

APPENDIX F-1

Data Quality Evaluation Report – Groundwater Samples (July–September 2020)

LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
AFB	Air Force Base
BFF	Bulk Fuels Facility
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DL	detection limit
DoD	Department of Defense
EB	equipment rinse blank
EDB	ethylene dibromide
ELLE	Eurofins Lancaster Laboratories Environmental, LLC
EPA	U.S. Environmental Protection Agency
GWM	groundwater monitoring
ICP	inductively coupled plasma
ICS	interference check sample
IS	internal standard
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantification
MS	matrix spike
MSD	matrix spike duplicate
Q3	third quarter of the year (July 1 through September 30)
QAPjP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RL	reporting limit
RPD	relative percent different
SDG	sample delivery group
SM	Standard Method
SW	Solid Waste
SWMU	Solid Waste Management Unit
VOA	volatile organic analysis
VOC	volatile organic compound

F-1. DATA QUALITY EVALUATION REPORT GROUNDWATER SAMPLES (July–September 2020)

1. LABORATORY DATA QUALITY SUMMARY

This Data Quality Evaluation Report describes the findings of the data validation performed for the third quarter (Q3) 2020 groundwater monitoring (GWM) chemical analytical data collected in support of the Work Plan, Bulk Fuels Facility (BFF) Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design Revision 2, Solid Waste Management Units (SWMUs) ST-106/SS-111, Kirtland Air Force Base (AFB), New Mexico (Kirtland AFB, 2017a); Work Plan for Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling Revision 1, BFF, SWMUs ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2017b; and Work Plan for Installation of Data Gap Monitoring Wells (Kirtland AFB, 2017c). Sampling and analysis for the Q3 2020 GWM were conducted in accordance with the procedures and overall quality control (QC) and quality assurance protocols presented in the Work Plans and Quality Assurance Project Plans (QAPjP) (Kirtland AFB, 2017a, 2017b).

Samples were collected from 65 GWM sample locations between July 6 and July 16, 2020 from the BFF monitoring well network and newly installed wells under the data gap monitoring well and vadose zone coring programs. The Q3 wells were sampled using dual membrane passive samplers or low-flow methodology.

The following field QC samples were associated with the Q3 well sampling: 7 field duplicates, 2 equipment rinse blanks (EBs), 31 trip blanks, 1 field blank, and 2 source water blanks for equipment rinse water. Groundwater samples were shipped to Eurofins Lancaster Laboratories Environmental, LLC (ELLE), Lancaster, Pennsylvania, for analysis. ELLE maintains a current Department of Defense (DoD) Environmental Laboratory Accreditation Program certification to perform the analyses required for this project. Sample analyses were performed in accordance with the following guidance documents:

- DoD Quality Systems Manual (QSM), Version 5.1.1 (DoD, 2018)
- U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW) 846, Third Edition and Updates, 1986
- Standard Methods (SM) for the Examination of Water and Wastewater, 22nd Edition (American Public Health Association, 2005)
- EPA Methods for Chemical Analysis of Water and Waste, EPA-600/4-79-020 (1983).

Q3 2020 groundwater samples were analyzed for a varying suite of analyses as shown in Appendix F-1 – Table 1. The following is a list of parameters and methods, as required per well:

- ***Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)***—Method SW8260C.
- ***Ethylene Dibromide (EDB)***—Method SW8011.
- ***Total Arsenic and Lead***—Method SW6020A.

- **Total Calcium, Magnesium, Potassium, and Sodium; Dissolved Iron; and Manganese**—Method SW6010C.
- **Anions (Bromide, Chloride, and Sulfate)**—Method EPA 300.0A.
- **Nitrate/Nitrite Nitrogen**—Method EPA 353.2.
- **Total Alkalinity (Bicarbonate and Carbonate)**—Method SM2320B.

Chemical analytical data for Q3 2020 were reported by ELLE in 8 sample delivery groups (SDGs): 410-6718-1, 410-6955-1, 410-7140-1, 410-7281-1, 410-7458-1, 410-7707-1, 410-8076-1, and 410-9143-1. Appendix F-1 – Table 1 summarizes samples collected from monitoring wells and the associated field QC samples, collection date, laboratory SDG, and analytical parameters for the Q3 monitoring program.

A third-party subcontractor, Environmental Data Services, Inc., conducted EPA Stage 3 data validation on 100 percent (%) of the Q3 2020 sample data associated with the BFF monitoring network.

Analytical data validation was performed using the quality criteria specified in the following analytical guidelines and methods as applicable:

- Work Plan (including QAPjP) (Kirtland AFB, 2017a)
- Work Plan (including QAPjP) (Kirtland AFB, 2017b)
- Work Plan (Kirtland AFB, 2017c) and QAPjP (Kirtland AFB, 2017a)
- DoD QSM for Environmental Laboratories, Version 5.1.1 (DoD, 2018)
- EPA Test Methods for Evaluating Solids Waste, Physical/Chemical Methods (SW 846, Third Edition and updates) (1986)
- American Public Health Association, SM for the Examination of Water and Wastewater, 22nd Edition (2005)
- EPA Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020 (1983)
- EPA Contract Laboratory Program, National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2014a)
- EPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review (EPA, 2014b).

The following QC criteria were included in the EPA Stage 3 validation per the QAPjP, as applicable to the analytical method:

- Sample preservation and extraction and analysis holding times
- Laboratory method blank contamination
- Surrogate spike and internal standard (IS) recoveries (organic analyses)
- Laboratory control sample (LCS) and LCS duplicate (LCSD) recoveries
- Matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries

- Relative percent difference (RPD)
- Initial and continuing calibrations
- Inductively coupled plasma (ICP) interference check samples (metals)
- ICP serial dilutions (metals)
- Second column confirmation (for EDB only)
- Trip, EB, field blank, and source water blank results
- Field duplicate sample precision.

Analytical data were reviewed to evaluate precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity as defined below:

- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSs/LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.
- *Accuracy (bias)* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. A comparison was made from the recovery of target analytes from fortified samples to the acceptance criteria defined in the QAPjPs (Kirtland AFB, 2017a, 2017b) and DoD QSM (2018). When the acceptance criteria are not available in the QAPjPs or DoD QSM, results are compared with the laboratory in-house control limits. When these criteria are not met, the data are qualified accordingly. Bias may be indicated as high or low.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and standard analytical method protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods and comparison of sample results to historical sample data.
- *Completeness* of data is evaluated based on contractual, analytical, and technical criteria for data analysis. Technical completeness of data is used to assess overall project data completeness and is expressed as a percentage of the ratio of the number of usable data results to the total number of analytical data results. Only rejected data (R-qualified) are considered not usable to achieve project objectives.
- *Sensitivity* is determined by the ability to achieve the established method-specific reporting limits (RLs) in accordance with DoD QSM requirements and includes establishing the detection limit (DL), limit of detection (LOD), and limit of quantitation (LOQ). For this project, the laboratory reported positive results to the DL, and results between the DL and LOQ are flagged with a J-qualifier and reported as estimated data. Sensitivity will be evaluated based on comparison of the sample RLs to the project screening levels.

The following sections present the EPA Stage 3 data validation findings. The discussion summarizes data quality exceedances and their potential impact on the quality and usability of analytical results.

Appendix F-1 – Table 2 presents the definitions of data qualification and the reasons why these codes were applied to the analytical results. Appendix F-1 – Table 3 summarizes the qualified analytical data for Q3 2020 based on data validation findings.

1.1 DATA QUALITY FINDINGS

1.1.1 Sample Preservation and Sample Extraction and Analysis Holding Times (Reason Code HT)

The sample coolers and samples contained within the coolers were received intact at the laboratory at ≤ 6 degrees Celsius, per EPA guidelines. All samples were preserved appropriately per the requirements of EPA methods and SM with no exceptions. Sample holding times were evaluated by comparing (1) the sample collection date to the sample extraction date, and (2) the extraction date to the analysis date to determine if the method-specified holding times were exceeded. Q3 2020 sample extraction and analysis holding times were met for all reported sample data.

1.1.2 Laboratory Method Blanks (Reason Code MB)

The field sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch and each analytical method. Based on the DoD QSM requirements (2018), laboratory method blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. There were no analyte detections reported in Q3 2020 method blank samples with exception of manganese in the method blank associated with the source water blank sample SWB203-01. No field sample data was qualified based on method blank data.

1.1.3 Initial and Continuing Calibration Blanks (Reason Code CB/CCB)

Initial and continuing calibration blank criteria were reviewed to ensure that the instruments were free of contamination prior to sample analysis. Based on the DoD QSM requirements (2018), calibration blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. Initial and continuing calibration blank data were within control criteria for the Q3 2020 sample analyses.

1.1.4 Surrogate and Internal Standard Recoveries (Reason Code SURR/IS)

Surrogate and internal compounds are added to field and laboratory QC samples for organic analysis to evaluate the matrix effect and method performance on an individual sample basis. Surrogate and IS recoveries for the Q3 2020 sample data were within method control criteria for all samples with exception of one EDB surrogate recovery above the control limit (SDG 410-7707-1) and the surrogate recovery for ethylbenzene and xylenes in one sample (SDG 410-7458-1). The associated sample detections were “J” qualified. Qualified Q3 2020 sample data based on surrogate spike recovery are presented in Appendix F-1 – Table 3.

1.1.5 Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries and Precision (Reason Codes LCS/RPD)

The LCS is an aliquot of an analyte-free matrix spiked with target analytes that are prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. One EDB LCS recovery in SDG 410-8076-1 was above the control limit but did not result in data qualification since the associated sample was trip blank TB-031. All other LCS recoveries for the Q3 2020 data were within control limits or did not result in data qualification based on the associated sample results.

1.1.6 Matrix Spike/Matrix Spike Duplicate Recoveries and Laboratory Duplicate Sample Precision (Reason Codes MS/MSD and RPD)

The MS and MSD samples are a portion of a field sample spiked with target analytes that are prepared with each analytical batch and method as appropriate. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch. For some analytical parameters (inorganic and general chemistry), standard reference materials were also analyzed to determine analytical method precision and accuracy. Also discussed in this section are laboratory duplicate samples analyzed by the laboratory to assess method precision for metals analysis.

In accordance with the QAPjP requirements, the additional volume for MS/MSD samples was collected at a rate of one per 20 groundwater samples. During the Q3 2020 sampling event, four MS/MSD samples were collected associated with the 65 monitoring well samples and analyzed for the well-specific analytical parameters as identified in Appendix F-1 – Table 1. Additional MS/MSD samples were analyzed by the laboratory as necessary to meet method and analytical batch requirements. MS/MSD recoveries were within control limits with exception of one MS/MSD recovery for arsenic and one MS recovery for chloride above the control limit (SDG 410-7458-1). The associated sample detections were “J” qualified.

Laboratory replicate samples were analyzed by the laboratory to meet metals method requirements to assess method precision. Laboratory replicates sample results and RPDs were within method control limits with exception of one replicate result for iron for the Q3 event. Qualified Q3 2020 sample data based on MS/MSD and lab replicate recoveries are presented in Appendix F-1 – Table 3.

1.1.7 Initial and Continuing Calibration Verification (Reason Code CCV)

Instrument calibration is performed for all analyses in accordance with method requirements. The linear analytical range is established for each method by analysis of calibration standards prepared at increasing concentrations that cover the expected sample concentration range. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or coefficient. Routinely, during sample analysis, the stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the instrument calibration range. The percent difference values between the relative response factor in the initial calibration and the relative response factor in the continuing calibration are reviewed to ensure instrument calibration criteria are within method control limits. Initial and continuing calibration verification (CCV) met the method-specific control criteria for the Q3 2020 analytical data with the exception of EDB in SDG 410-8076-1. Qualified Q3 2020 sample data based on continuing calibration verification are presented in Appendix F-1 – Table 3.

1.1.8 Interference Check Sample (Reason Code ICS)

The interference check sample (ICS) verifies the inter-element and background correction factors for metals analysis using ICP instrumentation. The ICSs were analyzed at the required frequencies, and all ICS results are within the established control criteria for the ICP analytical methods for the Q3 2020 analytical data.

1.1.9 Inductively Coupled Plasma Serial Dilution (Reason Code SD)

The ICP serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. When the concentration of an analyte exceeds 50 and 100 times the DL for ICP and ICP mass spectrometry analysis, respectively, the ICP serial dilution is performed and the results between the original analysis and the diluted analysis are compared. The results of the ICP serial dilution are deemed acceptable when a percent difference between the original analysis and the diluted analysis is less than or equal to 10%. ICP serial dilution was performed based on the above criteria for the Q3 samples as deemed appropriate. ICP serial dilution results were within control criteria for all samples and analytes for Q3 2020 data.

1.1.10 Sample Confirmation (Reason Code RPD)

As required by DoD and EPA analytical method guidance, sample detections for EDB require confirmation using a second column analysis. EDB samples for Q3 2020 were analyzed by EPA Method SW8011, confirmed by a second column analysis, and reported from the primary or secondary column per the laboratory standard operating procedure. Any detection of EDB on the second column is considered confirmation unless it appears to be associated with matrix interferences. One second column sample confirmation was reported at 68 percent RPD between the two columns. The associated EDB sample detection was “J” qualified (SDG 410-7458-1). Qualified Q3 2020 sample data based on sample confirmation RPD are presented in Appendix F-1 – Table 3.

1.1.11 Field Blanks for Volatile Organic Compounds (Reason Code FB)

Field blanks serve as a check for possible volatile organic compounds (VOCs) in air associated with a sampling location. The field blanks are prepared in the field during sampling by pouring ultra-pure water into EPA-certified clean sample containers and exposing the container to the environment at a particular sample location that may be associated with airborne VOCs.

Field blank samples are collected as deemed necessary at the time of sampling based on site conditions and potential for airborne VOC contamination. During the Q3 2020 sampling event, one field blank sample was collected and reported in SDG 410-7281-1. No data were qualified based on field blank results.

1.1.12 Trip Blanks (Reason Code TB)

Trip blanks were prepared by the laboratory and are stored with the containers to be used for collection of aqueous samples to be analyzed for VOCs (BTEX) and EDB. As samples are collected for volatile-type analyses, trip blanks are placed in the cooler with the sample containers; therefore, they are exposed to any potential contamination along with the field samples. In accordance with the QAPjP requirements, trip blank samples are to be included at a rate of one per cooler when collecting water samples for volatile organic-type analyses. A total of 31 trip blank samples were shipped during Q3 accompanying samples for BTEX and EDB analysis. No detections were reported in the trip blank samples or resulted in data qualification. Appendix F-1 – Table 4 summarizes the results for trip blank samples for the Q3 2020 sampling event.

1.1.13 Equipment Rinse Blanks (Reason Code EB)

EBs are collected in the field to assess potential contamination from sampling equipment. Results for the EB samples are used to evaluate the efficiency of equipment decontamination procedures in the field.

