure Investigation Report – NMED Second Disapproval Response* on December 30, 2019 (NASA, 2019ll). NMED disapproved the *400 Area Closure Investigation Report* (12/30/19; revised) on March 19, 2021 (NMED, 2021g). NMED directed NASA to address 17 comments and submit a revised report no later than July 30, 2021.

NASA submitted the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on May 28, 2019 (NASA, 2019g) and the related *300 Area Supplemental Abbreviated Drilling Work Plan* for two additional multiport soil vapor and groundwater monitoring wells in the 300 Area on May 30, 2019 (NASA, 2019i). NASA received NMED's fee assessment for review of the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* on July 3, 2019 (NMED, 2019p). NASA paid the 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan fee on October 7, 2019 (NASA, 2019z). NMED disapproved the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (5/28/19) on March 15, 2021 (NMED, 2021e). NMED directed NASA to address three comments and submit a revised monitoring plan no later than July 30, 2021.

2.4 600 Area Perched Groundwater Extraction

2.4.1 Extraction

NASA initiated extraction of perched groundwater from monitoring well 600-G-138 on April 19, 2013, in accordance with NMED's March 1, 2013, *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area* (NMED, 2013c). The measured depth of perched groundwater declined from approximately 5 ft following well installation in October 2011 to approximately 3 ft. The well yields approximately 13 gallons daily when pumped twice per day. NASA extracted approximately 217 gallons from the well in April 2019, approximately 172 gallons in May 2019, and approximately 86 gallons in June 2019. On June 12, 2019, the non-dedicated purge pump failed and was removed from the well. NASA determined that further evaluation and repair are required and is

coordinating with the manufacturer to obtain the required services. Extracted groundwater was containerized for treatment and disposal at the MPITS in accordance with DP-1255 (NMED, 2017g).

NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 6* on April 30, 2019 (NASA, 2019e). NASA received the NMED fee assessment for review of the report (NMED, 2019j) and paid the 600 Area Perched Groundwater Extraction Pilot Test Interim Status Report fee on July 16, 2019 (NASA, 2019n). NMED approved the status report for the 600 area Perched Groundwater Extraction Pilot Test - Project Year 6 on September 3, 2019 (NMED, 2019t).

NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 7* on May 26, 2020 (NASA, 2020n). NMED Hazardous Waste Bureau (HWB) issued its *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Year Seven* on July 9, 2020 (NMED, 2020o), and NASA paid the fee on August 17, 2020 (NASA, 2020r).

2.4.2 Perched Groundwater Investigation.

NASA submitted a revised Abbreviated Investigation Work Plan for 600 Area Perched Groundwater, submitted to NMED on December 22, 2016 (NASA, 2016g). It was approved by NMED on March 31, 2017 (NMED, 2017b). In accordance with NMED extension request approval (NMED, 2018q), NASA delayed an additional investigation of 600 Area perched groundwater. On August 22, 2018, NASA requested an additional extension of time for implementation of the perched groundwater investigation to accommodate the ongoing investigation fieldwork at the 100 and 600 Area Wastewater Lagoons (NASA, 2018l). NMED approved the request on September 13, 2018 (NMED, 2018q) and required the submittal of a geophysical survey report by December 31, 2019 and the 600 Area perched groundwater investigation report by July 31, 2020. On August 7, 2019, NASA submitted the *Request to Remove Electrical Resistivity Component of the 600 Area Perched Groundwater Geophysical Survey* (NASA, 2019s). NMED reviewed the request and authorized removal of electrical resistivity from the investigation work scope on August 23, 2019 (NMED, 2019s).

In October and November 2019, NASA and the selected geophysics subcontractor performed fieldwork for the geophysical survey at the 600 Area Closure, consisting of seismic reflection and reflection in accordance with the *Abbreviated Investigation Work Plan for 600 Area Perched Groundwater* (NASA, 2016g) and NMED's approved *Work Scope Modification Request Abbreviated Investigation Work Plan for 600 Area Perched Groundwater* (NMED, 2019s). NASA submitted the *Synopsis of the Findings of the 600 Area Closure Geophysical Seismic Refraction Tomography and Reflection Surveys with Revised Soil Boring Locations* to NMED on December 19, 2019 (NASA, 2019kk). NMED issued its *Fee Assessment 600 Area Closure Geophysical Survey Status Report* on January 15, 2020 (NMED, 2020b). NASA submitted the fee on February 12, 2020 (NASA, 2020d).

Because of an indeterminate review period for the *600 Area Closure Geophysical Survey 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, 2020c). NMED approved the extension on July 1, 2020 to 150 days after NMED provides comments (NMED, 2020l). On December 22, 2020, NMED issued its *Approval with Modifications 600 Area Closure Geophysical Survey Status Report* (NMED, 2020x) and set a due date for the 600 Area perched groundwater IR of December 31, 2021.

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

2.5.1 Pre-2019: Excavation and Characterization, Sludge and Liners

NASA submitted the *Wastewater Lagoon Areas Closure Investigation Work Plan and Wastewater Lagoon Areas Historical Investigation Summary* to NMED on October 15, 2012 (NASA, 2012). NASA received NMED's approval with modifications for the IWP (investigation work plan) and HIS (historical information summary) on January 3, 2013 (NMED, 2013a). NASA submitted a response to address the modifications in the February 21, 2013 revised report (NASA, 2013a). There were significant construction delays and legal issues associated with NASA's activation of its sanitary sewer system, which resulted in an NMED-approved extension of lagoon investigation fieldwork to August 31, 2015 (NMED, 2015b). NASA completed diversion of wastewater from the lagoons to the City of Las Cruces sewer system in July 2015 (NASA, 2015e).

NASA completed groundwater and wastewater sampling at the 100, 200, and 600 Area Lagoons in October 2015. After difficulties with sludge analysis because of its consistency, NASA completed sludge sampling at the 100 and 200 Area Lagoons in November 2016. Analytical data from sludge samples in the 100 and 200 Area Lagoons indicates that the majority of the sludge in those lagoons is considered New Mexico Special Waste. Based on these data, NASA continued development of the sludge management plan for removal of sludge from the 100 and 200 Area Wastewater Lagoons and continued planning for sludge removal throughout the reporting period. In January and February 2017, NASA performed soil sampling at the berms of the 100 Area, 200 Area, 600 Area, and STGT Wastewater Lagoons in order to characterize the soil for potential future reuse in site restoration as indicated in the work plan.

In July 2017, NASA secured the services of a qualified and experienced sludge excavation, disposal, and transportation subcontractor and continued planning for removal of sludge from the 100 Area and 200 Area Wastewater Lagoons. Using information provided by the vendor, NASA completed the 100 Area Wastewater Lagoons Sludge Disposal Management Plan and 200 Area Wastewater Lagoons Sludge Disposal Management Plan (NASA, 2017h, 2017i) and submitted them to the NMED SWB (Solid Waste Bureau) for review and concurrence. NMED SWB comments were received and incorporated into the 100 Area and 200 Area Wastewater Lagoons Sludge Disposal Management Plans. The revised 100 Area Wastewater Lagoons Sludge Disposal Management Plan was submitted to the NMED SWB and HWB (Hazardous Waste Bureau) on October 18, 2017 (NASA, 2017l).

NASA and the subcontractor selected to perform sludge excavation, disposal, and transportation-initiated lagoon closure fieldwork at the 100 Area and 200 Area Wastewater Lagoons on September 18, 2017. Initial efforts consisted of the removal and disposal of vegetation from the interior of the lagoons as solid waste in an appropriate landfill.

The revised 200 Area Wastewater Lagoons Sludge Disposal Management Plan was submitted to the NMED SWB and HWB on October 25, 2017 (NASA, 2017m). In order to complete waste characterization and disposal requirements, NASA collected sludge samples from the 100 and 200 Area Lagoons for analysis by the paint filter liquids test and toxicity characteristic leaching procedure (TCLP) as directed by the NMED SWB. The paint filter liquids test results were provided to the SWB on October 25, 2017 (NASA, 2017n). Results from TCLP analyses were submitted to the SWB on November 20, 2017 (NASA, 2017p). The SWB approved the 100 Area Wastewater Lagoons Sludge Disposal Management Plan and analytical results on December 19, 2017 (NMED, 2017k) and the 200 Area Wastewater Lagoons Sludge Disposal Management Plan and analytical results on December 21, 2017 (NMED, 2017l). The management plans were submitted to the NMED HWB, which provided fee assessments for their review on January 23, 2018 (NMED, 2018d, 2018e), and authorized sampling of the 100 and 200 Lagoon liners on January 31, 2018 (NMED, 2018f, 2018g).

2.5.1.1 100 Area Lagoons

NASA's sludge excavation and disposal subcontractor began removing sludge from the 100 Area Lagoons and transporting it to the Corralitos Regional Landfill in Las Cruces, NM for disposal on January 15, 2018. Following removal of sludge from the former 100 Area Lagoons, NASA determined that clay liners were not present in the form expected. As a result, NASA performed a study to characterize the shallow subsurface lithology. In February 2018, NASA completed the removal of sludge from the former 100 Area Wastewater Lagoons, and the sludge removed and disposed totaled 5,583 cubic yards (yd^3; 6,011 tons). NASA collected liner samples from the former 100 Area Lagoons in April 2018 and submitted them to the off-site laboratory for analysis. Following receipt and evaluation of the 100 Area Lagoons liner analytical results, NASA submitted the *NASA WSTF 100 Area Wastewater Lagoons Liner Management Plan Addendum* on July 3, 2018 (NASA, 2018k), which the NMED HWB approved with modifications on August 16, 2018 (NMED, 2018n).

2.5.1.2 200 Area Lagoons

During March 2018, NASA removed and disposed of 1,740 yd^3 (1,949 tons) of sludge from the former 200 Area Lagoons, which completed the sludge removal at these lagoons. NASA sampled the liner material within the 200 Area Lagoons in July 2018. NASA submitted the *NASA WSTF 200 Area Wastewater Lagoons Liner Management Plan Addendum* on October 4, 2018 (NASA, 2018o), and the NMED HWB provided the fee assessment for their review on November 30, 2018 (NMED, 2018x). The NMED HWB issued a memo to proceed on February 28, 2019 (NMED, 2019f).

2.5.1.3 600 Area Lagoons

NASA received and reviewed chemical analytical data from sludge samples collected at the west 600 Area Lagoon in December 2017. Several samples did not meet paint filter liquids test requirements and resampling was performed on January 30, 2018. NASA submitted the *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Sludge Disposal Management Plan* to the NMED SWB on February 26, 2018 (NASA, 2018c). The SWB approved the plan on March 1, 2018 (NMED, 2018i). From March through May 2018, NASA's sludge excavation and disposal subcontractor excavated, transported and disposed of 4,338 yd^3 (4,866 tons) of sludge from the former 600 Area Lagoons. All sludge excavated from the former wastewater lagoons was transported to the Corralitos Regional Landfill in Las Cruces, NM for disposal as New Mexico Special Waste. During sludge excavation activities at the west 600 Area Lagoon, NASA identified the presence of interbedded sludge and liner material in the northwestern lagoon berm. The interbedded materials were left in place pending liner sampling to fully characterize it prior to disposal. NASA sampled the liner material within the 600 Area Lagoons in August 2018, including the interbedded sludge and berm material within the northwestern berm of the 600 North Lagoon. NASA's sludge excavation and disposal subcontractor returned to WSTF on October 29, 2018, and continued excavation and disposal of sludge from the 600 Area Lagoons and transporting it to the Corralitos Regional Landfill in Las Cruces for disposal. Sludge excavation and disposal at the 600 Area Lagoons was completed in December 2018, the final quantity of sludge removed and disposed from these lagoons totaled 9,240 yd^3 (10,046 tons).NASA submitted the *NASA WSTF 600 Area Wastewater Lagoons Liner Management Plan Addendum* on October 30, 2018 (NASA, 2018q), and the NMED HWB provided the fee assessment for their review on November 30, 2018 (NMED, 2018y). The NMED HWB issued a memo to proceed on February 25, 2019 (NMED, 2019e).

2.5.1.4 STGT Lagoons

In June 2018, NASA and the off-site subcontractor used light duty construction equipment to manipulate the sludge in the STGT Lagoons to facilitate moisture reduction in preparation for sludge sampling.

Following sludge drying activities, NASA collected samples of sludge and evaluated sludge thickness at the STGT Lagoons in accordance with the approved Wastewater Lagoon Areas Closure Investigation Work Plan (NASA, 2013a).

NASA evaluated analytical data from STGT sludge samples and characterized the sludge as non-hazardous material. NASA submitted the *WSTF (White Sands Test Facility) STGT (Second TDRSS [Tracking and Data Relay Satellite System] Ground Terminal) Wastewater Lagoons Sludge Disposal Management Plan* on September 13, 2018 (NASA, 2018m). The NMED SWB approved this plan on September 28, 2018 (NMED, 2018s). The NMED HWB provided the fee assessment for their review on December 12, 2018 (NMED, 2018aa). NASA submitted the review fee to the NMED on December 13, 2018 (NASA, 2018s). The NMED HWB issued a memo to proceed on February 5, 2019 (NMED, 2019b).