Two EB samples and two source water blank samples were collected during the Q3 sampling event. The EB samples were prepared by rinsing the decontaminated sampling equipment with laboratory-grade water provided by Environmental Sampling Supply or Crystal Springs deionized water (source water), and then collecting the final rinse water into appropriate sample containers for analysis. The EB and source water samples associated with the Q3 sampling event were analyzed for BTEX, EDB, and metals. One low-level detection of toluene was reported in rinse blank sample ER203-02 (SDG 410-7707-1) and one low-level detection of lead was reported in the ER203-01 sample (SDG 410-7707-1). One associated sample detect of lead was qualified “U,” signifying non-detect data. The rinse blank sample results were acceptable to demonstrate the equipment decontamination procedures for the Q3 2020 sampling event achieved project objectives. Qualified Q3 2020 sample data based on equipment rinse blanks are presented in Appendix F-1 – Table 3. Appendix F-1 – Table 4 presents the results of the Q3 2020 EB and source water samples.

1.1.14 Field Duplicate Samples

In accordance with the project QAPjP requirements (Kirtland AFB, 2017a, 2017b), field duplicate samples are collected at a frequency of 10% of the total number of groundwater samples for the Q3 event. Seven field duplicate samples were collected for a total of 65 groundwater samples for the Q3 event. The 10% frequency for field duplicate samples was achieved for Q3 2020 sampling.

Field duplicate RPD is evaluated by calculating the RPD between the parent sample and the duplicate sample. The RPD was calculated using the following equation:

$$RPD = \frac{|(S-D)|}{[(S+D)/2]} \times 100$$

where

- S = Sample result.
- D = Duplicate result.

Acceptable precision control criteria are established at less than or equal to 35% for water samples. The RPD was calculated between the field sample and field duplicate sample when both results are reported at or above the LOQ. All field duplicate sample results achieved the acceptable precision control criterion for the Q3 sampling event with exception of one field duplicate RPD for nitrate/nitrite for sample GW243-425-203. The results for the parent and field duplicate sample were “J and UJ” qualified. The results for the field duplicate samples collected during Q3 2020 are presented on Appendix F-1 – Table 5. Qualified Q3 2020 sample data based on field duplicate RPD are presented in Appendix F-1 – Table 3. The field duplicate results demonstrate acceptable overall field sampling procedures and analytical method precision.

1.1.15 Estimated Sample Data Above Project Screening Levels

During Q3 2020, one detection of EDB (SDG 410-7707-1), one detection of iron and xylenes (SDG 410-7458-1) were above the project screening level and J-qualified as a result of data validation and

exceedance of data quality criteria for surrogate recovery, and lab replicate RPD. Appendix F-1 – Table 6 presents the results for the samples with the “J” qualified results above the project screening level.

1.1.16 Professional Judgement

Professional judgement may be applied by a third-party data validation subcontractor or the project chemist during the data review process to apply validation qualifiers based on site-specific knowledge, historical data, comparability of data, and analytical expertise. There were no exceptions to the validation qualifiers as applied to the data in accordance with the project QAPjP and other guidelines used in the validation review for the Q3 2020 data.

1.2 COMPLETENESS

The following sections present a discussion of contractual, analytical, and technical completeness for the Q3 2020 analytical data. Completeness calculations were performed for the samples that are used for project decisions. Completeness results are presented in the following sections.

1.2.1 Contractual Completeness

Contractual completeness is a quantitative determination of the number of unqualified results compared to the total number of sample results expressed as a percentage, based on data qualified for QC outliers related to analytical method performance. These include data qualified for calibration or method blank contamination, missed holding times, LCS recovery, and/or precision. The contractual completeness goal is 95%. Contractual completeness was calculated as follows:

$$\text{Percent Contractual Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

For the contractual completeness for Q3 samples, no analytes were qualified based on contractual completeness criteria. Groundwater sample contractual completeness for Q3 is 100%. The 95% contractual completeness objective was achieved for all of the methods for the Q3 2020 sampling event.

1.2.2 Analytical Completeness

Analytical completeness is a quantitative measure of the number of unqualified data results compared to the total number of results expressed as a percentage, based on the target analytes qualified for exceedances of QC requirements from calibration, LCS, MS/MSD, surrogate, method precision, and laboratory method blank contamination results. The analytical completeness goal is 90% for the project. Analytical completeness was calculated as follows:

$$\text{Percent Analytical Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

A total of 11 analytes were qualified “U,” “J,” and “UJ” based on calibration verification, surrogate recovery, MS/MSD recovery, lab replicate recovery, second column confirmation RPD, equipment rinse blank contamination and field duplicate RPD out of a total number of 600 analyte results, for an analytical

completeness of 98.2%. Analytical completeness exceeded the 90% completeness objective for the Q3 2020 sampling event.

Estimated data (J-qualified) are usable to achieve project objectives. No analytical data for GWM samples were rejected (R-qualified) and qualified unusable based on analytical completeness for the Q3 2020 sampling event.

1.2.3 Technical Completeness

Technical completeness is a quantitative measure of the data usability based on the number of rejected data compared to the total number of sample results. The technical completeness goal for each quarterly event is equal to or greater than 95%. The technical completeness calculation considers all data that are not rejected (R-qualified) usable data to achieve project objectives. The technical completeness was calculated as follows:

$$\text{Percent Technical Completeness} = \frac{\text{Number of Usable Results}}{\text{Total Number of Results}} \times 100$$

The project data quality objectives were achieved for all methods for the Q3 sampling event. No data were rejected, and the technical completeness for the Q3 2020 groundwater data is 100% for all parameters and is provided in Appendix F-1 – Table 7.

1.2.4 Data Analysis Completeness

As a part of the data review process, chain-of-custody forms and project data deliverables are reviewed against Table 3-2 – Groundwater Monitoring Wells Sampled in Q3 2020 from the main report to ensure compliance with the sampling plans, and that analytical results were reported for all planned methods and samples.

Data deliverable completeness for Q3 data deliverables was determined to be 100% complete as received from the laboratory. Level 2 analytical data packages for Q3 2020 groundwater data are provided in Appendix F-2. Level 4 data packages are available upon request.

1.3 REPRESENTATIVENESS AND COMPARABILITY

Q3 2020 BFF well network and vadose zone well sampling was conducted in accordance with the sampling and analysis protocols and standard operating procedures documented in the Work Plans (Kirtland AFB, 2017a, 2017b, 2017c). Approved procedures were used to collect, preserve, document, and ship samples to ELLE, thus ensuring the samples collected for the Q3 2020 sampling event were representative of the project site and conditions.

Groundwater samples for VOCs and EDB analyses were collected in 40-milliliter volatile organic analysis (VOA) vials preserved with hydrochloric acid and shipped to ELLE at ≤ 6 degrees Celsius. Samples received in VOA vials were inspected to evaluate the presence of any headspace (estimated in millimeters) and documented as sample condition on the laboratory sample receipt report. Following EPA guidance and laboratory standard operating procedure, the laboratory analyzed the VOC and EDB VOA vials without headspace, if available, to ensure that the reported data were representative. The presence of bubbles in the vials could be attributed to imperfections of the septa seal and/or septa expansion and contraction due to temperature changes during shipping samples from the field to the laboratory. To minimize VOC losses and possible low-biased data reported from the laboratory, samplers performed a

visual inspection of the VOA vials prior to sample shipping to avoid shipping any VOA vials with headspace to the laboratory. If large bubbles appeared in the vials upon closing the lid over the sample container, the samples were re-collected; containers were never topped off with additional volume. Analysts at the laboratory also performed a visual inspection of VOA vials prior to analysis to ensure analysis of sample vials without headspace, if available. All Q3 groundwater samples were analyzed from VOA vials without headspace.

The project laboratory (ELLE) maintains current DoD Environmental Laboratory Accreditation Program certification and adhered to the analytical methods documented in the project QAPjPs and DoD QSM requirements to prepare and analyze samples and report the data. This certification ensures the comparability of the analytical results between different samples and different sampling events. For the Q3 2020 groundwater data, an EPA Stage 3 data review was performed on 100% of the analytical data to verify that the laboratory complied with the DoD QSM, project QAPjPs, and method requirements. QC results that exceeded method control criteria resulted in data qualification as presented in the previous sections. Based on a review of the completed sample collection logs, chain-of-custody forms, sample receipt forms, and laboratory data packages, the analytical data reported for the Q3 2020 monitoring event achieved the project data representativeness and comparability requirements.

1.4 SENSITIVITY

Data sensitivity for Q3 2020 was achieved by complying with the analytical method guidelines and RLs specified in the project QAPjPs. The analytical methods used for groundwater analysis achieved the project screening levels for the monitoring well samples: EPA National Drinking Water Regulations, Maximum Contaminant Levels (EPA, 2018); New Mexico Administrative Code Title 20 Chapter 6 Part 2.3103, Standards for Ground Water of 10,000 Milligrams per Liter Total Dissolved Solids Concentration or Less (New Mexico Administrative Code, 2018); and EPA Region 6 Regional Screening Levels for Tapwater (EPA, 2019), as applicable. Project screening levels for groundwater samples are presented in the QAPjPs, Attachment 1, Table 1-1 (Kirtland AFB, 2017a, 2017b).

Elevated sample RLs are associated with elevated concentrations of target analytes in the samples requiring dilution or sample matrix interference. For the analytical results, detections of target compounds reported below the LOQ are “J”-flagged as estimated values. Non-detect analytes are reported at the LOD per the DoD QSM requirements unless as noted above.

1.5 CONCLUSIONS

The analytical data reported for the Q3 2020 GWM event have been reviewed for precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity. Data quality exceedances that resulted in data qualification include the following: (1) rinse blank contamination for lead, (2) continuing calibration verification for EDB, (3) surrogate recovery for EDB, ethylbenzene and xylenes, (4) field duplicate RPD for nitrate/nitrite nitrogen, (5) MS/MSD recovery for arsenic and chloride, (6) lab replicate recovery for iron, and (7) second column confirmation for EDB. Analytical data are qualified as estimated detect (J), estimated non-detect (UJ), and non-detect (U) data results. Estimated sample data are usable to achieve project objectives. The 95% technical completeness goal was achieved for the Q3 2020 sampling event. Data are usable to achieve the project data quality objectives as qualified based on validation.

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Table 1
Groundwater Sample Collection Summary, Q3 2020

Sample Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
KAFB-106003	GW003-203	7/15/2020	410-8076-1	EDB, BTEX	—
KAFB-106004	GW004-203	7/16/2020	410-8076-1	EDB, BTEX	—
KAFB-106005	GW005-203	7/13/2020	410-7707-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106009	GW009-203	7/9/2020	410-7281-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106009	GW009-603	7/9/2020	410-7281-1	EDB, BTEX, metals, anions, alkalinity	Field Duplicate
KAFB-106012R	GW012R-203	7/14/2020	410-7707-1	EDB, BTEX, metals, anions, alkalinity	MS/MSD
KAFB-106012R	GW012R-603	7/14/2020	410-7707-1	EDB, BTEX, metals, anions, alkalinity	Field Duplicate
KAFB-106013	GW013-203	7/15/2020	410-8076-1	EDB, BTEX	—
KAFB-106029	GW029-203	7/9/2020	410-7281-1	EDB	—
KAFB-106030	GW030-203	7/9/2020	410-7281-1	EDB	—
KAFB-106031	GW031-203	7/9/2020	410-7281-1	EDB	—
KAFB-106032	GW032-203	7/8/2020	410-7140-1	EDB	—
KAFB-106033	GW033-203	7/8/2020	410-7140-1	EDB	—
KAFB-106034	GW034-203	7/8/2020	410-7140-1	EDB	—
KAFB-106041	GW041-203	7/8/2020	410-7140-1	EDB, BTEX, metals, anions, alkalinity	MS/MSD
KAFB-106049	GW049-203	7/8/2020	410-7140-1	EDB	—
KAFB-106050	GW050-203	7/8/2020	410-7140-1	EDB	—
KAFB-106051	GW051-203	7/8/2020	410-7140-1	EDB	—
KAFB-106051	GW051-603	7/8/2020	410-7140-1	EDB	Field Duplicate
KAFB-106097	GW097-203	7/16/2020	410-8076-1	EDB, BTEX	—
KAFB-106098	GW098-203	7/15/2020	410-8076-1	EDB, BTEX	—
KAFB-106099	GW099-203	7/16/2020	410-8076-1	EDB, BTEX	—
KAFB-106100	GW100-203	7/16/2020	410-8076-1	EDB, BTEX	—
KAFB-106101	GW101-203	7/15/2020	410-8076-1	EDB, BTEX	—
KAFB-106102	GW102-203	7/15/2020	410-8076-1	EDB, BTEX	—
KAFB-106149-484	GW149-484-203	7/10/2020	410-7458-1	EDB, metals, anions, alkalinity	—
KAFB-106151-484	GW151-484-203	7/10/2020	410-7458-1	EDB, metals, anions, alkalinity	—
KAFB-106152-484	GW152-484-203	7/10/2020	410-7458-1	EDB, metals, anions, alkalinity	—
KAFB-106153-484	GW153-484-203	7/10/2020	410-7458-1	EDB, metals, anions, alkalinity	—
KAFB-106201	GW201-203	7/9/2020	410-7281-1	EDB	—
KAFB-106202	GW202-203	7/9/2020	410-7281-1	EDB	—
KAFB-106203	GW203-203	7/9/2020	410-7281-1	EDB	—
KAFB-106204	GW204-203	7/7/2020	410-6955-1	EDB	—
KAFB-106205	GW205-203	7/7/2020	410-6955-1	EDB	—
KAFB-106206	GW206-203	7/7/2020	410-6955-1	EDB	—
KAFB-106207	GW207-203	7/7/2020	410-6955-1	EDB	—
KAFB-106208	GW208-203	7/7/2020	410-6955-1	EDB	—
KAFB-106209	GW209-203	7/7/2020	410-6955-1	EDB	—
KAFB-106216	GW216-203	7/7/2020	410-6955-1	EDB	—
KAFB-106216	GW216-603	7/7/2020	410-6955-1	EDB	Field Duplicate