In early October 2018, the rain gauge at the STGT Lagoons recorded approximately 2.5 in., which submerged the dried sludge in the STGT Lagoons with accumulated precipitation. NASA and the excavation contractor began sludge drying activities at the STGT Lagoons in December 2018, by pumping accumulated precipitation from the STGT South Lagoon into the North Lagoon so that mechanical sludge working and dewatering may proceed in the South Lagoon. In January 2019, the subcontractor completed mechanical manipulation of the sludge in the STGT Lagoons to facilitate sludge drying in order to meet paint filter test requirements prior to excavation and off-site disposal. During January 2019, NASA's off-site subcontractor removed approximately 30 yd^3 of sludge and debris from the southern STGT Lagoon. During February 2019, the subcontractor removed approximately 1,690 yd^3 of sludge and HDPE liner (approximately 1,700 tons) from the STGT Lagoons. During March 2019, the subcontractor removed approximately 220 yd^3 of sludge and 140 yd^3 of HDPE liner (approximately 244 tons of waste) from the STGT Lagoons. During April 2019, NASA removed approximately 180 yd^3 (approximately 176 tons) of residual sludge and 40 yd^3 of HDPE liner (approximately 1.9 tons of waste) from the STGT Lagoons. This completed removal of sludge and HDPE liner from the STGT Lagoons. All waste removed from the STGT Lagoons in 2019 was disposed of as New Mexico Special Waste at the Corralitos Regional Landfill.

NASA collected samples of the clay liner now exposed at the STGT Lagoons in April 2019. Clay liner samples were collected directly below the sludge sampling locations (three locations in the South Lagoon and two in the north), and additional liner samples were collected from areas potentially impacted by wastewater sludge as identified during waste removal activities. These samples were submitted to the off-site laboratories for chemical analyses. Results of these samples were evaluated and reported to the NMED in accordance with the approved work plan. NASA submitted the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on July 11, 2019 (NASA, 2019m).

2.5.2 Post-2019: Subsurface Investigations

In December 2018, NASA selected a drilling contractor to install soil borings at each lagoon area as indicated in the approved work plan. In January 2019, NASA's off-site drilling subcontractor installed 16 soil borings at the WSTF Wastewater Lagoons: nine borings within and adjacent to the 100 Area Lagoons; three borings adjacent to the 200 Area Lagoons; three borings adjacent to the 600 Area Lagoons; and, one boring adjacent to the STGT Lagoons. NASA collected soil samples from each boring at the intervals specified in the NMED-approved investigation work plan and submitted them to the off-site laboratories for analysis. NASA received and processed analytical data from soil samples collected from these 16 soil borings in February and March 2019. In June 2019, NASA's off-site drilling subcontractor installed 17 soil borings within and adjacent to 100, 200, 600, and STGT Wastewater Lagoons, completing the portion of the subsurface investigation for which NASA has NMED approval.

2.5.3 Interim Status Reports and Investigation Reports

2.5.3.1 100 Area Lagoons

NASA submitted the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report* on May 29, 2019 (NASA, 2019h), and the NMED HWB provided the fee assessment for their review on July 3, 2019 (NMED, 2019n). NASA paid the 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report fee on August 13, 2019 (NASA, 2019u). NMED responded to NASA's *100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report* on May 14, 2020 (NMED, 2020i). NMED 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, 2020l). NASA received NMED's fee assessment and invoice for $20,000 for *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report (*August 3, 2020) dated September 22, 2020. NASA requested a revised invoice in the amount of $18,000, and NMED issued the revised invoice on November 12, 2020 (NMED, 2020t). On November 30, 2020, NASA paid the fee assessment for NMED's review of the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report* (NASA, 2020y).

2.5.3.2 200 Area Lagoons

NASA submitted the *NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* to NMED on November 25, 2019 (NASA, 2019ee). NMED issued its *Fee Assessment 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* on January 15, 2020 (NMED, 2020a). NASA submitted the fee on February 25, 2020 (NASA, 2020e).

2.5.3.3 600 Area Lagoons

NASA submitted the *NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* to NMED on November 26, 2019 (NASA, 2019ff). NMED issued its *Fee Assessment NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* on January 15, 2020 (NMED, 2020c). NASA submitted the fee on February 25, 2020 (NASA, 2020f).

2.5.3.4 STGT Lagoons

NASA submitted the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on July 11, 2019. NMED HWB provided the fee assessment for their review on August 19, 2019 (NMED, 2019r). NASA paid the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* review fee on September 10, 2019 (NASA, 2019x).

NASA addressed NMED's comments in the *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum* (NMED, 2019x) and submitted *the Response to Approval with Modifications for NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on December 5, 2019 (NASA, 2019gg). 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 submitted the White Sands Test Facility WSTF STGT Wastewater Lagoons Closure (AOC 51) Investigation Report on October 13, 2020 (NASA, 2020w). NMED issued its *Fee Assessment NASA White Sands Test Facility (WSTF) STGT*

Wastewater Lagoons Closure (AOC 51) Investigation Report on November 19, 2020 (NMED, 2020v). NASA paid the review fee on February 18, 2021 (NASA, 2021c).

2.6 SWMU 10 (200 Area Hazardous Waste Transmission Lines)

NASA performed fieldwork activities to excavate and remove remaining sections of the abandoned Hazardous Waste Transmission Line (HWTL) between May and November 2016 in accordance with the NMED-approved 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Work Plan and Historical Information Summary on June 29, 2015 (NASA, 2015c). NASA identified, excavated, sampled, and removed all accessible portions of the stainless steel and PVC HWTL. NASA then backfilled and restored the remaining exposed trenches in various work areas.

On December 14, 2017, NASA submitted the *NASA WSTF 200 Area HWTL (SWMU 10) HWTL Investigation Report* (NASA, 2017r). NASA received NMED's January 12, 2018, Fee Assessment for the investigation report (NMED, 2018a) and submitted the *Fee Assessment – NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* on March 13, 2018 (NASA, 2018f). NMED disapproved the investigation report on November 16, 2018 (NMED, 2018v) and directed NASA to address 22 NMED comments and submit a revised report by July 31, 2019. NASA submitted the *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* on July 30, 2019 (NASA, 2019r). On November 16, 2020, NMED disapproved the *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report* (July 30, 2019) (NMED, 2020u) and directed NASA to address 16 comments including resampling along the HWTL.