Table 1
Groundwater Sample Collection Summary, Q3 2020

Sample Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
KAFB-106217	GW217-203	7/7/2020	410-6955-1	EDB	—
KAFB-106218	GW218-203	7/7/2020	410-6955-1	EDB	—
KAFB-106222	GW222-203	7/7/2020	410-6955-1	EDB	—
KAFB-106223	GW223-203	7/7/2020	410-6955-1	EDB	—
KAFB-106224	GW224-203	7/7/2020	410-6955-1	EDB	—
KAFB-106230	GW230-203	7/8/2020	410-7140-1	EDB, metals, anions, alkalinity	—
KAFB-106231	GW231-203	7/7/2020	410-6955-1	EDB	—
KAFB-106232	GW232-203	7/7/2020	410-6955-1	EDB	—
KAFB-106235-438	GW235-438-203	7/6/2020	410-6718-1	EDB	—
KAFB-106235-438	GW235-438-603	7/6/2020	410-6718-1	EDB	Field Duplicate
KAFB-106235-472	GW235-472-203	7/6/2020	410-6718-1	EDB	—
KAFB-106235-501	GW235-501-203	7/6/2020	410-6718-1	EDB	—
KAFB-106236-436	GW236-436-203	7/6/2020	410-6718-1	EDB	—
KAFB-106236-470	GW236-470-203	7/6/2020	410-6718-1	EDB	MS/MSD
KAFB-106236-499	GW236-499-203	7/6/2020	410-6718-1	EDB	—
KAFB-106240-449	GW240-449-203	7/8/2020	410-7140-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106241-428	GW241-428-203	7/8/2020	410-7140-1	EDB, metals, anions, alkalinity	—
KAFB-106242-418	GW242-418-203	7/7/2020	410-6955-1	EDB, metals, anions, alkalinity	—
KAFB-106243-425	GW243-425-203	7/9/2020	410-7281-1	EDB, metals, anions, alkalinity	—
KAFB-106243-425	GW243-425-603	7/9/2020	410-7281-1	EDB, metals, anions, alkalinity	Field Duplicate
KAFB-106244-445	GW244-445-203	7/8/2020	410-7140-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106245-460	GW245-460-203	7/9/2020	410-7281-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106247-450	GW247-450-203	7/8/2020	410-7140-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S1-447	GWS1-447-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	MS/MSD
KAFB-106S2-451	GWS2-451-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S3-449	GWS3-449-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S4-446	GWS4-446-203	7/9/2020	410-7281-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S5-446	GWS5-446-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S7-451	GWS7-451-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S8-451	GWS8-451-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
KAFB-106S8-451	GWS8-451-603	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	Field Duplicate
KAFB-106S9-447	GWS9-447-203	7/10/2020	410-7458-1	EDB, BTEX, metals, anions, alkalinity	—
Equipment Blank	ER203-01	7/13/2020	410-7707-1	EDB, BTEX, Metals	—

Table 1
Groundwater Sample Collection Summary, Q3 2020

Sample Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
Equipment Blank	ER203-02	7/14/2020	410-7707-1	EDB, BTEX, Metals	—
Field Blank	FB203-01	7/9/2020	410-7281-1	EDB	—
Trip Blank	TB203-01	7/6/2020	410-6718-1	EDB	—
Trip Blank	TB203-02	7/6/2020	410-6718-1	EDB	—
Trip Blank	TB203-03	7/7/2020	410-6955-1	EDB	—
Trip Blank	TB203-04	7/7/2020	410-6955-1	EDB	—
Trip Blank	TB203-05	7/7/2020	410-6955-1	EDB	—
Trip Blank	TB203-06	7/7/2020	410-6955-1	EDB	—
Trip Blank	TB203-07	7/7/2020	410-6955-1	EDB	—
Trip Blank	TB203-08	7/8/2020	410-7140-1	EDB, BTEX	—
Trip Blank	TB203-09	7/8/2020	410-7140-1	EDB, BTEX	—
Trip Blank	TB203-10	7/8/2020	410-7140-1	EDB	—
Trip Blank	TB203-11	7/8/2020	410-7140-1	EDB	—
Trip Blank	TB203-12	7/8/2020	410-7140-1	EDB	—
Trip Blank	TB203-13	7/8/2020	410-7140-1	EDB	—
Trip Blank	TB203-15	7/9/2020	410-7281-1	EDB, BTEX	—
Trip Blank	TB203-16	7/9/2020	410-7281-1	EDB, BTEX	—
Trip Blank	TB203-17	7/9/2020	410-7281-1	EDB	—
Trip Blank	TB203-18	7/9/2020	410-7281-1	EDB	—
Trip Blank	TB203-19	7/9/2020	410-7281-1	EDB	—
Trip Blank	TB203-20	7/10/2020	410-7458-1	EDB, BTEX	—
Trip Blank	TB203-21	7/10/2020	410-7458-1	EDB, BTEX	—
Trip Blank	TB203-22	7/10/2020	410-7458-1	EDB, BTEX	—
Trip Blank	TB203-23	7/10/2020	410-7458-1	EDB, BTEX	—
Trip Blank	TB203-24	7/10/2020	410-7458-1	EDB, BTEX	—
Trip Blank	TB203-25	7/10/2020	410-7458-1	EDB	—
Trip Blank	TB203-26	7/10/2020	410-7458-1	EDB	—
Trip Blank	TB203-27	7/14/2020	410-7707-1	EDB, BTEX	—
Trip Blank	TB203-28	7/14/2020	410-7707-1	EDB, BTEX	—
Trip Blank	TB203-29	7/16/2020	410-8076-1	EDB, BTEX	—
Trip Blank	TB203-30	7/16/2020	410-8076-1	EDB, BTEX	—
Trip Blank	TB203-31	7/16/2020	410-8076-1	EDB, BTEX	—
Trip Blank	TB203-34	7/29/2020	410-9143-1	EDB, BTEX	—
Source Water Blank	SWB203-01	7/29/2020	410-9143-1	EDB, BTEX, Metals	—
Source Water Blank	SWB203-02	7/29/2020	410-9143-1	EDB, BTEX, Metals	—

^aAnalytical methods include: Method SW8260C for BTEX; Method SW8011 for EDB; Methods SW6010C/6020A for total metals (calcium, potassium, magnesium, sodium/arsenic and lead); Method SW6010C for dissolved iron and manganese. Anion analyses include: Method E300.0A for bromide, chloride and sulfate; Method E353.2 for nitrate/nitrite nitrogen. Alkalinity is analyzed by Method SM2320B.

— = no comments

BTEX = benzene, toluene, ethylbenzene, xylenes

EDB = ethylene dibromide

ID = identification

MS = matrix spike

MSD = matrix spike duplicate

Table 2
Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Data Validation	
Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Reason Codes for Data Validation	
Reason Code	Description
CB/CCB	Calibration blank or continuing calibration blank outside of control limits
CCV	Calibration verification outside of control limits
EB	Equipment rinse blank contamination
FB	Field blank contamination
FD	Field duplicate sample results out of control criteria
HT	Holding time exceedance
ICS	Interference check sample
LCS	Laboratory control sample recovery out of control criteria
MB	Method blank contamination
MS/MSD	Matrix spike/ matrix spike duplicate recovery outside of control criteria
RPD	Relative percent difference outside of control limits
SD	Inductively Coupled Plasma serial dilution out of control criteria
SURR	Surrogate recovery outside of control limits
TB	Trip blank contamination

Table 3
Qualified Sample Results, Q3 2020

Well Location ID	Sample Name	Sample Delivery Group	Collection Method	Sample Type	Analyte	Data Qualifier	Validation Reason Code
GW152-484-203	GW152-484-203	410-7458-1	DF	N	Ethylene Dibromide	J	Lab replicate RPD
GWS1-447-203	GWS1-447-203	410-7458-1	DF	N	Arsenic	J	MS/MSD Recovery
GWS1-447-203	GWS1-447-203	410-7458-1	DF	N	Iron	J	Lab replicate RPD
GWS1-447-203	GWS1-447-203	410-7458-1	DF	N	Ethylbenzene	J	Surrogate Recovery
GWS1-447-203	GWS1-447-203	410-7458-1	DF	N	Xylenes, Total	J	Surrogate Recovery
GWS7-451-203	GWS7-451-203	410-7458-1	DF	N	Chloride	J	MS/MSD Recovery
KAFB-106005	GW005-203	410-7707-1	LF	N	Lead	U	Equipment Blank
KAFB-106005	GW005-203	410-7707-1	LF	N	1,2-Dibromoethane	J	Surrogate Recovery
KAFB-106013	GW013-203	410-8076-1	LF	N	1,2-Dibromoethane	UJ	Continuing Calibration Verification
KAFB-106243-425	GW243-425-203	410-7281-1	DF	N	Nitrate/Nitrite Nitrogen	J	Field Duplicate RPD
KAFB-106243-425	GW243-425-603	410-7281-1	DF	FD	Nitrate/Nitrite Nitrogen	UJ	Field Duplicate RPD

Notes:

DF = diffusion bag sampler

FD = Field duplicate

ID = identification

LF = low flow sampling

MS/MSD = matrix spike/matrix spike duplicate

N = normal field sample

RPD = relative percent difference

Qualifiers:

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed for but was not detected above the detection limit.

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			ER203-01			ER203-02			FB203-01			SWB203-01			SWB203-02			TB203-01			TB203-02		
Sample Date:			7/13/2020			7/14/2020			7/9/2020			7/29/2020			7/29/2020			7/6/2020			7/6/2020		
Sample Type:			EB			EB			FB			SWB			SWB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	ND	U	0.50	ND	U	0.50	—	—	—	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—
		Ethylbenzene	ND	U	0.80	ND	U	0.80	—	—	—	ND	U	0.8	ND	U	0.8	—	—	—	—	—	—
		Toluene	ND	U	0.50	2.5	--	0.50	—	—	—	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—
		Xylenes, total	ND	U	2.0	ND	U	2.0	—	—	—	ND	U	2	ND	U	2	—	—	—	—	—	—
Metals	Method SW6010C (mg/L)	Calcium	0.48	--	0.15	0.11	J	0.15	—	—	—	ND	U	0.15	ND	U	0.15	—	—	—	—	—	—
		Iron	ND	U	0.10	ND	U	0.10	—	—	—	ND	U	0.1	ND	U	0.1	—	—	—	—	—	—
		Magnesium	ND	U	0.075	ND	U	0.075	—	—	—	ND	U	0.075	ND	U	0.075	—	—	—	—	—	—
		Manganese	ND	U	0.0050	ND	U	0.0050	—	—	—	ND	U	0.005	ND	U	0.005	—	—	—	—	—	—
		Potassium	0.40	J	0.38	ND	U	0.38	—	—	—	ND	U	0.38	ND	U	0.38	—	—	—	—	—	—
		Sodium	0.92	J	0.50	ND	U	0.50	—	—	—	0.32	J	0.5	ND	U	0.5	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	ND	U	0.0016	ND	U	0.0016	—	—	—	ND	U	0.0016	ND	U	0.0016	—	—	—	—	—	—
		Lead	0.00072	--	0.00025	0.000075	J	0.00025	—	—	—	ND	U	0.00025	ND	U	0.00025	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB203-03			TB203-04			TB203-05			TB203-06			TB203-07			TB203-08			TB203-09		
Sample Date:			7/7/2020			7/7/2020			7/7/2020			7/7/2020			7/7/2020			7/8/2020			7/8/2020		
Sample Type:			TB			TB			TB			TB			TB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.50	ND	U	0.50
		Ethylbenzene	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.80	ND	U	0.80
		Toluene	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.50	ND	U	0.50
		Xylenes, total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	2.0	ND	U	2.0
Metals	Method SW6010C (mg/L)	Calcium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Iron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Magnesium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Manganese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Potassium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Sodium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB203-10			TB203-11			TB203-12			TB203-13			TB203-15			TB203-16			TB203-17		
Sample Date:			7/8/2020			7/8/2020			7/8/2020			7/8/2020			7/9/2020			7/9/2020			7/9/2020		
Sample Type:			TB			TB			TB			TB			TB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.50	ND	U	0.50	—	—	—
		Ethylbenzene	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.80	ND	U	0.80	—	—	—
		Toluene	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	0.50	ND	U	0.50	—	—	—
		Xylenes, total	—	—	—	—	—	—	—	—	—	—	—	—	ND	U	2.0	ND	U	2.0	—	—	—
Metals	Method SW6010C (mg/L)	Calcium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Iron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Magnesium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Manganese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Potassium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Sodium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB203-18			TB203-19			TB203-20			TB203-21			TB203-22			TB203-23			TB203-24		
Sample Date:			7/9/2020			7/9/2020			7/10/2020			7/10/2020			7/10/2020			7/10/2020			7/10/2020		
Sample Type:			TB			TB			TB			TB			TB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.02	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	—	—	—	—	—	—	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	—	—	—	—	—	—	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Metals	Method SW6010C (mg/L)	Calcium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Iron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Magnesium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Manganese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Potassium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Sodium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB203-25			TB203-26			TB203-27			TB203-28			TB203-29			TB203-30			TB203-31		
Sample Date:			7/10/2020			7/10/2020			7/14/2020			7/14/2020			7/16/2020			7/16/2020			7/16/2020		
Sample Type:			TB			TB			TB			TB			TB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	UJ	0.019	ND	U	0.019	0.023	J	0.019
BTEX	Method SW8260C (µg/L)	Benzene	ND	U	0.5	ND	U	0.5	ND	U	0.50	ND	U	0.50	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	ND	U	0.8	ND	U	0.8	ND	U	0.80	ND	U	0.80	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	ND	U	0.5	ND	U	0.5	ND	U	0.50	ND	U	0.50	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	ND	U	2	ND	U	2	ND	U	2.0	ND	U	2.0	ND	U	2	ND	U	2	ND	U	2
Metals	Method SW6010C (mg/L)	Calcium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Iron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Magnesium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Manganese	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Potassium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Sodium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB203-34		
Sample Date:			7/29/2020		
Sample Type:			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	ND	U	0.5
		Ethylbenzene	ND	U	0.8
		Toluene	ND	U	0.5
		Xylenes, total	ND	U	2
Metals	Method SW6010C (mg/L)	Calcium	—	—	—
		Iron	—	—	—
		Magnesium	—	—	—
		Manganese	—	—	—
		Potassium	—	—	—
		Sodium	—	—	—
	Method SW6020A (mg/L)	Arsenic	—	—	—
		Lead	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

— = Compound not analyzed for.

µg/L = microgram per liter.

EB = equipment rinse blank

FB = field blank

ID = identification

LOD = limit of detection

mg/L = milligram per liter

ND = not detected above the detection limit

SWB = source water blank

TB = trip blank

Val Qual = validation qualifier

VOC = volatile organic compound

Shading = detected concentrations above the detection limit

Qualifiers:

Val Qual based on independent data validation.

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

-- = Validation qualifier not assigned.

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				KAFB-106009			KAFB-106009			KAFB-106012R			KAFB-106012R		
			Field Sample ID:				GW009-203			GW009-603			GW012R-203			GW012R-603		
			Sample Date:				7/9/2020			7/9/2020			7/14/2020			7/14/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate		
			Sample Depth (ft bgs):				484.39			484.39			495			495		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	Analytical Method	Analyte	NMAC NMWQCC ^a	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.05	0.05	0.075	0.05	0.019	J	0.019	0.02	J	0.019	ND	U	0.019	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	10	5	4.5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	750	700	15	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1000	1100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	620	10000	190	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	140	--	0.15	140	--	0.15	150	--	0.15	160	--	0.15
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	20	--	0.075	20	--	0.075	23	--	0.075	24	--	0.075
		Manganese, dissolved	0.2	NS	NS	0.2	0.008	J	0.0052	0.0043	J	0.0052	--	--	--	--	--	--
		Potassium	NS	NS	NS	NS	3.7	--	0.38	3.6	--	0.38	4.6	--	0.38	4.6	--	0.38
		Sodium	NS	NS	NS	NS	45	--	0.5	45	--	0.5	63	--	0.5	64	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	ND	U	0.0016	ND	U	0.0016	ND	U	0.0016	0.0007	J	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0003	ND	U	0.0003	0.0019	--	0.0003	0.0016	--	0.0003
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	2.8	--	2	2.9	--	2	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	180	J	150	210	--	150	200	--	150	190	J	150
		Sulfate	600	250	NS	250	230	J	450	340	J	450	390	J	450	400	J	450
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10 ^e	10 ^e	NS	10 ^e	1.7	--	0.09	1.7	--	0.09	3.9	--	0.45	4.2	--	0.18
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	140	--	6	170	--	6	110	--	6	110	--	6
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	6	ND	U	6	ND	U	6	ND	U	6
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	140	--	6	170	--	6	110	--	6	110	--	6

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				KAFB-106051			KAFB-106051			KAFB-106216			KAFB-106216		
			Field Sample ID:				GW051-203			GW051-603			GW216-203			GW216-603		
			Sample Date:				7/8/2020			7/8/2020			7/7/2020			7/7/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate		
			Sample Depth (ft bgs):				501.5			501.5			461.4			461.4		
			Reference Elevation Interval (ft AMSL):				4814			4814			4857			4857		
Parameter	Analytical Method	Analyte	NMAC NMWQCC ^a	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
BTEX	Method SW8260C (µg/L)	Benzene	10	5	4.5	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	750	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1000	1100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, total	620	10000	190	620	—	—	—	—	—	—	—	—	—	—	—	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Iron, dissolved	1.0	NS	NS	1.0	—	—	—	—	—	—	—	—	—	—	—	—
		Magnesium	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Manganese, dissolved	0.2	NS	NS	0.2	—	—	—	—	—	—	—	—	—	—	—	—
		Potassium	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Sodium	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	—	—	—	—	—	—	—	—	—	—	—
		Lead	0.015	0.015	0.015	0.015	—	—	—	—	—	—	—	—	—	—	—	—
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Chloride	250	250	NS	250	—	—	—	—	—	—	—	—	—	—	—	—
		Sulfate	600	250	NS	250	—	—	—	—	—	—	—	—	—	—	—	—
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10 ^e	10 ^e	NS	10 ^e	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	—	—	—	—	—	—

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				KAFB-106235-438			KAFB-106235-438			KAFB-106243-425			KAFB-106243-425		
			Field Sample ID:				GW235-438-203			GW235-438-603			GW243-425-203			GW243-425-603		
			Sample Date:				7/6/2020			7/6/2020			7/9/2020			7/9/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate		
			Sample Depth (ft bgs):				443.9			443.9			449.14			449.14		
			Reference Elevation Interval (ft AMSL):				4857			4857			4857			4857		
Parameter	Analytical Method	Analyte	NMAC NMWQCC ^a	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	0.035	--	0.019	0.03	--	0.019
BTEX	Method SW8260C (µg/L)	Benzene	10	5	4.5	5	—	—	—	—	—	—	—	—	—	—	—	—
		Ethylbenzene	750	700	15	700	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	1,000	1000	1100	1,000	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, total	620	10000	190	620	—	—	—	—	—	—	—	—	—	—	—	—
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	—	—	—	—	—	—	48	--	0.15	49	--	0.15
		Iron, dissolved	1.0	NS	NS	1.0	—	—	—	—	—	—	ND	U	0.1	ND	U	0.1
		Magnesium	NS	NS	NS	NS	—	—	—	—	—	—	6.4	--	0.075	6.7	--	0.075
		Manganese, dissolved	0.2	NS	NS	0.2	—	—	—	—	—	—	ND	U	0.0052	ND	U	0.0052
		Potassium	NS	NS	NS	NS	—	—	—	—	—	—	2.5	--	0.38	2.5	--	0.38
		Sodium	NS	NS	NS	NS	—	—	—	—	—	—	24	--	0.5	25	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	—	—	—	—	—	—	0.0014	J	0.0016	0.0013	J	0.0016
		Lead	0.015	0.015	0.015	0.015	—	—	—	—	—	—	8E-05	J	0.0003	ND	U	0.0003
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	—	—	—	—	—	—	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	—	—	—	—	—	—	20	--	1.5	21	--	1.5
		Sulfate	600	250	NS	250	—	—	—	—	—	—	40	--	4.5	41	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10 ^e	10 ^e	NS	10 ^e	—	—	—	—	—	—	1	J	0.09	ND	UJ	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	150	--	6	150	--	6
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	ND	U	6	ND	U	6
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	—	—	—	—	—	—	150	--	6	150	--	6

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				KAFB-106S8-451			KAFB-106S8-451		
			Field Sample ID:				GWS8-451-203			GWS8-451-603		
			Sample Date:				7/10/2020			7/10/2020		
			Sample Type:				REG			Field Duplicate		
			Sample Depth (ft bgs):				478.32			478.32		
			Reference Elevation Interval (ft AMSL):				4857			4857		
Parameter	Analytical Method	Analyte	NMAC NMWQCC ^a	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.05	0.05	0.075	0.05	310	--	38	370	--	39
BTEX	Method SW8260C (µg/L)	Benzene	10	5	4.5	5	5000	--	50	4800	--	25
		Ethylbenzene	750	700	15	700	150	--	80	150	--	40
		Toluene	1,000	1000	1100	1,000	3300	--	50	3200	--	25
		Xylenes, total	620	10000	190	620	2000	--	200	2000	--	100
Metals	Method SW6010C (mg/L)	Calcium	NS	NS	NS	NS	190	--	0.15	190	--	0.15
		Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	0.29	--	0.1
		Magnesium	NS	NS	NS	NS	28	--	0.075	27	--	0.075
		Manganese, dissolved	0.2	NS	NS	0.2	4.9	--	0.0052	5.1	--	0.0052
		Potassium	NS	NS	NS	NS	4.2	--	0.38	4.1	--	0.38
		Sodium	NS	NS	NS	NS	43	--	0.5	43	--	0.5
	Method SW6020A (mg/L)	Arsenic	0.01	0.01	0.00052	0.01	0.0034	--	0.0016	0.0034	--	0.0016
		Lead	0.015	0.015	0.015	0.015	ND	U	0.0003	ND	U	0.0003
Anions	Method E300.0 (mg/L)	Bromide	NS	NS	NS	NS	ND	U	2	ND	U	2
		Chloride	250	250	NS	250	11	--	1.5	9.2	--	1.5
		Sulfate	600	250	NS	250	5	--	4.5	5.1	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10 ^e	10 ^e	NS	10 ^e	ND	U	0.09	ND	U	0.09
Alkalinity	Method SM2320B (mg/L)	Alkalinity, bicarbonate (as CaCO3)	NS	NS	NS	NS	460	--	6	440	--	6
		Alkalinity, carbonate (as CaCO3)	NS	NS	NS	NS	ND	U	6	ND	U	6
		Alkalinity, total (as CaCO3)	NS	NS	NS	NS	460	--	6	440	--	6

Table 5
Field Duplicate Sample Results, Q3 2020

^a NMWQCC numeric standards per the NMAC Title 20.6.2.3101A, Standards for Ground Water of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC 2018). For metals, the NMWQCC numeric standard applies to dissolved metals.

^b EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).

^c EPA Region 6 RSL for Tapwater (May 2020) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.

^d The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

^e Based on the geochemical equilibrium of the site groundwater and previous site data analyses, nitrate/nitrite results represent nitrate concentrations.

— = Compound not analyzed for.

µg/L = microgram per liter

AFB = Air Force Base

AMSL = above mean sea level

BFF = Bulk Fuels Facility

bgs = below-ground surface

CaCO₃ = calcium carbonate

CFR = Code of Federal Regulations

EDB = ethylene dibromide (1,2-dibromoethane)

EPA = U.S. Environmental Protection Agency

ft = foot/feet

ID = identification

KAFB = Kirtland Air Force Base

LOD = limit of detection

MCL = maximum contaminant level

mg/L = milligram per liter

ND = not detected

NMAC = New Mexico Administrative Code

NMWQCC = New Mexico Water Quality Control Commission

NS = not specified

REG = normal field sample

RSL = regional screening level

SWMU = Solid Waste Management Unit

Val Qual = validation qualifier

VOC = volatile organic compound

Shading = detected concentrations above the detection limit

Bold/Shading = reported concentrations exceed the project screening level

Val Quals based on independent data validation

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

-- = Validation qualifier not assigned.

Table 6
Qualified Sample Results Above Project Screening Levels, Q3 2020

Well Location ID	Field Sample ID	Sample Date	Sample Type	Analytical Method	Analyte	Result	LOD	Unit	Val Qual	Validation Reason Code	Project Screening Level ^a
KAFB-106005	GW005-203	7/13/2020	N	SW8011	1,2-Dibromoethane	1.9	0.39	µg/L	J	SURR	0.05
GWS1-447-203	GWS1-447-203	7/10/2020	N	SW6010C	Iron	7.3	0.1	mg/L	J	LR RPD	1
GWS1-447-203	GWS1-447-203	7/10/2020	N	SW8260C	Xylenes, Total	2800	20	µg/L	J	SURR	620

Notes:

^a The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit No. NM9570024423 as the lowest of (1) NMWQCC standard or (2) EPA MCL. If no MCL or NMWQCC standard exists for any analyte, then the project screening level will be the EPA Tapwater RSL. Project screening levels below the LOD are highlighted and the screening level is set at the LOQ.

µg/L = microgram per liter

AFB = Air Force Base

EPA = US Environmental Protection Agency

FD = field duplicate

ID = identification

LOD = limit of detection

LOQ = limit of quantitation

LR RPD = lab replicate relative percent difference

MCL = maximum contaminant level

mg/L = milligram per liter

N = field sample

NMWQCC = New Mexico Water Quality Control Commission

No. = number

RSL = regional screening limit

SURR = surrogate recovery

Qualifiers:

Val Quals based on independent data validation

J = Denotes the analyte was positively identified, but the associated numerical value is estimated.

Table 7
Technical Data Completeness - Groundwater, Q3 2020

Analytical Parameter	Field/Field Duplicate Sample Analytes	Quality Control Sample Analytes (TB, FB, EB, SWB)	Qualified Analytes	Percent Technical Completeness^a
BTEX (SW8260C) ^b	108	84	2	100
Ethylene dibromide (SW8011)	72	36	3	100
Total metals (SW6010C) ^c	112	24	0	100
Dissolved metals (SW6010C) ^d	56	0	1	100
Total metals (SW6020A) ^e	56	8	2	100
Anions (E300.0) ^f	84	0	1	100
Nitrate/nitrite nitrogen (E353.2)	28	0	2	100
Alkalinity (SM2320B)	84	0	0	100

Notes:

^a Percent technical completeness including analytes qualified as estimated data. No data were rejected.

^b Samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes.

^c Total metals (SW6010C) = calcium, magnesium, potassium, sodium.

^d Dissolved metals (SW6010C) = dissolved iron, manganese.

^e Total metals (SW6020A) = arsenic, lead.

^f Anions = bromide, chloride, sulfate.

BTEX = benzene, toluene, ethylbenzene, xylenes

EB = equipment rinse blank

FB = Field blank

SWB = source water blank

TB = trip blank



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-6718-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

A handwritten signature in black ink, appearing to read "Kay Hower", is positioned above a horizontal line.

Authorized for release by:

7/28/2020 1:19:51 PM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory Job ID: 410-6718-1

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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
7/28/2020 1:19:51 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Job ID: 410-6718-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-6718-1

Comments

No additional comments.

Receipt

The samples were received on 7/7/2020 10:41 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.6° C and 1.4° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 8011: Could not prep a ms/msd for this batch. There was insufficient sample available to do so.

GW235-438-603 (410-6718-2), GW235-472-203 (410-6718-3), GW235-501-203 (410-6718-4), GW236-436-203 (410-6718-5), GW236-499-203 (410-6718-7), TB203-01 (410-6718-8) and TB203-02 (410-6718-9)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Client Sample ID: GW235-438-203	Lab Sample ID: 410-6718-1
--	----------------------------------

☐ No Detections.

Client Sample ID: GW235-438-603	Lab Sample ID: 410-6718-2
--	----------------------------------

☐ No Detections.

Client Sample ID: GW235-472-203	Lab Sample ID: 410-6718-3
--	----------------------------------

☐ No Detections.

Client Sample ID: GW235-501-203	Lab Sample ID: 410-6718-4
--	----------------------------------

☐ No Detections.

Client Sample ID: GW236-436-203	Lab Sample ID: 410-6718-5
--	----------------------------------

☐ No Detections.

Client Sample ID: GW236-470-203	Lab Sample ID: 410-6718-6
--	----------------------------------

☐ No Detections.

Client Sample ID: GW236-499-203	Lab Sample ID: 410-6718-7
--	----------------------------------

☐ No Detections.

Client Sample ID: TB203-01	Lab Sample ID: 410-6718-8
-----------------------------------	----------------------------------

☐ No Detections.