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

In November and December 2015, NASA performed investigation fieldwork at the 600 Area BLM Off-Site Soil Pile in accordance with the NMED-approved *NASA WSTF 600 Area BLM Off-Site Soil Pile (SWMU 16) Investigation Work Plan and Historical Information Summary* (NASA, 2014). On February 25, 2016, NASA submitted the SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report (NASA, 2016c) to NMED, which disapproved the report on October 14, 2016 (NMED, 2016d). NASA provided the *Response to Disapproval of NASA WSTF SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on January 26, 2017 (NASA, 2017b). NASA received NMED's June 27, 2017, *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report* (NMED, 2017e) and incorporated all pertinent comments into the revised SMWU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report, completed the human health and ecological risk screening tasks, and prepared the revised investigation report. On November 28, 2017, NASA submitted the *Response to Second Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-site Soil Pile) Investigation Report* (NASA, 2017q). On June 19, 2018, NMED disapproved the revised investigation report and directed NASA to prepare and submit a revised report by October 31, 2018 (NMED, 2018k). NASA submitted a request for extension of time for submittal of the revised investigation report on October 4, 2018 (NASA, 2018p). NMED approved the extension request on October 19, 2018 (NMED, 2018u) and required the submittal of a revised investigation report by December 31, 2018. NASA submitted the *Response to Third Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* on December 21, 2018 (NASA, 2018w).

NMED provided the *Disapproval 600 Area Bureau of Land Management Off-site Soil Pile (SWMU 16) Revised Investigation Report* on October 8, 2019 (NMED, 2019y). NMED directed NASA to address eight comments, revise the investigation report, and submit the response to comments and the revised investigation report no later than December 31, 2019. NASA addressed NMED's comments and submitted the *Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report* to NMED on December 18, 2019 (NASA, 2019jj).

2.8 SWMUs 18–20 (700 Area High Energy Blast Facility, 800 Area Below Grade Storage Tank, and 800 Area Oxidizer Burner)

NASA performed investigation fieldwork at the 800 Area Below Grade Storage Tank (SWMU 19) in December 2015 in accordance with the NMED-approved 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan (NASA, 2015b; NMED, 2015c). On February 17, 2016, NASA submitted the SMWU 19 (800 Area Below Grade Storage Tank) Investigation Report (NASA, 2016a) to NMED. NMED disapproved the investigation report on July 29, 2016 (NMED, 2016c) and directed NASA to perform additional fieldwork and submit a revised investigation report. NASA completed and submitted the 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling on November 16, 2016 (NASA, 2016f). NMED approved the work plan with modifications on March 31, 2017 (NMED, 2017c). NASA submitted the *Response to NMED Approval with Modifications of the 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Sampling* on April 20, 2017 (NASA, 2017f). NASA performed the required additional fieldwork in October 2017. NASA submitted the *Request for Extension of Time for Submittal of 800 Area BGST (SWMU 19) Revised Investigation Report* on September 5, 2017 (NASA, 2017j). NMED approved the extension on September 29, 2017 (NMED, 2017i). NASA submitted the *Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* to NMED on January 30, 2018 (NASA, 2018a). NMED disapproved the investigation report on December 7, 2018 (NMED, 2018z) and directed NASA to address eight NMED comments and submit a revised investigation report no later than June 30, 2019. NASA submitted the *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* on June 27, 2019 (NASA, 2019l). NMED reviewed the *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report* (NASA, 2019d), and issued the *Approval with Modifications Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report* on August 27, 2020 (NMED, 2020j).

2.9 SWMUs 21–27 (Septic Tanks)

NASA submitted the *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMU 21-27) Investigation Work Plan and WSTF Septic Tanks Historical Information Summary* to NMED on June 27, 2013 (NASA, 2013b). The IWP and HIS were approved by the NMED HWB on November 8, 2013 (NMED, 2013c). The removal plan portion of the IWP for non-SWMU tanks was approved by the NMED Liquid Waste Program on December 5, 2013 (NMED, 2013d).

The septic tank at Building 114 (SWMU 22) was the only one to have received hazardous waste. NASA performed investigation fieldwork at the SWMU 22 tank location in accordance with the approved work plan. Soil samples were collected from five borings and submitted to the contracted off-site laboratory for analysis of cyanide and silver. Following that initial fieldwork, NASA determined that additional soil sampling was required at the former location of the Building 114 septic tank (SWMU 22). NASA submitted the *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report Schedule Update* on September 6, 2017 (NASA, 2017k). In October 2017, NASA installed two additional borings through the former Building 114 septic tank (SWMU 22) location and collected soil samples at the interface between the clean fill and native soil.

NASA evaluated historical information available for SWMUs 21–27 and concluded that only SWMU 22, the Building 114 septic tank, received hazardous waste and required an investigation. NASA investigated the former Building 114 septic tank location and provided the results to NMED in the *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* submitted to NMED on February 27, 2018 (NASA, 2018d). NMED disapproved the investigation report on February 6, 2019 (NMED, 2019c) and directed NASA to address eight NMED comments and submit a revised investigation report no later than July 31, 2019. 2019. NASA submitted the *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27)*

Investigation Report on July 23, 2019 (NASA, 2019p). NMED disapproved NASA's July 23, 2019, *Response to Disapproval of NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report* (the revised IR) on January 29, 2021 and directed NASA to address six comments no later than May 30, 2021 (NMED 2021b).

2.10 SWMUs 29-31 (Small Arms Firing Ranges)

NASA submitted the *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Accelerated Corrective Measures Work Plan and Historical Information Summary* on February 26, 2015 (NASA, 2015a). NMED approved the work plan with modifications on May 29, 2015 (NMED, 2015a). Following project planning and procurement activities, NASA performed initial pre-cleanup field screening in August and September 2015. In late 2015 and 2016, NASA consulted with NMED and determined that additional corrective action was required. NASA performed field screening, manual recovery of ammunition fragments, soil excavation, confirmation soil sampling, and waste management and off-site disposal at the three firing ranges. NASA completed and submitted the *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* on March 30, 2017 (NASA, 2017d). NASA received NMED's September 7, 2017, *Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* (NMED, 2017h) and requested an extension of time for submittal of the required response (NASA, 2017o). NMED approved the request on December 1, 2017, which extended the due date for NASA's response to March 30, 2018 (NMED, 2017j). NASA completed and submitted the *Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report* to NMED on March 29, 2018 (NASA, 2018g). NMED disapproved the report February 21, 2019 (NMED, 2019d) and directed NASA to address seven NMED comments and submit a revised investigation report no later than December 31, 2019. NASA initiated additional fieldwork required to respond to NMED's February 21, 2019, *Second Disapproval of Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report.* In September 2019, NASA initiated and completed collection of discrete soil samples from randomly selected quadrants of each sampling grid cell. Grid cells located within the footprint of the former wastewater lagoons could not be sampled until NASA received NMED approval of the *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* submitted on July 11, 2019.

In October 2019, NASA completed discrete soil sampling at the WB-2 firing range (SWMU 31). During that sampling exercise, NASA observed several residual ammunition fragments near the impact berm where soil was drug back by heavy equipment during previous soil excavation. NASA evaluated the quantity and distribution of these fragments and determined that additional soil excavation was required. On December 12, 2019, NASA excavated approximately 4 yd^3 of lead-impacted soil from the vicinity of the impact berm at the WB-2 firing range. Follow-on field screening indicated that the minimal fragments remaining in the soil could be recovered manually.