Client Sample ID: TB203-02	Lab Sample ID: 410-6718-9
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☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Client Sample ID: GW235-438-203

Lab Sample ID: 410-6718-1

Date Collected: 07/06/20 08:48

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 00:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	106		46 - 136				07/10/20 00:54	07/11/20 00:08	1
1,1,2,2-Tetrachloroethane (2C)	91		46 - 136				07/10/20 00:54	07/11/20 00:08	1

Client Sample ID: GW235-438-603

Lab Sample ID: 410-6718-2

Date Collected: 07/06/20 08:48

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/11/20 03:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	105		46 - 136				07/10/20 01:26	07/11/20 03:16	1
1,1,2,2-Tetrachloroethane (2C)	92		46 - 136				07/10/20 01:26	07/11/20 03:16	1

Client Sample ID: GW235-472-203

Lab Sample ID: 410-6718-3

Date Collected: 07/06/20 09:05

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 03:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	108		46 - 136				07/10/20 01:26	07/11/20 03:33	1
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136				07/10/20 01:26	07/11/20 03:33	1

Client Sample ID: GW235-501-203

Lab Sample ID: 410-6718-4

Date Collected: 07/06/20 09:22

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 03:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	110		46 - 136				07/10/20 01:26	07/11/20 03:51	1
1,1,2,2-Tetrachloroethane (2C)	95		46 - 136				07/10/20 01:26	07/11/20 03:51	1

Client Sample ID: GW236-436-203

Lab Sample ID: 410-6718-5

Date Collected: 07/06/20 07:36

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 04:08	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	110		46 - 136					07/10/20 01:26	07/11/20 04:08	1
1,1,2,2-Tetrachloroethane (2C)	94		46 - 136					07/10/20 01:26	07/11/20 04:08	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Client Sample ID: GW236-470-203

Lab Sample ID: 410-6718-6

Date Collected: 07/06/20 07:52

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/11/20 00:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136				07/10/20 00:54	07/11/20 00:25	1
1,1,2,2-Tetrachloroethane (2C)	91		46 - 136				07/10/20 00:54	07/11/20 00:25	1

Client Sample ID: GW236-499-203

Lab Sample ID: 410-6718-7

Date Collected: 07/06/20 08:14

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 04:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	111		46 - 136				07/10/20 01:26	07/11/20 04:25	1
1,1,2,2-Tetrachloroethane (2C)	96		46 - 136				07/10/20 01:26	07/11/20 04:25	1

Client Sample ID: TB203-01

Lab Sample ID: 410-6718-8

Date Collected: 07/06/20 11:00

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/11/20 04:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	105		46 - 136				07/10/20 01:26	07/11/20 04:42	1
1,1,2,2-Tetrachloroethane (2C)	91		46 - 136				07/10/20 01:26	07/11/20 04:42	1

Client Sample ID: TB203-02

Lab Sample ID: 410-6718-9

Date Collected: 07/06/20 11:00

Matrix: Water

Date Received: 07/07/20 10:41

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 04:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	103		46 - 136				07/10/20 01:26	07/11/20 04:59	1
1,1,2,2-Tetrachloroethane (2C)	88		46 - 136				07/10/20 01:26	07/11/20 04:59	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-6718-1	GW235-438-203	106	91
410-6718-2	GW235-438-603	105	92
410-6718-3	GW235-472-203	108	93
410-6718-4	GW235-501-203	110	95
410-6718-5	GW236-436-203	110	94
410-6718-6	GW236-470-203	107	91
410-6718-6 MS	GW236-470-203	107	89
410-6718-6 MSD	GW236-470-203	108	88
410-6718-7	GW236-499-203	111	96
410-6718-8	TB203-01	105	91
410-6718-9	TB203-02	103	88
LCS 410-21104/2-A	Lab Control Sample	100	88
LCS 410-21107/2-A	Lab Control Sample	113	97
LCSD 410-21104/3-A	Lab Control Sample Dup	98	86
LCSD 410-21107/3-A	Lab Control Sample Dup	107	93
MB 410-21104/1-A	Method Blank	98	86
MB 410-21107/1-A	Method Blank	114	97

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-21104/1-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21104

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/10/20 18:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	98		46 - 136	07/10/20 00:54	07/10/20 18:09	1
1,1,2,2-Tetrachloroethane (2C)	86		46 - 136	07/10/20 00:54	07/10/20 18:09	1

Lab Sample ID: LCS 410-21104/2-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.161		ug/L		126	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136
1,1,2,2-Tetrachloroethane (2C)	88		46 - 136

Lab Sample ID: LCSD 410-21104/3-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21104

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.155		ug/L		121	60 - 140	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	98		46 - 136
1,1,2,2-Tetrachloroethane (2C)	86		46 - 136

Lab Sample ID: 410-6718-6 MS

Matrix: Water

Analysis Batch: 21390

Client Sample ID: GW236-470-203

Prep Type: Total/NA

Prep Batch: 21104

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.019	U M	0.122	0.147		ug/L		121	60 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136
1,1,2,2-Tetrachloroethane (2C)	89		46 - 136

Lab Sample ID: 410-6718-6 MSD

Matrix: Water

Analysis Batch: 21390

Client Sample ID: GW236-470-203

Prep Type: Total/NA

Prep Batch: 21104

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.019	U M	0.123	0.144		ug/L		117	60 - 140	3	20

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-6718-6 MSD

Matrix: Water

Analysis Batch: 21390

Client Sample ID: GW236-470-203

Prep Type: Total/NA

Prep Batch: 21104

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	108		46 - 136
1,1,2,2-Tetrachloroethane (2C)	88		46 - 136

Lab Sample ID: MB 410-21107/1-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21107

Analyte	MB	MB								
	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/11/20 01:34	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	114		46 - 136					07/10/20 01:26	07/11/20 01:34	1
1,1,2,2-Tetrachloroethane (2C)	97		46 - 136					07/10/20 01:26	07/11/20 01:34	1

Lab Sample ID: LCS 410-21107/2-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21107

Analyte		Spike	LCS	LCS					%Rec.	
		Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylene Dibromide (1C)		0.128	0.164		ug/L		128	60 - 140		
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
1,1,2,2-Tetrachloroethane (1C)	113		46 - 136							
1,1,2,2-Tetrachloroethane (2C)	97		46 - 136							

Lab Sample ID: LCSD 410-21107/3-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21107

Analyte		Spike	LCSD	LCSD					%Rec.	RPD	RPD	Limit
		Added	Result	Qualifier	Unit	D	%Rec	Limits				
Ethylene Dibromide (1C)		0.128	0.156		ug/L		122	60 - 140	5	20		
Surrogate	LCSD	LCSD										
	%Recovery	Qualifier	Limits									
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136									
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136									

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

GC Semi VOA

Prep Batch: 21104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6718-1	GW235-438-203	Total/NA	Water	8011	
410-6718-6	GW236-470-203	Total/NA	Water	8011	
MB 410-21104/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-21104/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-21104/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-6718-6 MS	GW236-470-203	Total/NA	Water	8011	
410-6718-6 MSD	GW236-470-203	Total/NA	Water	8011	

Prep Batch: 21107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6718-2	GW235-438-603	Total/NA	Water	8011	
410-6718-3	GW235-472-203	Total/NA	Water	8011	
410-6718-4	GW235-501-203	Total/NA	Water	8011	
410-6718-5	GW236-436-203	Total/NA	Water	8011	
410-6718-7	GW236-499-203	Total/NA	Water	8011	
410-6718-8	TB203-01	Total/NA	Water	8011	
410-6718-9	TB203-02	Total/NA	Water	8011	
MB 410-21107/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-21107/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-21107/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 21390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6718-1	GW235-438-203	Total/NA	Water	8011	21104
410-6718-2	GW235-438-603	Total/NA	Water	8011	21107
410-6718-3	GW235-472-203	Total/NA	Water	8011	21107
410-6718-4	GW235-501-203	Total/NA	Water	8011	21107
410-6718-5	GW236-436-203	Total/NA	Water	8011	21107
410-6718-6	GW236-470-203	Total/NA	Water	8011	21104
410-6718-7	GW236-499-203	Total/NA	Water	8011	21107
410-6718-8	TB203-01	Total/NA	Water	8011	21107
410-6718-9	TB203-02	Total/NA	Water	8011	21107
MB 410-21104/1-A	Method Blank	Total/NA	Water	8011	21104
MB 410-21107/1-A	Method Blank	Total/NA	Water	8011	21107
LCS 410-21104/2-A	Lab Control Sample	Total/NA	Water	8011	21104
LCS 410-21107/2-A	Lab Control Sample	Total/NA	Water	8011	21107
LCSD 410-21104/3-A	Lab Control Sample Dup	Total/NA	Water	8011	21104
LCSD 410-21107/3-A	Lab Control Sample Dup	Total/NA	Water	8011	21107
410-6718-6 MS	GW236-470-203	Total/NA	Water	8011	21104
410-6718-6 MSD	GW236-470-203	Total/NA	Water	8011	21104

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Client Sample ID: GW235-438-203**Lab Sample ID: 410-6718-1****Date Collected: 07/06/20 08:48****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21104	07/10/20 00:54	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 00:08	AC3T	ELLE

Client Sample ID: GW235-438-603**Lab Sample ID: 410-6718-2****Date Collected: 07/06/20 08:48****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 03:16	AC3T	ELLE

Client Sample ID: GW235-472-203**Lab Sample ID: 410-6718-3****Date Collected: 07/06/20 09:05****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 03:33	AC3T	ELLE

Client Sample ID: GW235-501-203**Lab Sample ID: 410-6718-4****Date Collected: 07/06/20 09:22****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 03:51	AC3T	ELLE

Client Sample ID: GW236-436-203**Lab Sample ID: 410-6718-5****Date Collected: 07/06/20 07:36****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 04:08	AC3T	ELLE

Client Sample ID: GW236-470-203**Lab Sample ID: 410-6718-6****Date Collected: 07/06/20 07:52****Matrix: Water****Date Received: 07/07/20 10:41**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21104	07/10/20 00:54	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 00:25	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Client Sample ID: GW236-499-203

Lab Sample ID: 410-6718-7

Date Collected: 07/06/20 08:14

Matrix: Water

Date Received: 07/07/20 10:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 04:25	AC3T	ELLE

Client Sample ID: TB203-01

Lab Sample ID: 410-6718-8

Date Collected: 07/06/20 11:00

Matrix: Water

Date Received: 07/07/20 10:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 04:42	AC3T	ELLE

Client Sample ID: TB203-02

Lab Sample ID: 410-6718-9

Date Collected: 07/06/20 11:00

Matrix: Water

Date Received: 07/07/20 10:41

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 04:59	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-6718-1

Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Method	Method Description	Protocol	Laboratory
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6718-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-6718-1	GW235-438-203	Water	07/06/20 08:48	07/07/20 10:41	
410-6718-2	GW235-438-603	Water	07/06/20 08:48	07/07/20 10:41	
410-6718-3	GW235-472-203	Water	07/06/20 09:05	07/07/20 10:41	
410-6718-4	GW235-501-203	Water	07/06/20 09:22	07/07/20 10:41	
410-6718-5	GW236-436-203	Water	07/06/20 07:36	07/07/20 10:41	
410-6718-6	GW236-470-203	Water	07/06/20 07:52	07/07/20 10:41	
410-6718-7	GW236-499-203	Water	07/06/20 08:14	07/07/20 10:41	
410-6718-8	TB203-01	Water	07/06/20 11:00	07/07/20 10:41	
410-6718-9	TB203-02	Water	07/06/20 11:00	07/07/20 10:41	

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Eurofins Lancaster Laboratories Env, LLC



410-6718 Chain of Custody

EA		205 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-235-438-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)													
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7259																					
ANALYSIS REQUIRED (Specify number of bottles)																							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	ED8	(B260C) BTEXN	(B260C) BTEX	(B260C) BTEX	Total (As, Pb, Cd, Cu, Ni, Mn, Mg)	(B011)	ED8	Chloride, bromide, sulfate	COMMENTS									
1	GW235-438-203	7-6-2020	0848	2																			
2	GW235-438-603	7-6-2020	0848	2																			
3																							
4																							
5																							
6																							
COMMENTS:																							
TB203-01																							
SAMPLER(S): D. Schneelk				COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0179																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: D. Schneelk				7-6-2020				1320				Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											

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mm 7/28/2020

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-235-472-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3 (Jul-Sep)											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
				ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8011) ED8	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	(8260C) BTEX	COMMENTS
1	GW235-472-203	7-6-2020	0905	2	2														
2																			
3																			
4																			
5																			
6																			
COMMENTS:																			
SAMPLER(S): D. Schmeelk										COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179									
RELINQUISHED BY: D. Schmeelk										RECEIVED BY: Nicole Reiff									
DATE: 7-6-2020										DATE: 7/7/20									
TIME: 1330										TIME: 1039									

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-235-501-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020										
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs (8260C) BTEX (8260C)	EDB (8011)	BTXN (8260C)	Dissolved Fe, Mn (6020A/6010C) Total (As, Pb, Cd, K, Na, Mg) (8011)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (353.2)	Carbon Dioxide (353.2)	Methane (RSK-175)		(RSK-175)			
1	GW235-501-203	7-6-2020	0922	2				2										
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
SAMPLER(S): D. Schuelek RELINQUISHED BY: D. Schuelek DATE: 7-6-2020 TIME: 1330 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179 RECEIVED BY: Nicole Ruff DATE: 7/7/20 TIME: 1035																		

DEM

EA		225 Schuling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-236-436-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020	
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)	
ANALYSIS REQUIRED (Specify number of bottles)									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8250C) BTEXN	(8250C) BTEX	(8250C) VOCs	(8011) EDB	COMMENTS
1	GW236-436-203	7-6-2020	0736	2	2				
2									
3									
4									
5									
6									
COMMENTS:									
TB203- 02									
SAMPLER(S): D. Schuelek				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0341					
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:	
Printed Name and Signature: D. Schuelek				7-6-2020		1330		Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
								Nicole Reiff 7/7/20 1041	

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EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-236-470-203							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	ANALYSIS REQUIRED (Specify number of bottles)							COMMENTS			
					VOCs (8260C)	BTEX (8260C)	EDB (8011)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (5042320B)	Carbon Dioxide (RSC-175)	Methane (RSC-175)		
1	GW236-470-203	7-6-2020	0752	6			6							Please see Comments for requested MS/MSD analytes	
2															
3															
4															
5															
6															
COMMENTS:															
Please run MS/MSD on the following analytes only: VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe															
TB203-02															
SAMPLER(S): <i>Dylan Schmeelk</i>				COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0341											
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME				
Printed Name and Signature: <i>D. Schmeelk</i>				<i>[Signature]</i>	7-6-2020	1330	Printed Name and Signature:								
Printed Name and Signature:							Printed Name and Signature:								
Printed Name and Signature:							Printed Name and Signature:								
Printed Name and Signature:							Printed Name and Signature: <i>Nicole Ruff</i>				<i>[Signature]</i>	7/2/20	1041		

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EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-236-499-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS					
				Total Number of Bottles	VOCs	BTEX	(B260C)	(B260C)	(BTEX)	(B260C)	(B260C)	(B260C)	(B260C)		(B260C)	(B260C)			
1	GW236-499-203	7-6-2020	0814	2															
2																			
3																			
4																			
5																			
6																			
COMMENTS:																			
TB203- 02																			
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 88155 2830 0341															
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME					
Printed Name and Signature: D. Schmeelk				7-6-2020		1330		Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature: Nicole Ruff				7/7/20		1041					

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EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 594-7000 Fax No. (410) 771-1525		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-01					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)									
				Total Number of Bottles	VOCs	BTEX	EDB	(8011)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	TB203-01	07-06-2020	1100	2	2								
2													
3													
4													
5													
Associated with: GW235-438-203 GW235-438-603 GW235-472-203 GW235-501-203													
SAMPLER(S): G-Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0179									
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME		
Printed Name and Signature: Galveston Begaye				07-06-2020	1330	Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature: Nicole Reiff				7/7/20	1039		

qcm

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203- 02					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)						COMMENTS			
				Total Number of Bottles	VOCs (B200C) (B200C) BTEX (B200C)	BTEXN (B200C)	EDB (B011)	Total As, Pb, Cd, K, Na, Mg (B020A/B010C)	Dissolved Fe, Mn (B010C)	Chloride, bromide, sulfate (300 U)	Nitrate-Nitrite (353 Z)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	
1	TB203- 02	07-06-2020	1100	2	-	-	2						
2													
3													
4													
5													
Associated with: GW 236-436-203 GW 236-470-203 GW 236-499-203													
SAMPLER(S): G. Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0341									
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME		
Printed Name and Signature: Galveston Begaye				07-06-2020	1330	Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature: Nicole Ruff				7/7/20	1041		

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-6718-1

Login Number: 6718**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Miller, Wesley R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-6955-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
8/14/2020 9:04:13 AM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

LINKS

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results through
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory Job ID: 410-6955-1

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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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Measurement uncertainty values, as applicable, are available upon request.