Following the *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum* (NMED, 2019x), which authorized NASA to perform additional fieldwork at the firing range floor that underlies the wastewater lagoon liner, NASA performed discrete soil sampling and additional corrective measures fieldwork at the STGT Firing Range (SWMU 29). NASA manually collected ammunition scraps and fragments from previously unsearched portions of the range thus accessible. Manual recovery was completed on November 18, 2019. NASA then collected discrete soil samples from all sampling grid cells at the STGT firing range and shipped samples to the off-site laboratory for analysis.

On October 28, 2019, NASA submitted the *Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report* (NASA, 2019bb). NMED approved the request on November 13, 2019 (NMED, 2019z), extending the due date for submittal of the disapproval response and revised remedy completion report from December 31, 2019 to February 28, 2020. 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, 2020h), 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, 2020m).

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

Anticipating closure of Test Stand 302A 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, 2020s), and on September 22, 2020, NMED issued its *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary* (NMED, 2020r).

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, 2018n). NASA received NMED's October 15, 2018 fee assessment for review of the work plan (NMED, 2018t) and submitted the $10,000 review fee on December 19, 2018 (NASA, 2018t). NMED disapproved the *500 Area Fuel Storage (SWMU 47) Investigation Work Plan* on August 8, 2019 and directed NASA to address 14 comments and submit a revised work plan no later than November 25, 2019 (NMED, 2019q). NASA responded to NMED's 14 comments and submitted the *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* on November 21, 2019 (NASA, 2019dd). NMED disapproved the *Response to Disapproval of 500 Area (SWMU 47) Investigation Work Plan* (November 21, 2019; the revised IWP) on March 29, 2021 and directed NASA to address five comments and submit a revised IWP no later than July 31, 2021 (NMED, 2021h).

2.13 SWMU 49 (700 Area Landfill)

NASA prepared and submitted the *NASA White Sands Test Facility (WSTF) SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (IWP) and Historical Information Summary (HIS)* to NMED on December 28, 2017 (NASA, 2017u). NASA received NMED's February 7, 2018 fee assessment for review of the work plan (NMED, 2018h) and submitted the *Fee Assessment for SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary* on March 5, 2018 (NASA, 2018e). NMED disapproved the work plan on November 29, 2018 (NMED, 2018w) and directed NASA to address eight NMED comments and submit a revised investigation work plan no later than May 31, 2019. NASA submitted the *Response to NMED Disapproval SWMU 49 (700 Area Landfill) Phase 1 Investigation Work Plan and Historical Information Summary* on March 28, 2019 (NASA, 2019c). NMED issued an approval with modifications on June 6, 2019 (NMED, 2019l). NASA responded to the approval with modifications on August 8, 2019 (NASA, 2019t).

In late November 2019, NASA systematically deployed 159 passive soil vapor samplers within the conduits for vapor implants, as well as within existing landfill methane and groundwater monitoring wells. This shallow soil vapor survey was described as investigation Phase 1A in the revised SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (NASA, 2019t). In early December 2019, NASA recovered the passive soil samplers after their 14-day residence time and shipped them to the off-site laboratory for analysis. In December 2019, NASA began removing vegetation from the landfill closure cap in accordance with NMED SWB approval (NMED, 2019w) in preparation for the planned

geophysical investigations. A contract was awarded to perform the electromagnetic induction and magnetic gradient surveys. NASA and the subcontracted geophysics firm performed the EMI and magnetic gradient field surveys between February 24 and 28, 2020.

In the second quarter of 2020, and due to 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, 2020l). NASA also completed procurement of ground penetrating radar and passive seismic surveys as described in the NMED-approved landfill investigation work plan. NMED issued an *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on July 1, 2020 (NMED, 2020m). The approved extension for the Phase I field investigation report was to March 31, 2021. 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 issued an *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report* on March 15, 2021 (NMED, 2021d). The approved extension for the Phase I field investigation report was April 29, 2022.

2.14 SWMU 50 (First TDRSS Diesel Release)

NASA prepared and submitted the *NASA WSTF First TDRSS Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary* to NMED on June 29, 2016 (NASA, 2016d). NMED disapproved the work plan on January 25, 2017 (NMED, 2017a). NASA revised the work plan in accordance with NMED comments and submitted the *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan* on July 27, 2017 (NASA, 2017g). NMED approved the revised work plan on January 17, 2018 (NMED, 2018c). In April 2018, NASA initiated investigation fieldwork in accordance with the *Approval Request for Deferral of Investigation of Subsurface at TDRSS Diesel Release* (NMED, 2018b) and the revision was submitted to NMED on April 9, 2018 (NASA, 2018h). Soil vapor, indoor air, and outdoor air sample locations were verified, and soil vapor implants were installed and allowed to equilibrate prior to sample collection. NASA performed investigation fieldwork in accordance with the approved plan in May and November 2018 and submitted soil vapor, indoor air, and outdoor air samples to the off-site laboratory for analysis. NASA received and evaluated analytical data from these sampling events in late 2018 and 2019. NASA submitted the *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report* on March 14, 2019 (NASA, 2019b). NASA received NMED's April 12, 2019 fee assessment for review of the investigation report (NMED, 2019g) and submitted the $7,500 review fee on May 28, 2019 (NASA, 2019f). NMED issued a disapproval of the First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report on July 8, 2020 (NMED, 2020n).

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, 2020t). NASA submitted the *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report* to NMED HWB on February 18, 2021 (NASA, 2021d).

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, 2020v). 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, 2020x) 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. The NMED PSTB approved NASA's *Second TDRSS UST Minimum Site Assessment Work Plan* of November 18, 2020 (NASA, 2020x) on February 4, 2021 (NMED, 2021c).

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.

2.16 Newly Identified SWMU

While researching documentation related to the Fuel Treatment Unit (FTU), NASA identified the location of a former 500 Area oxidizer as a potential new SWMU. NASA issued a *Fifteen-Day Notification of a Newly Identified SWMU within the WSTF 500 Area* on October 16 (NASA, 2019aa). NMED acknowledged receipt of the fifteen-day notification on November 13, 2019 (NMED, 2019aa) 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, 2020o). NMED HWB issued its *Fee Assessment 500 Area Newly Identified SWMU* on July 23, 2020 (NMED, 2020p), and NASA paid the fee on August 31, 2020 (NASA, 2020u).

3.0 References

NASA Johnson Space Center White Sands Test Facility. (2011, June 27). *400 Area Closure Investigation Work Plan, 400 Area Historical Information Summary (HIS), 400 Aspirator Discharge Pipes HIS, and 500 Fuel Storage Area HIS*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2012, October 15). *NASA White Sands Test Facility (WSTF) Wastewater Lagoon Areas Closure Investigation Work Plan and Wastewater Lagoon Areas Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2013a, February 21). *NMED Approval with Modifications Wastewater Lagoon Areas Historical Information Summary and Closure Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2013b, June 27). *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMU 21-27) Investigation Work Plan and WSTF Septic Tanks Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2014, December 29). *NASA WSTF 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015a, February 26). *NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Accelerated Corrective Measures Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015b, June 25). *NASA WSTF 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015c, June 29). *NASA WSTF 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015d, June 29). *NASA WSTF 200 Area Phase II Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2015e, July 14). *Initiation of Sanitary Sewer Service to the City of Las Cruces and Implementation of the WSTF Wastewater Lagoon Areas Closure Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016a, February 17). *NASA WSTF SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016b, February 25). *200 and 600 Area Vapor Intrusion Assessment Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016c, February 25). *NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016d, June 29). *NASA WSTF First TDRSS Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016e, July 28). *400 Area Investigation Abbreviated Drilling Work Plan and Notification of Field Work Commencement*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016f, November 16). *800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2016g, December 22). *Response to Disapproval of Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017a, January 26). *NASA White Sands Test Facility (WSTF) Updated Soil Vapor Risk-Based Concentrations (RBCs) Memorandum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017b, January 26). *Response to Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017c, March 22). *Well Reconfiguration Report for Westbay Wells JER-1, JER-2, ST-6, and ST-7*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017d, March 30). *NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017e, March 30). *Work Plan for Westbay Wells Conversion WW-3, PL-5, PL-6, PL-7, PL-8*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017f, April 20). *Response to Approval with Modification 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan and Additional Required Sampling*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017g, July 27). *Response to Disapproval of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017h, August 29). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017i, August 29). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017j, September 5). *Request for Extension of Time for Submittal of 800 Area BGST (SWMU 19) Revised Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017k, September 6). *NASA WSTF Septic Tanks (SWMUs 21-27) Investigation Report Schedule Update*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017l, October 18). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017m, October 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017n, October 25). *Paint Filter Liquids Test Results for NASA White Sands Test Facility (WSTF) 100 Area and 200 Area Wastewater Lagoons Sludge*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017o, November 8). *Request for Extension of Time for Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017p, November 20). *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Sludge TCLP Sampling Results*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017q, November 28). *Response to Second Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017r, December 14). *NASA WSTF 200 Area HWTL (SWMU 10) HWTL Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017s, December 27). *NASA WSTF 400 Area Closure Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017t, December 27). *NASA WSTF Drilling Work Plan for Groundwater Monitoring Well PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017u, December 28). *NASA White Sands Test Facility (WSTF) SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2017v, December 28). *Well Reconfiguration Work Plan for Well BLM-30*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018a, January 30). *Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018b, January 30). *Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018c, February 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018d, February 27). *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21 – 27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018e, March 5). *Fee Assessment for SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary (NMED Invoice Number HWB-NASA-18-001)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018f, March 13). *Fee Assessment – NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018g, March 29). *Response to Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018h, April 9). *Response to Approval with Modifications of First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Revised Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018i, June 13). *Response to Disapproval – NASA White Sands Test Facility (WSTF) Well Completion Report 400 Area Monitoring Wells*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018j, June 18). *200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018k, July 3). *NASA WSTF 100 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018l, August 22). *Request for Extension of Time for Performing 600 Area Perched Groundwater Investigation due to Ongoing Wastewater Lagoon Investigation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018m, September 13). *WSTF (White Sands Test Facility) STGT (Second TDRSS [Tracking and Data Relay Satellite System] Ground Terminal) Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018n, September 26). *500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018o, October 4). *NASA WSTF 200 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018p, October 4). *Request for Extension of Time for 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU) Revised Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018q, October 30). *NASA WSTF 600 Area Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018r, November 29). *NASA WSTF 400 Area Closure Investigation Report – NMED Disapproval Response*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018s, December 13). *Fee Assessment - WSTF STGT Area Wastewater Lagoons Sludge Disposal Management Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018t, December 19). *Fee Assessment for 500 Area Fuel Storage (SWMU 47) Investigation Work Plan (NMED Invoice Number HWB-NASA-18-016)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018u, December 20). *Request for Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018v, December 21). *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 1: FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2018w, December 21). *Response to Third Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019a, February 25). *Well Plugging Plan of Operations for NASA Wells BLM-37 (LRG-16097 POD 1) and PL-5*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019b, March 14). *First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019c, March 28). *Response to NMED Disapproval SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019d, April 25). *Request for Extension of Time for Well BLM-30 Reconfiguration Status Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019e, April 30). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 6*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019f, May 28). *Fee Assessment for First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SMWU 50) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019g, May 29). *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019h, May 29). *NASA WSTF (White Sands Test Facility) 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019i, May 30). *300 Area Supplemental Abbreviated Drilling Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019j, June 21). *NASA WSTF BLM-42 Monitoring Well Design*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019k, June 24). *NASA WSTF BLM-42 Monitoring Well Design*. Email. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019l, June 27). *Response to Disapproval of Revised SWMU 19 (800 Area Below Grade Storage Tank) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019m, July 11). *NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019n, July 16). *Fee Assessment for NASA WSTF Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6, April 2019*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019o, July 19). *NASA WSTF PL-12 Monitoring Well Design*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019p, July 23). *Response to Disapproval of NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21-27) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019q, July 30). *Response to Approval with Modifications of Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019r, July 30). *Response to Disapproval of the NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019s, August 7). *Request to Remove Electrical Resistivity Component of the 600 Area Perched Groundwater Geophysical Survey based on Geophysical Subcontractor Input Received during the Procurement Process*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019t, August 8). *Response to NMED Approval with Modifications SWMU 49 (700 Area Landfill) Phase I Investigation Work Plan and Historical Information Summary*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019u, August 13). *Fee Assessment for 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report (NMED Invoice Number HWB-NASA-19-012)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019v, August 13). *Fee Assessment for 300 Area Supplemental Abbreviated Drilling Work Plan (NMED Invoice Number HWB-NASA-19-010)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019w, August 29). *NASA WSTF Drilling Work Plan for Abandonment of Well BLM-30 and Drilling of New Groundwater Monitoring Well BLM-43*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019x, September 10). *Fee Assessment for STGT Wastewater Lagoons Liner Management Plan Addendum (NMED Invoice Number HWB-NASA-19-017)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019y, September 17). *Request for Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019z, October 7). *Fee Assessment for 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019aa, October 16). *Fifteen-Day Notification of a Newly Identified SWMU within the WSTF 500 Area*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019bb, October 28). *Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019cc, October 31). *Fee Assessment for BLM-30 Abandonment and BLM-43 Drilling Work Plan (NMED Invoice Number HWB-NASA-19-018)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019dd, November 21). *Response to Disapproval of 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ee, November 25). *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ff, November 26). *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019gg, December 5). *Response to Approval with Modifications for NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019hh, December 11). *Request for Second Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ii, December 17). *Request for Second Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Email. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019jj, December 18). *Response to Fourth Disapproval of NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile) Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019kk, December 19). *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*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2019ll, December 30). *NASA WSTF 400 Area Closure Investigation Report – NMED Second Disapproval Response*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020a, January 29). *Second Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29 – 31) Response to Second Disapproval Remedy Completion Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020b, January 30). *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020c, February 6). *Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020d, February 12). *Fee Assessment for NASA WSTF 600 Area Closure Geophysical Survey Status Report, November 2019 (NMED Invoice Number HWB-NASA-19-023)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020e, February 25). *Fee Assessment for NASA WSTF 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report, November 2019 (NMED Invoice Number HWB-NASA-19-021)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020f, February 25). *Fee Assessment for NASA WSTF 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report (NMED Invoice Number HWB-NASA-19-022)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020g, February 27). *Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020h, March 24). *Request for Extension of Time for Submittal of the 600 Area Perched Groundwater Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020i, April 20). *Fee Assessment for Groundwater Data Representativeness Phase I: FLUTe Well Evaluation Abbreviated Investigation Report Invoice Number (HWB-NASA-20-003)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020j, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for BLM-42*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020k, May 4). *NASA White Sands Test Facility (WSTF) Well Completion Report for PL-12*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020l, May 4). *Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020m, May 4). *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020n, May 26). *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 7*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020o, June 22). *500 Area Newly Identified SWMU Release Assessment Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020p, August 3). *Fee Assessment for BLM-42 Well Completion Report (NMED Invoice Number HWB-NASA-20-004)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020q, August 3). *Fee Assessment for PL-12 Well Completion Report (NMED Invoice Number HWB-NASA-20-005)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020r, August 17). *Fee Assessment for Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year Seven (NMED Invoice Number HWB-NASA-20-006)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020s, August 17). *NASA White Sands Test Facility (WSTF) 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020t, August 17). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Notification*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020u, August 31). *Fee Assessment for NASA White Sands Test Facility (WSTF) 500 Area Newly Identified SWMU (NMED Invoice Number HWB-NASA-20-009)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020v, September 21). *NASA White Sands Test Facility Hazardous Waste Operating Permit SWMU 52 Incident Update*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020w, October 13). *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report*. Las Cruces, NM.