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Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
8/14/2020 9:04:13 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Job ID: 410-6955-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-6955-1

Receipt

The samples were received on 7/8/2020 10:34 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.8° C, 0.9° C, 1.0° C, 1.4° C and 1.7° C.

Receipt Exceptions

One or more containers for the following sample(s) was received broken or leaking: GW218-203 (1 HCl vial)

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 8011: Could not prep a ms/msd for this batch. There was insufficient sample available to do so.

GW207-203 (410-6955-1), GW208-203 (410-6955-2), GW209-203 (410-6955-3), TB203-04 (410-6955-4), GW222-203 (410-6955-5), GW223-203 (410-6955-6), GW224-203 (410-6955-7), TB203-06 (410-6955-8), GW204-203 (410-6955-9), GW205-203 (410-6955-10), GW206-203 (410-6955-11), TB203-03 (410-6955-12) and GW231-203 (410-6955-13)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW207-203

Lab Sample ID: 410-6955-1

☐ No Detections.

Client Sample ID: GW208-203

Lab Sample ID: 410-6955-2

☐ No Detections.

Client Sample ID: GW209-203

Lab Sample ID: 410-6955-3

☐ No Detections.

Client Sample ID: TB203-04

Lab Sample ID: 410-6955-4

☐ No Detections.

Client Sample ID: GW222-203

Lab Sample ID: 410-6955-5

☐ No Detections.

Client Sample ID: GW223-203

Lab Sample ID: 410-6955-6

☐ No Detections.

Client Sample ID: GW224-203

Lab Sample ID: 410-6955-7

☐ No Detections.

Client Sample ID: TB203-06

Lab Sample ID: 410-6955-8

☐ No Detections.

Client Sample ID: GW204-203

Lab Sample ID: 410-6955-9

☐ No Detections.

Client Sample ID: GW205-203

Lab Sample ID: 410-6955-10

☐ No Detections.

Client Sample ID: GW206-203

Lab Sample ID: 410-6955-11

☐ No Detections.

Client Sample ID: TB203-03

Lab Sample ID: 410-6955-12

☐ No Detections.

Client Sample ID: GW231-203

Lab Sample ID: 410-6955-13

☐ No Detections.

Client Sample ID: GW232-203

Lab Sample ID: 410-6955-14

☐ No Detections.

Client Sample ID: GW242-418-203

Lab Sample ID: 410-6955-15

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Bromide	2.2	J D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	130	D	80	60	40	mg/L	200		300.0	Total/NA
Sulfate	280	D	200	180	60	mg/L	200		300.0	Total/NA
Calcium	170		0.20	0.15	0.096	mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW242-418-203 (Continued)

Lab Sample ID: 410-6955-15

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	22		0.10	0.075	0.040	mg/L	1		6010C	Total
Potassium	4.5		0.50	0.38	0.20	mg/L	1		6010C	Recoverable
Sodium	45		1.0	0.50	0.24	mg/L	1		6010C	Total
Arsenic	0.00083	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Recoverable
Nitrate Nitrite as N	4.7		0.20	0.18	0.080	mg/L	2		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-07

Lab Sample ID: 410-6955-16

No Detections.

Client Sample ID: GW216-203

Lab Sample ID: 410-6955-17

No Detections.

Client Sample ID: GW216-603

Lab Sample ID: 410-6955-18

No Detections.

Client Sample ID: GW217-203

Lab Sample ID: 410-6955-19

No Detections.

Client Sample ID: GW218-203

Lab Sample ID: 410-6955-20

No Detections.

Client Sample ID: TB203-05

Lab Sample ID: 410-6955-21

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW207-203

Lab Sample ID: 410-6955-1

Date Collected: 07/07/20 12:26

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 05:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	110		46 - 136				07/10/20 01:26	07/11/20 05:16	1
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136				07/10/20 01:26	07/11/20 05:16	1

Client Sample ID: GW208-203

Lab Sample ID: 410-6955-2

Date Collected: 07/07/20 12:51

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 05:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	105		46 - 136				07/10/20 01:26	07/11/20 05:33	1
1,1,2,2-Tetrachloroethane (2C)	91		46 - 136				07/10/20 01:26	07/11/20 05:33	1

Client Sample ID: GW209-203

Lab Sample ID: 410-6955-3

Date Collected: 07/07/20 13:03

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 05:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	103		46 - 136				07/10/20 01:26	07/11/20 05:50	1
1,1,2,2-Tetrachloroethane (2C)	89		46 - 136				07/10/20 01:26	07/11/20 05:50	1

Client Sample ID: TB203-04

Lab Sample ID: 410-6955-4

Date Collected: 07/07/20 14:15

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 06:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	105		46 - 136				07/10/20 01:26	07/11/20 06:42	1
1,1,2,2-Tetrachloroethane (2C)	88		46 - 136				07/10/20 01:26	07/11/20 06:42	1

Client Sample ID: GW222-203

Lab Sample ID: 410-6955-5

Date Collected: 07/07/20 09:50

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 06:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	104		46 - 136				07/10/20 01:26	07/11/20 06:59	1
1,1,2,2-Tetrachloroethane (2C)	89		46 - 136				07/10/20 01:26	07/11/20 06:59	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW223-203

Lab Sample ID: 410-6955-6

Date Collected: 07/07/20 09:35

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 07:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	116		46 - 136				07/10/20 01:26	07/11/20 07:16	1
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136				07/10/20 01:26	07/11/20 07:16	1

Client Sample ID: GW224-203

Lab Sample ID: 410-6955-7

Date Collected: 07/07/20 09:15

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 07:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	106		46 - 136				07/10/20 01:26	07/11/20 07:33	1
1,1,2,2-Tetrachloroethane (2C)	87		46 - 136				07/10/20 01:26	07/11/20 07:33	1

Client Sample ID: TB203-06

Lab Sample ID: 410-6955-8

Date Collected: 07/07/20 14:15

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 07:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	102		46 - 136				07/10/20 01:26	07/11/20 07:50	1
1,1,2,2-Tetrachloroethane (2C)	90		46 - 136				07/10/20 01:26	07/11/20 07:50	1

Client Sample ID: GW204-203

Lab Sample ID: 410-6955-9

Date Collected: 07/07/20 07:40

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 08:07	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136					07/10/20 01:26	07/11/20 08:07	1
1,1,2,2-Tetrachloroethane (2C)	89		46 - 136					07/10/20 01:26	07/11/20 08:07	1

Client Sample ID: GW205-203

Lab Sample ID: 410-6955-10

Date Collected: 07/07/20 07:20

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 08:24	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136					07/10/20 01:26	07/11/20 08:24	1
1,1,2,2-Tetrachloroethane (2C)	86		46 - 136					07/10/20 01:26	07/11/20 08:24	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW206-203

Date Collected: 07/07/20 07:03

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-11

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/11/20 08:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	110		46 - 136				07/10/20 01:26	07/11/20 08:42	1
1,1,2,2-Tetrachloroethane (2C)	90		46 - 136				07/10/20 01:26	07/11/20 08:42	1

Client Sample ID: TB203-03

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-12

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/11/20 08:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136				07/10/20 01:26	07/11/20 08:59	1
1,1,2,2-Tetrachloroethane (2C)	90		46 - 136				07/10/20 01:26	07/11/20 08:59	1

Client Sample ID: GW231-203

Date Collected: 07/07/20 11:28

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-13

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/11/20 09:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	106		46 - 136				07/10/20 01:26	07/11/20 09:16	1
1,1,2,2-Tetrachloroethane (2C)	90		46 - 136				07/10/20 01:26	07/11/20 09:16	1

Client Sample ID: GW232-203

Date Collected: 07/07/20 11:44

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-14

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/13/20 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	108		46 - 136				07/11/20 07:31	07/13/20 22:35	1
1,1,2,2-Tetrachloroethane (2C)	75		46 - 136				07/11/20 07:31	07/13/20 22:35	1

Client Sample ID: GW242-418-203

Date Collected: 07/07/20 10:55

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-15

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.0099	ug/L		07/13/20 22:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	102		46 - 136				07/11/20 07:31	07/13/20 22:52	1
1,1,2,2-Tetrachloroethane (2C)	79		46 - 136				07/11/20 07:31	07/13/20 22:52	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW242-418-203

Lab Sample ID: 410-6955-15

Date Collected: 07/07/20 10:55

Matrix: Water

Date Received: 07/08/20 10:34

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.2	J D	2.5	2.0	1.3	mg/L	-	07/12/20 21:55	5
Chloride	130	D	80	60	40	mg/L	-	07/12/20 22:12	200
Sulfate	280	D	200	180	60	mg/L	-	07/12/20 22:12	200

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	170		0.20	0.15	0.096	mg/L	-	07/14/20 19:37	1
Magnesium	22		0.10	0.075	0.040	mg/L	-	07/14/20 19:37	1
Potassium	4.5		0.50	0.38	0.20	mg/L	-	07/14/20 19:37	1
Sodium	45		1.0	0.50	0.24	mg/L	-	07/14/20 19:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/13/20 08:36	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L	-	07/13/20 08:36	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00083	J	0.0020	0.0016	0.00068	mg/L	-	07/23/20 16:43	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/23/20 16:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	4.7		0.20	0.18	0.080	mg/L	-	07/19/20 09:35	2
Bicarbonate Alkalinity as CaCO ₃	150		8.0	6.0	8.0	mg/L	-	07/10/20 06:23	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 06:23	1
Total Alkalinity as CaCO ₃ to pH 4.5	150		8.0	6.0	8.0	mg/L	-	07/10/20 06:23	1

Client Sample ID: TB203-07

Lab Sample ID: 410-6955-16

Date Collected: 07/07/20 14:15

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L	-	07/13/20 23:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	79		46 - 136				07/11/20 07:31	07/13/20 23:09	1
1,1,2,2-Tetrachloroethane (2C)	70		46 - 136				07/11/20 07:31	07/13/20 23:09	1

Client Sample ID: GW216-203

Lab Sample ID: 410-6955-17

Date Collected: 07/07/20 08:11

Matrix: Water

Date Received: 07/08/20 10:34

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L	-	07/13/20 23:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	113		46 - 136				07/11/20 07:31	07/13/20 23:26	1
1,1,2,2-Tetrachloroethane (2C)	80		46 - 136				07/11/20 07:31	07/13/20 23:26	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW216-603

Date Collected: 07/07/20 08:11

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-18

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/13/20 23:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136				07/11/20 07:31	07/13/20 23:43	1
1,1,2,2-Tetrachloroethane (2C)	74		46 - 136				07/11/20 07:31	07/13/20 23:43	1

Client Sample ID: GW217-203

Date Collected: 07/07/20 08:30

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-19

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 00:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136				07/11/20 07:31	07/14/20 00:00	1
1,1,2,2-Tetrachloroethane (2C)	75		46 - 136				07/11/20 07:31	07/14/20 00:00	1

Client Sample ID: GW218-203

Date Collected: 07/07/20 08:48

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-20

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 00:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	115	J1	46 - 136				07/11/20 07:31	07/14/20 00:17	1
1,1,2,2-Tetrachloroethane (2C)	75	J1	46 - 136				07/11/20 07:31	07/14/20 00:17	1

Client Sample ID: TB203-05

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-21

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/14/20 00:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	79		46 - 136				07/11/20 07:31	07/14/20 00:35	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136				07/11/20 07:31	07/14/20 00:35	1

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Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-6955-1	GW207-203	110	93
410-6955-2	GW208-203	105	91
410-6955-3	GW209-203	103	89
410-6955-4	TB203-04	105	88
410-6955-5	GW222-203	104	89
410-6955-6	GW223-203	116	93
410-6955-7	GW224-203	106	87
410-6955-8	TB203-06	102	90
410-6955-9	GW204-203	107	89
410-6955-10	GW205-203	100	86
410-6955-11	GW206-203	110	90
410-6955-12	TB203-03	100	90
410-6955-13	GW231-203	106	90
410-6955-14	GW232-203	108	75
410-6955-15	GW242-418-203	102	79
410-6955-16	TB203-07	79	70
410-6955-17	GW216-203	113	80
410-6955-18	GW216-603	100	74
410-6955-19	GW217-203	107	75
410-6955-20	GW218-203	115 J1	75 J1
410-6955-21	TB203-05	79	64
LCS 410-21107/2-A	Lab Control Sample	113	97
LCS 410-21490/2-A	Lab Control Sample	85	70
LCSD 410-21107/3-A	Lab Control Sample Dup	107	93
LCSD 410-21490/3-A	Lab Control Sample Dup	82	71
MB 410-21107/1-A	Method Blank	114	97
MB 410-21490/1-A	Method Blank	86	75

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-21107/1-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21107

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/11/20 01:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	114		46 - 136	07/10/20 01:26	07/11/20 01:34	1
1,1,2,2-Tetrachloroethane (2C)	97		46 - 136	07/10/20 01:26	07/11/20 01:34	1

Lab Sample ID: LCS 410-21107/2-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.164		ug/L		128	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	113		46 - 136
1,1,2,2-Tetrachloroethane (2C)	97		46 - 136

Lab Sample ID: LCSD 410-21107/3-A

Matrix: Water

Analysis Batch: 21390

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21107

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.156		ug/L		122	60 - 140	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136

Lab Sample ID: MB 410-21490/1-A

Matrix: Water

Analysis Batch: 21982

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21490

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/13/20 19:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	86		46 - 136	07/11/20 07:31	07/13/20 19:10	1
1,1,2,2-Tetrachloroethane (2C)	75		46 - 136	07/11/20 07:31	07/13/20 19:10	1

Lab Sample ID: LCS 410-21490/2-A

Matrix: Water

Analysis Batch: 21982

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.119		ug/L		93	60 - 140

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-21490/2-A
Matrix: Water
Analysis Batch: 21982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21490

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	85		46 - 136
1,1,2,2-Tetrachloroethane (2C)	70		46 - 136

Lab Sample ID: LCSD 410-21490/3-A
Matrix: Water
Analysis Batch: 21982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.119		ug/L		93	60 - 140	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	82		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	71		46 - 136						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-21573/35
Matrix: Water
Analysis Batch: 21573

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/12/20 20:12	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/12/20 20:12	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/12/20 20:12	1

Lab Sample ID: LCS 410-21573/34
Matrix: Water
Analysis Batch: 21573

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	6.90		mg/L		92	90 - 110
Chloride	3.00	2.76		mg/L		92	90 - 110
Sulfate	7.50	7.18		mg/L		96	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-20697/1-A
Matrix: Water
Analysis Batch: 21837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20697

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/13/20 07:54	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/13/20 07:54	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-20697/2-A
Matrix: Water
Analysis Batch: 21837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20697

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.376		mg/L		93	87 - 115
Manganese	0.0200	0.0219		mg/L		110	90 - 114

Lab Sample ID: MB 410-20667/1-A
Matrix: Water
Analysis Batch: 22587

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 20667

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/14/20 18:49	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/14/20 18:49	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/14/20 18:49	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/14/20 18:49	1

Lab Sample ID: LCS 410-20667/2-A
Matrix: Water
Analysis Batch: 22587

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20667

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.422		mg/L		105	87 - 113
Magnesium	0.200	0.204		mg/L		102	85 - 113
Potassium	5.60	5.50		mg/L		98	86 - 114
Sodium	2.00	1.78		mg/L		89	87 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-20668/1-A
Matrix: Water
Analysis Batch: 25936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20668

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/23/20 16:09	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/23/20 16:09	1

Lab Sample ID: LCS 410-20668/2-A
Matrix: Water
Analysis Batch: 25936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20668

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0104		mg/L		105	84 - 116
Lead	0.00492	0.00516		mg/L		105	88 - 115

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-24043/20
Matrix: Water
Analysis Batch: 24043

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/19/20 09:04	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 410-24043/21

Matrix: Water

Analysis Batch: 24043

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.54		mg/L		102	90 - 110

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 410-21353/85

Matrix: Water

Analysis Batch: 21353

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 03:52	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 03:52	1
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 03:52	1

Lab Sample ID: LCS 410-21353/86

Matrix: Water

Analysis Batch: 21353

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	168		mg/L		89	82 - 106

Lab Sample ID: LCSD 410-21353/87

Matrix: Water

Analysis Batch: 21353

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Alkalinity as CaCO ₃ to pH 4.5	189	175		mg/L		93	82 - 106	4	10

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

GC Semi VOA

Prep Batch: 21107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-1	GW207-203	Total/NA	Water	8011	
410-6955-2	GW208-203	Total/NA	Water	8011	
410-6955-3	GW209-203	Total/NA	Water	8011	
410-6955-4	TB203-04	Total/NA	Water	8011	
410-6955-5	GW222-203	Total/NA	Water	8011	
410-6955-6	GW223-203	Total/NA	Water	8011	
410-6955-7	GW224-203	Total/NA	Water	8011	
410-6955-8	TB203-06	Total/NA	Water	8011	
410-6955-9	GW204-203	Total/NA	Water	8011	
410-6955-10	GW205-203	Total/NA	Water	8011	
410-6955-11	GW206-203	Total/NA	Water	8011	
410-6955-12	TB203-03	Total/NA	Water	8011	
410-6955-13	GW231-203	Total/NA	Water	8011	
MB 410-21107/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-21107/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-21107/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 21390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-1	GW207-203	Total/NA	Water	8011	21107
410-6955-2	GW208-203	Total/NA	Water	8011	21107
410-6955-3	GW209-203	Total/NA	Water	8011	21107
410-6955-4	TB203-04	Total/NA	Water	8011	21107
410-6955-5	GW222-203	Total/NA	Water	8011	21107
410-6955-6	GW223-203	Total/NA	Water	8011	21107
410-6955-7	GW224-203	Total/NA	Water	8011	21107
410-6955-8	TB203-06	Total/NA	Water	8011	21107
410-6955-9	GW204-203	Total/NA	Water	8011	21107
410-6955-10	GW205-203	Total/NA	Water	8011	21107
410-6955-11	GW206-203	Total/NA	Water	8011	21107
410-6955-12	TB203-03	Total/NA	Water	8011	21107
410-6955-13	GW231-203	Total/NA	Water	8011	21107
MB 410-21107/1-A	Method Blank	Total/NA	Water	8011	21107
LCS 410-21107/2-A	Lab Control Sample	Total/NA	Water	8011	21107
LCSD 410-21107/3-A	Lab Control Sample Dup	Total/NA	Water	8011	21107

Prep Batch: 21490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-14	GW232-203	Total/NA	Water	8011	
410-6955-15	GW242-418-203	Total/NA	Water	8011	
410-6955-16	TB203-07	Total/NA	Water	8011	
410-6955-17	GW216-203	Total/NA	Water	8011	
410-6955-18	GW216-603	Total/NA	Water	8011	
410-6955-19	GW217-203	Total/NA	Water	8011	
410-6955-20	GW218-203	Total/NA	Water	8011	
410-6955-21	TB203-05	Total/NA	Water	8011	
MB 410-21490/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-21490/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-21490/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

GC Semi VOA

Analysis Batch: 21982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-14	GW232-203	Total/NA	Water	8011	21490
410-6955-15	GW242-418-203	Total/NA	Water	8011	21490
410-6955-16	TB203-07	Total/NA	Water	8011	21490
410-6955-17	GW216-203	Total/NA	Water	8011	21490
410-6955-18	GW216-603	Total/NA	Water	8011	21490
410-6955-19	GW217-203	Total/NA	Water	8011	21490
410-6955-20	GW218-203	Total/NA	Water	8011	21490
410-6955-21	TB203-05	Total/NA	Water	8011	21490
MB 410-21490/1-A	Method Blank	Total/NA	Water	8011	21490
LCS 410-21490/2-A	Lab Control Sample	Total/NA	Water	8011	21490
LCS 410-21490/3-A	Lab Control Sample Dup	Total/NA	Water	8011	21490

HPLC/IC

Analysis Batch: 21573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total/NA	Water	300.0	
410-6955-15	GW242-418-203	Total/NA	Water	300.0	
MB 410-21573/35	Method Blank	Total/NA	Water	300.0	
LCS 410-21573/34	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 20667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total Recoverable	Water	3005A	
MB 410-20667/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-20667/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 20668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total/NA	Water	3020A	
MB 410-20668/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-20668/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 20697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Dissolved	Water	Non-Digest Prep	
MB 410-20697/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-20697/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 21837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Dissolved	Water	6010C	20697
MB 410-20697/1-A	Method Blank	Total/NA	Water	6010C	20697
LCS 410-20697/2-A	Lab Control Sample	Total/NA	Water	6010C	20697

Analysis Batch: 22587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total Recoverable	Water	6010C	20667
MB 410-20667/1-A	Method Blank	Total Recoverable	Water	6010C	20667
LCS 410-20667/2-A	Lab Control Sample	Total Recoverable	Water	6010C	20667

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Metals

Analysis Batch: 25936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total/NA	Water	6020A	20668
MB 410-20668/1-A	Method Blank	Total/NA	Water	6020A	20668
LCS 410-20668/2-A	Lab Control Sample	Total/NA	Water	6020A	20668

General Chemistry

Analysis Batch: 21353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total/NA	Water	SM2320 B	
MB 410-21353/85	Method Blank	Total/NA	Water	SM2320 B	
LCS 410-21353/86	Lab Control Sample	Total/NA	Water	SM2320 B	
LCSD 410-21353/87	Lab Control Sample Dup	Total/NA	Water	SM2320 B	

Analysis Batch: 24043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-6955-15	GW242-418-203	Total/NA	Water	353.2	
MB 410-24043/20	Method Blank	Total/NA	Water	353.2	
LCS 410-24043/21	Lab Control Sample	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW207-203

Date Collected: 07/07/20 12:26

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 05:16	AC3T	ELLE

Client Sample ID: GW208-203

Date Collected: 07/07/20 12:51

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 05:33	AC3T	ELLE

Client Sample ID: GW209-203

Date Collected: 07/07/20 13:03

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 05:50	AC3T	ELLE

Client Sample ID: TB203-04

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 06:42	AC3T	ELLE

Client Sample ID: GW222-203

Date Collected: 07/07/20 09:50

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 06:59	AC3T	ELLE

Client Sample ID: GW223-203

Date Collected: 07/07/20 09:35

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 07:16	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW224-203

Date Collected: 07/07/20 09:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 07:33	AC3T	ELLE

Client Sample ID: TB203-06

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 07:50	AC3T	ELLE

Client Sample ID: GW204-203

Date Collected: 07/07/20 07:40

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 08:07	AC3T	ELLE

Client Sample ID: GW205-203

Date Collected: 07/07/20 07:20

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 08:24	AC3T	ELLE

Client Sample ID: GW206-203

Date Collected: 07/07/20 07:03

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 08:42	AC3T	ELLE

Client Sample ID: TB203-03

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 08:59	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW231-203

Date Collected: 07/07/20 11:28

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21107	07/10/20 01:26	K2IL	ELLE
Total/NA	Analysis	8011		1	21390	07/11/20 09:16	AC3T	ELLE

Client Sample ID: GW232-203

Date Collected: 07/07/20 11:44

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/13/20 22:35	AC3T	ELLE

Client Sample ID: GW242-418-203

Date Collected: 07/07/20 10:55

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/13/20 22:52	AC3T	ELLE
Total/NA	Analysis	300.0		5	21573	07/12/20 21:55	WHJ3	ELLE
Total/NA	Analysis	300.0		200	21573	07/12/20 22:12	WHJ3	ELLE
Dissolved	Prep	Non-Digest Prep			20697	07/09/20 06:19	UJL8	ELLE
Dissolved	Analysis	6010C		1	21837	07/13/20 08:36	ULJC	ELLE
Total Recoverable	Prep	3005A			20667	07/09/20 03:23	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22587	07/14/20 19:37	LR7D	ELLE
Total/NA	Prep	3020A			20668	07/09/20 03:31	UJL8	ELLE
Total/NA	Analysis	6020A		1	25936	07/23/20 16:43	V5SW	ELLE
Total/NA	Analysis	353.2		2	24043	07/19/20 09:35	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21353	07/10/20 06:23	DI9Q	ELLE

Client Sample ID: TB203-07

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/13/20 23:09	AC3T	ELLE

Client Sample ID: GW216-203

Date Collected: 07/07/20 08:11

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/13/20 23:26	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Client Sample ID: GW216-603

Date Collected: 07/07/20 08:11

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/13/20 23:43	AC3T	ELLE

Client Sample ID: GW217-203

Date Collected: 07/07/20 08:30

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 00:00	AC3T	ELLE

Client Sample ID: GW218-203

Date Collected: 07/07/20 08:48

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 00:17	AC3T	ELLE

Client Sample ID: TB203-05

Date Collected: 07/07/20 14:15

Date Received: 07/08/20 10:34

Lab Sample ID: 410-6955-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21490	07/11/20 07:31	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 00:35	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Method	Method Description	Protocol	Laboratory
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
300.0	Anions, Ion Chromatography	MCAWW	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
SM2320 B	Alkalinity, Total	SM18	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-6955-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-6955-1	GW207-203	Water	07/07/20 12:26	07/08/20 10:34	
410-6955-2	GW208-203	Water	07/07/20 12:51	07/08/20 10:34	
410-6955-3	GW209-203	Water	07/07/20 13:03	07/08/20 10:34	
410-6955-4	TB203-04	Water	07/07/20 14:15	07/08/20 10:34	
410-6955-5	GW222-203	Water	07/07/20 09:50	07/08/20 10:34	
410-6955-6	GW223-203	Water	07/07/20 09:35	07/08/20 10:34	
410-6955-7	GW224-203	Water	07/07/20 09:15	07/08/20 10:34	
410-6955-8	TB203-06	Water	07/07/20 14:15	07/08/20 10:34	
410-6955-9	GW204-203	Water	07/07/20 07:40	07/08/20 10:34	
410-6955-10	GW205-203	Water	07/07/20 07:20	07/08/20 10:34	
410-6955-11	GW206-203	Water	07/07/20 07:03	07/08/20 10:34	
410-6955-12	TB203-03	Water	07/07/20 14:15	07/08/20 10:34	
410-6955-13	GW231-203	Water	07/07/20 11:28	07/08/20 10:34	
410-6955-14	GW232-203	Water	07/07/20 11:44	07/08/20 10:34	
410-6955-15	GW242-418-203	Water	07/07/20 10:55	07/08/20 10:34	
410-6955-16	TB203-07	Water	07/07/20 14:15	07/08/20 10:34	
410-6955-17	GW216-203	Water	07/07/20 08:11	07/08/20 10:34	
410-6955-18	GW216-603	Water	07/07/20 08:11	07/08/20 10:34	
410-6955-19	GW217-203	Water	07/07/20 08:30	07/08/20 10:34	
410-6955-20	GW218-203	Water	07/07/20 08:48	07/08/20 10:34	
410-6955-21	TB203-05	Water	07/07/20 14:15	07/08/20 10:34	

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Eurofins Lancaster Laboratories Env, LLC



410-6955 Chain of Custody

EA 225 Schuling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD						COC NUMBER COC-207-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS					
				Total Number of Bottles	VOCs	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)		(BTEX)	(BTEX)			
1	GW207-203	7-7-2020	1226	2															
2																			
3																			
4																			
5																			
6																			
COMMENTS:																			
SAMPLER(S): D. Schmeelk										COURIER AND SHIPPING NUMBER: FedEx 8155 2830 6244 0250 TB203-04									
RELINQUISHED BY: D. Schmeelk										RECEIVED BY: Nicole Reiff									
DATE: 7-7-2020 TIME: 1600										DATE: 7/6/20 TIME: 1034									
Printed Name and Signature: D. Schmeelk										Printed Name and Signature: Nicole Reiff									
Printed Name and Signature: D. Schmeelk										Printed Name and Signature: Nicole Reiff									
Printed Name and Signature: D. Schmeelk										Printed Name and Signature: Nicole Reiff									

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-208-203						
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)						
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										
				Total Number of bottles	VOCs (8250C)	BTEX (8260C)	EDS (8011)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	Comments
1	GW208-203	7-7-2020	1251	2			2							
2														
3														
4														
5														
6														
COMMENTS:														
SAMPLER(S): D. Schmeelk COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250 TB203- 04														
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME			
Printed Name and Signature: D. Schmeelk, [Signature]				7-7-2020	1600	Printed Name and Signature:								
Printed Name and Signature:						Printed Name and Signature:								
Printed Name and Signature:						Printed Name and Signature:								
Printed Name and Signature:						Printed Name and Signature: Nicole Ruff				7/8/20	1034			

QY

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-209-203								
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020								
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)								
ANALYSIS REQUIRED (Specify number of bottles)																
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (8260C)	81EX (8260C)	EDB (8011)	Total (As, Pb, Cd, Ni, Mn) (6020A/6010C)	Disolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Total, Carbonate, and Bicarbonate (5M2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	(RSK-175)	COMMENTS
1	GW209-203	7-7-2020	1303	2				2								
2																
3																
4																
5																
6																
COMMENTS:																
TB203- 04																
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: DSchmeelk				7-7-2020		1600		Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-04							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)											
				Total Number of Bottles	VOCS (9260C)	BTEX (9260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS		
1	TB203-04	7-7-2020	1415	2	2	2	2								
2															
3															
4															
5															
Associated with: GW207-203 GW208-203 GW209-203															
SAMPLER(S) D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0250											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reitt				7/8/20		1034	

ONE

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-223-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111		Lab PQ Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)								
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS		
				Total Number of Bottles	VOCs (9260C)	BTEX (9260C)	EDB (9260C)	BTXN (9260C)	Total As, Pb, Cd, Cu, Ni, Mn (8011)	Dissolved Fe, Mn (8020A/6010C)	Chloride, bromide, sulfate (6010C)	Nitrate-Nitrite (300.0)	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	Carbon Dioxide (SM2320B)		Methane (RSK-175)	(RSK-175)
1	GW223-203	7-7-2020	0935	2						2								
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
TB203- 06																		
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature: Kristin Zeigler Kristin Z				7/8/20		1037				