NASA White Sands Complex. (2020x, November 18). *Second TDRSS UST Minimum Site Assessment Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020y, November 30). *Fee Assessment for NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2020z, November 30). *Request for Fourth Extension of Time for Well Reconfiguration Work Plan*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021a, February 3). *Response to Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021b, February 3). *Second Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021c, February 18). *Fee Assessment for STGT Wastewater Lagoons Closure (AOC 51) Investigation Report (NMED Invoice Number HWB-NASA-20-016)*. Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021d, February 18). *Second TDRSS Underground Storage Tank (SWMU 52) Release Assessment Report.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021e, March 15). *Application for Permit to Drill Monitoring Well (BLM-43) with No Consumptive Use of Water at NASA-JSC White Sands Test Facility.* Las Cruces, NM.

NASA Johnson Space Center White Sands Test Facility. (2021f, March 15). *Well Plugging Plan of Operations for NASA Well BLM-30.* Las Cruces, NM.

NMED Hazardous Waste Bureau. (2013a, January 3). *Approval with Modifications Wastewater Lagoon Areas Historical Information Summary and Closure Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013b, March 1). *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2013c, November 8). *Approval with Modifications WSTF Septic Tanks (SWMU 21-27) Historical Information Summary and Investigation Work Plan*. Santa Fe, NM.

NMED Liquid Waste Program. (2013d, December 5). *WSTF Septic Tanks Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau (2015a, May 29). *Approval with Modification NASA WSTF Small Arms Firing Ranges (SWMUS 29-31) Accelerated Corrective Action Measures Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015b, June 17). *Approval Request for Additional Extension of Time for Implementation of Lagoon Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015c, August 11). *Approval with Modifications 800 Area BGST (SWMU 19) Abbreviated Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015d, November 30). *Approval with Modification 200 Area Phase II Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2015e, December 2). *Approval Request for Extension of Time for Conversion of Westbay Wells BLM-28, WW-4, and WW-5*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016a, March 29). *Approval NASA WSTF Periodic Monitoring Report Fourth Quarter 2015*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016b, May 27). *Approval 200 Area and 600 Area Vapor Intrusion Assessment Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016c, July 29). *Disapproval 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2016d, October 14). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017a, January 25). *Disapproval First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017b, March 31). *Approval Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017c, March 31). *Approval with Modification 800 Area Below Grade Storage Tank (SWMU 19) Abbreviated Investigation Work Plan for Additional Required Sampling*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017d, April 12). *Approval Updated Soil Vapor Risk Based Concentrations (RBCs) Memorandum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017e, June 27). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017f, July 7). *Approval with Modification Well Reconfiguration Summary Reports JER-1, JER-2, ST-6, and ST-7*. Santa Fe, NM.

NMED Ground Water Quality Bureau. (2017g, July 14). *Discharge Permit Renewal and Modification, DP-1255, NASA White Sands Testing Facility*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017h, September 7). *Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017i, September 29). *Approval Request for Extension of Time for Submittal of 800 Area Below Grade Storage Tank Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2017j, December 1). *Approval Request for Extension of Time for Response to Disapproval Small Arms Firing Range (SWMUs 29-31)*. Santa Fe, NM.

NMED Solid Waste Bureau. (2017k, December 19). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 100 Area*. Santa Fe, NM.

NMED Solid Waste Bureau. (2017l, December 21). *Approval of Sludge Disposal Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 200 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018a, January 12). *Fee Assessment 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018b, January 17). *Approval Request for Deferral of Investigation of Subsurface at TDRSS Diesel Release*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018c, January 17). *Approval with Modifications First Tracking Data Relay Satellite System (TDRSS) Diesel Release (SWMU 50) Revised Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018d, January 23). *Fee Assessment 100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018e, January 23). *Fee Assessment 200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018f, January 31). *100 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018g, January 31). *200 Area Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018h, February 7). *Fee Assessment SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Solid Waste Bureau. (2018i, March 1). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility 600 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018j, March 27). *Disapproval 400 Area Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018k, June 19). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018l, July 26). *Approval 400 Area Well Completion Summary Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018m, August 14). *Disapproval 400 Area Closure Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018n, August 16). *100 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018o, September 10). *Approval Work Plan for Abandonment of NASA WSTF Monitoring Well BLM-37 and Replacement with Monitoring Well BLM-42*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018p, September 10). *Approval Work Plan for Abandonment of NASA WSTF Well PL-5 and Replacement with Monitoring Well PL-12*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018q, September 13). *Approval Request for Extension 600 Area Perched Groundwater Investigation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018r, September 13). *Approval Well Reconfiguration Work Plan for Well BLM-30*. Santa Fe, NM.

NMED Solid Waste Bureau. (2018s, September 28). *Approval of Sludge Disposal Management Plan ("DMP") and Laboratory Analysis - NASA White Sands Test Facility, Second Tracking and Data Relay Satellite System Ground Terminal Wastewater Lagoons*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018t, October 15). *Fee Assessment 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018u, October 19). *Approval Request for Extension of Time for 600 Area Bureau of Land Management Off-Site Soil Pile Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018v, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018w, November 29). *Disapproval SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018x, November 30). *Fee Assessment 200 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018y, November 30). *Fee Assessment 600 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018z, December 7). *Disapproval Revised 800 Area Below Grade Storage Tank (SWMU 19) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2018aa, December 12). F*ee Assessment WSTF STGT Wastewater Lagoon Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019a, January 10). *Approval Request for Extension of Time for Well Reconfiguration Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019b, February 5). *WSTF STGT Wastewater Lagoons Sludge Disposal Management Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019c, February 6). *Disapproval Septic Tanks (SWMUs 21-27) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019d, February 21). *Second Disapproval Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019e, February 25). *600 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019f, February 28). *200 Area Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019g, April 12). *Fee Assessment First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019h, May 2). *Approval Request for Extension of Time Well BLM-30 Reconfiguration Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019i, May 13). *Approval with Modifications Abbreviated Investigation Work Plan Groundwater Data Representativeness Phase 1: Water Flute Well Evaluation*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019j, May 31). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019k, June 5). *Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019l, June 6). *Approval with Modifications SWMU 49, 700 Area Landfill Phase I Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019m, June 24). *Approval NASA WSTF BLM-42 Monitoring Well Design*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019n, July 3). *Fee Assessment 100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019o, July 3). *Fee Assessment 300 Area Supplemental Abbreviated Drilling Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019p, July 3). *Fee Assessment 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019q, August 8). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019r, August 19). *Fee Assessment STGT Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019s, August 23). *Work Scope Modification Request Abbreviated Investigation Work Plan for 600 Area Perched Groundwater*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019t, September 3). *Approval Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Project Year 6*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019u, September 16). *Disapproval 400 Area Closure Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019v, September 20). *Fee Assessment Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43*. Santa Fe, NM.

NMED Solid Waste Bureau. (2019w, September 25). *NASA White Sands Test Facility 700 Area Landfill, Phase I Investigation Request*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019x, October 8). *Approval with Modifications STGT Wastewater Lagoons Liner Management Plan Addendum*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019y, October 8). *Disapproval 600 Area Bureau of Land Management Off-Site Soil Pile (SWMU 16) Revised Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019z, November 13). *Approval Request for Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Response to Second Disapproval Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2019aa, November 13). *Fifteen-Day Notification of a Newly Identified SWMU Within WSTF 500 Area*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020a, January 15). *Fee Assessment 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020b, January 15). *Fee Assessment 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020c, January 15). *Fee Assessment NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020d, January 16). *Approval Request for Extension of Time for Well Reconfiguration Work Plan*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020e, January 16). *Approval Request for Second of Extension of Time for Response to Disapproval 200 Area and 600 Area Vapor Intrusion Assessment Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020f, February 17). *Approval Third Request for Extension of Time for BLM-42 and PL-12 Well Completion Reports*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020g, March 20). *Fee Assessment Groundwater Data Representativeness Phase 1: Water FLUTe Well Evaluation Abbreviated Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020h, March 21). *Approval Request for Second Extension of Time for NASA WSTF Small Arms Firing Ranges (SWMUs 29-31) Response to Second Disapproval Remedy Completion Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020i, May 14). *100 Area Wastewater Lagoons Closure (SWMU 2) Interim Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020j, May 28). *Fee Assessment Well Completion Report for BLM-42*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020k, May 28). *Fee Assessment Well Completion Report for PL-12*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020l, July 1). *Approval Request for Extension of Time for Submittal of 600 Area Perched Groundwater Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020m, July 1). *Approval Request for Extension of Time for Submittal of the SWMU 49 (700 Area Landfill) Phase I Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020n, July 8). *Disapproval First TDRSS (Tracking and Data Relay Satellite System) Diesel Release (SWMU 50) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020o, July 9). *Fee Assessment Interim Status Report for 600 Area Perched Groundwater Extraction Pilot Test Year Seven*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020p, July 23). *Fee Assessment 500 Area Newly Identified SWMU*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020q, September 22). *Fee Assessment 100 Area Waste Water Lagoons Closure (SWMU2) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020r, September 22). *Fee Assessment 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan and Historical Information Summary*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020s, November 5). *Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement With Monitoring Well BLM-43*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020t, November 12). *Replacement Fee Assessment 100 Area Waste Water Lagoons Closure (SWMU 2) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020u, November 16). *Disapproval 200 Area Hazardous Waste Transmission Lines (SWMU 10) Investigation Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020v, November 19). *Fee Assessment STGT Wastewater Lagoons Closure (AOC 51) Investigation Report. Santa Fe*, NM.

NMED Hazardous Waste Bureau. (2020w, November 19). *Well Reconfiguration Report for Well BLM-28 and Notice of Intent to Plug and Abandon*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2020x, December 22). *Approval with Modifications 600 Area Closure Geophysical Survey Status Report*. Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021a, January 25). *Approval Request for Fourth Extension of Time for Well Reconfiguration Work Plan.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021b, January 29). *Disapproval Revised WSTF Septic Tanks (SWMUs 21-27) Investigation Report.* Santa Fe, NM.

NMED Petroleum Storage Tank Bureau. (2021c, February 4). *Technical Approval of Minimum Site Assessment Workplan for White Sand Complex.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021d, March 15). *Approval Request for Extension of Time for Submittal of The SWMU 49 (700 Area Landfill) Phase I Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021e, March 15). *Disapproval 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021f, March 19). *Disapproval 300 Area Supplemental Abbreviated Drilling Work Plan.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021g, March 19). *Disapproval 400 Area Closure Investigation Report.* Santa Fe, NM.

NMED Hazardous Waste Bureau. (2021h, March 19). *Disapproval 500 Area Fuel Storage (SWMU 47) Investigation Work Plan: Phase I.* Santa Fe, NM.

NM Office of the State Engineer. (2019a, March 12). *Plugging Plan Approval for LRG-16097 POD1*. Las Cruces, NM.

NM Office of the State Engineer. (2019b, March 13). *Plugging Plan Approval for LRG-17595 POD1 (PL-5)*. Las Cruces, NM.