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-224-203			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)			
				ANALYSIS REQUIRED (Specify number of bottles)							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C) (8260C) BTEX (8260C)	ED8 (8011) (6020A/6010C) Total (Pb, Cd, Cu, Ni, Mn, Mg)	Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C)	Nitrate-Nitrite (353.2) (300.0)	Alkalinity (Total, Carbonate, and Bicarbonate) (5M2320B)	Carbon Dioxide (RSK-175) (RSK-175)	Comments
1	GW224-203	7-7-2020	0915	2		2					
2											
3											
4											
5											
6											
COMMENTS:											
TB203- 06											
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271							
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:			
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:			
Printed Name and Signature:								Printed Name and Signature:			
Printed Name and Signature:								Printed Name and Signature: Kristin Zeigler			
								7/8/20 1036			

gem

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3					
				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, Cr, Ni, Mn (6020A/6010C)	Disolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (8010C)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate and Bicarbonate) (SM2320B)	COMMENTS	
1	TB203-06	7-7-2020	1415	2	2			2							
2															
3															
4															
5															

Associated with:
GW222-203
GW223-203
GW224-203

SAMPLER(S) D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0271			
RELINQUISHED BY:		DATE		TIME		RECEIVED BY:	
Printed Name and Signature: D. Schmeelk		7-7-2020		1600		Printed Name and Signature:	
Printed Name and Signature:						Printed Name and Signature:	
Printed Name and Signature:						Printed Name and Signature:	
Printed Name and Signature:						Printed Name and Signature: Kristin Zeigler	
						7/8/20 1036	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-204-203					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS					
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	ED8 (8011)	Total (As, Pb, Cd, Cr, Hg, Mn) (8210A/8210C)	Disolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	(Total, Carbonate, and Bicarbonate) (353.2)		Carbon Dioxide (SM2320B)	Methane (RSK-175)	(RSK-175)		
1	GW204-203	7-7-2020	0740	2					2										
2	GW204-603	7-7-2020	0740	2					2										
3																			
4																			
5																			
6																			
COMMENTS:																			
														TB203- 03					
SAMPLER(S): D. Schmeck				RELINQUISHED BY:				DATE:				TIME:				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249			
Printed Name and Signature: D. Schmeck				Printed Name and Signature: [Signature]				DATE: 7-7-2020				TIME: 1600				RECEIVED BY:			
Printed Name and Signature:				Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature: Kristin Zeigler			
																7/8/20 1033			

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-205-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020												
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS									
					VOCs	BTEX	(B260C)	BTEXN	(B260C)	EDB	Total (As, Pb, Cd, Ni, Mn)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite		(353.2)	(Total, Carbonate, and Bicarbonate)	Carbon Dioxide	(SM2320B)	Alkalinity	(Total, Carbonate, and Bicarbonate)	(RSK-175)	Methane	(RSK-175)
1	GW205-203	7-7-2020	0720	2																				
2																								
3																								
4																								
5																								
6																								
COMMENTS:																								
TB203- 03																								
SAMPLER(S): D. Schmeelk												COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249												
RELINQUISHED BY:												RECEIVED BY:												
Printed Name and Signature: D. Schmeelk												Printed Name and Signature: Kristin Zeigler Kuntz												
DATE: 7-7-2020												DATE: 7/8/20												
TIME: 1600												TIME: 1033												

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-206-203			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)							
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDH (8011)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	(Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	(RSK-175)	COMMENTS	
1	GW206-203	7-7-2020	0703	2				2									
2																	
3																	
4																	
5																	
6																	
COMMENTS:																	
TB203- 03																	
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature: Kristin Zeigler				7/8/20		1133			

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1025		CHAIN-OF-CUSTODY RECORD				COC NUMBER							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		COC-TB203-03							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3							
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total As Pb Cd K Na Mg (6020A-8010C)	Disolved Fe, Mn (8010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS		
1	TB203-03	7-7-2020	1415	2	2										
2															
3															
4															
5															
Associated with: GW 204-203 GW 205-203 GW 206-203															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0249											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Kristin Zeigler				7/8/20		1033	

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-231-203							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)							
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C) BTEX (8260C)	EDB (8260C) BTEXN (8260C)	Total (As, Pb, Cd, Cu, Ni, Mn) (6010C) Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	Comments		
1	GW231-203	7-7-2020	1128	2			2								
2															
3															
4															
5															
6															
COMMENTS:															
TB203- 07															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0282											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Wesley Miller				7/8/20		1634	

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EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-232-203												
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@equest.com EA Amanda Smith: asmith@equest.com EA		YEAR: 2020												
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@equest.com EA		QUARTER: 3 (Jul-Sep)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS						
				Total Number of Bottles	VOCs	BTEX	(B260C)	BTEXN	(B260C)	ED8	Total (As, Pb, Cu, Zn, Ni, Mn)	Dissolved Fe, Mn	Chloride, bromide, sulfate		Nitrate-Nitrite	Alkalinity	(Total, Carbonate, and Bicarbonate)	Carbon Dioxide	(SK-175)	Methane
1	GW232-203	7-7-2020	1144	2																
2																				
3																				
4																				
5																				
6																				
COMMENTS:																				
TB203-07																				
SAMPLER(S): D. Schneek				COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0282																
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME						
Printed Name and Signature: D. Schneek				7-7-2020		1600		Printed Name and Signature:												
Printed Name and Signature:								Printed Name and Signature:												
Printed Name and Signature:								Printed Name and Signature:												
Printed Name and Signature:								Printed Name and Signature: Wesley Miller				7/8/2020		1034						

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-242-418-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020								
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: 3 (Jul-Sep)										
				ANALYSIS REQUIRED (Specify number of bottles)							COMMENTS					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Cu, Cd, Ni, Mn) (8220A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	(RSK-175)	
1	GW242-418-203	7-7-2020	1055	7	—	—	2	1	1*	1	1	1	—	—	—	—
2																
3																
4																
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																
TB203-07																
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0282												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: D. Schmeelk, [Signature]				7-7-2020		1600		Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature: Wesley Miller [Signature]				7/8/2020		1634		

CRM

EA		225 Schang Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA		Amanda Smith: asmith@eaest.com EA		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		COC-TB203-07			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3							
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	EDB (8260C)	Total As, Pb, Cd, Cr, Hg, Mn (8011)	Dissolved Fe, Mn (8011)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS	
1	TB203-07	7-7-2020	1415	2	2										
2															
3															
4															
5															
Associated with: GW 231-203 GW 232-203 GW 242-418-203															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Wesley Miller				7/8/20		1634	

EA		225 Schwing Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-216-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS					
				Total Number of Bottles	VOCs	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)		(BTEX)	(BTEX)			
1	GW216-203	7-7-2020	0811	2															
2	GW216-603	7-7-2020	0811	2															
3																			
4																			
5																			
6																			
COMMENTS:																			
TB203- 05																			
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260															
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME					
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature:											
Printed Name and Signature:								Printed Name and Signature: Nicole Ruiz				7/8/20		1031					

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-217-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020										
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs	BTEX	(B260C)	BTEXN	(B260C)	EDB	Total (As, Pb, Cd, K, Hg, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate		Nitrate-Nitrite	Alkalinity		
1	GW217-203	7-7-2020	0830	2														
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
TB203- 05																		
SAMPLER(S): D. Schneelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schneelk				7-7-2020		1600		Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/8/20		1031				

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-218-203			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Ca, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)		Methane (RSK-175)	(RSK-175)	
1	GW218-203	7-7-2020	0848	2				2									
2																	
3																	
4																	
5																	
6																	
COMMENTS:																	
TB203-05																	
SAMPLER(S): D. Schneelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0260													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schneelk				7-7-2020		1600		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-05							
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER 62599DM01		LABORATORY NAME AND CONTACT Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)											
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, Cr, Hg, Mn (6020A, 6010C)	Disinfectant, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS	
1	TB203-05	7-7-2020	1415	2	2	2	2	2	2	2	2	2	2		
2															
3															
4															
5															
Associated with: GW 216-203 GW 216-603 GW 217-203 GW 218-203															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 9155 2830 0260											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-7-2020		1600		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/8/20		1031	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-6955-1

Login Number: 6955**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers received broken. No volume could be salvaged for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-7140-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
8/15/2020 9:38:08 AM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

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results through
TotalAccess

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory Job ID: 410-7140-1

1

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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Measurement uncertainty values, as applicable, are available upon request.

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Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
8/15/2020 9:38:08 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Job ID: 410-7140-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-7140-1

Comments

No additional comments.

Receipt

The samples were received on 7/9/2020 10:56 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.6° C, 0.7° C, 0.8° C, 0.9° C, 1.0° C and 1.8° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 410-26363 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW032-203

Lab Sample ID: 410-7140-1

No Detections.

Client Sample ID: GW247-450-203

Lab Sample ID: 410-7140-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	32	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	47		0.20	0.15	0.096	mg/L	1		6010C	Total
										Recoverable
Magnesium	7.0		0.10	0.075	0.040	mg/L	1		6010C	Total
										Recoverable
Potassium	2.4		0.50	0.38	0.20	mg/L	1		6010C	Total
										Recoverable
Sodium	25		1.0	0.50	0.24	mg/L	1		6010C	Total
										Recoverable
Nitrate Nitrite as N	1.0		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-09

Lab Sample ID: 410-7140-3

No Detections.

Client Sample ID: GW049-203

Lab Sample ID: 410-7140-4

No Detections.

Client Sample ID: GW051-203

Lab Sample ID: 410-7140-5

No Detections.

Client Sample ID: GW051-603

Lab Sample ID: 410-7140-6

No Detections.

Client Sample ID: TB203-12

Lab Sample ID: 410-7140-7

No Detections.

Client Sample ID: GW041-203

Lab Sample ID: 410-7140-8

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.016	J	0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	57	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	99	D	50	45	15	mg/L	50		300.0	Total/NA
Calcium	91		0.20	0.15	0.096	mg/L	1		6010C	Total
										Recoverable
Magnesium	12		0.10	0.075	0.040	mg/L	1		6010C	Total
										Recoverable
Potassium	3.7		0.50	0.38	0.20	mg/L	1		6010C	Total
										Recoverable
Sodium	32		1.0	0.50	0.24	mg/L	1		6010C	Total
										Recoverable
Nitrate Nitrite as N	2.4		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	98		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	98		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: TB203-10

Lab Sample ID: 410-7140-9

No Detections.

Client Sample ID: GW050-203

Lab Sample ID: 410-7140-10

No Detections.

Client Sample ID: GW034-203

Lab Sample ID: 410-7140-11

No Detections.

Client Sample ID: GW033-203

Lab Sample ID: 410-7140-12

No Detections.

Client Sample ID: TB203-13

Lab Sample ID: 410-7140-13

No Detections.

Client Sample ID: GW244-445-203

Lab Sample ID: 410-7140-14

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	320	D	50	45	15	mg/L	50		300.0	Total/NA
Calcium	140		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	22		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.4		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	58		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Arsenic	0.00076	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Recoverable Total/NA
Nitrate Nitrite as N	3.5		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW240-449-203

Lab Sample ID: 410-7140-15

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130	J D	200	150	100	mg/L	500		300.0	Total/NA
Sulfate	71	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	83		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	12		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	3.1		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	29		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Arsenic	0.0010	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Recoverable Total/NA
Nitrate Nitrite as N	1.9		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: TB203-08

Lab Sample ID: 410-7140-16

No Detections.

Client Sample ID: GW230-203

Lab Sample ID: 410-7140-17

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	53	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	44		0.20	0.15	0.096	mg/L	1		6010C	Total
										Recoverable
Magnesium	6.1		0.10	0.075	0.040	mg/L	1		6010C	Total
										Recoverable
Potassium	2.5		0.50	0.38	0.20	mg/L	1		6010C	Total
										Recoverable
Sodium	23		1.0	0.50	0.24	mg/L	1		6010C	Total
										Recoverable
Arsenic	0.00098	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00021	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	0.72		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	97		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	97		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW241-428-203

Lab Sample ID: 410-7140-18

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	50	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	54		0.20	0.15	0.096	mg/L	1		6010C	Total
										Recoverable
Magnesium	7.5		0.10	0.075	0.040	mg/L	1		6010C	Total
										Recoverable
Potassium	2.7		0.50	0.38	0.20	mg/L	1		6010C	Total
										Recoverable
Sodium	28		1.0	0.50	0.24	mg/L	1		6010C	Total
										Recoverable
Arsenic	0.00081	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	0.19		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	130		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	130		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-11

Lab Sample ID: 410-7140-19

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW032-203

Lab Sample ID: 410-7140-1

Date Collected: 07/08/20 11:21

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L	-	07/14/20 08:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	89		46 - 136				07/11/20 07:42	07/14/20 08:49	1
1,1,2,2-Tetrachloroethane (2C)	72		46 - 136				07/11/20 07:42	07/14/20 08:49	1

Client Sample ID: GW247-450-203

Lab Sample ID: 410-7140-2

Date Collected: 07/08/20 07:23

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 03:40	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L	-	07/16/20 03:40	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 03:40	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L	-	07/16/20 03:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118					07/16/20 03:40	1
4-Bromofluorobenzene (Surr)	93		85 - 114					07/16/20 03:40	1
Dibromofluoromethane (Surr)	101		80 - 119					07/16/20 03:40	1
Toluene-d8 (Surr)	101		89 - 112					07/16/20 03:40	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L	-	07/14/20 09:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	91		46 - 136				07/11/20 07:42	07/14/20 09:06	1
1,1,2,2-Tetrachloroethane (2C)	73		46 - 136				07/11/20 07:42	07/14/20 09:06	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L	-	07/13/20 08:19	5
Chloride	10	D	2.0	1.5	1.0	mg/L	-	07/13/20 08:19	5
Sulfate	32	D	5.0	4.5	1.5	mg/L	-	07/13/20 08:19	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	47		0.20	0.15	0.096	mg/L	-	07/21/20 06:29	1
Magnesium	7.0		0.10	0.075	0.040	mg/L	-	07/21/20 06:29	1
Potassium	2.4		0.50	0.38	0.20	mg/L	-	07/21/20 06:29	1
Sodium	25		1.0	0.50	0.24	mg/L	-	07/21/20 06:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/18/20 11:58	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L	-	07/18/20 11:58	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L	-	08/06/20 18:06	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW247-450-203

Lab Sample ID: 410-7140-2

Date Collected: 07/08/20 07:23

Matrix: Water

Date Received: 07/09/20 10:56

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/21/20 15:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.0		0.10	0.090	0.040	mg/L		07/19/20 11:47	1
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L		07/10/20 22:22	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 22:22	1
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L		07/10/20 22:22	1

Client Sample ID: TB203-09

Lab Sample ID: 410-7140-3

Date Collected: 07/08/20 14:00

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 01:06	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 01:06	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 01:06	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 01:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d ₄ (Surr)	99		81 - 118		07/16/20 01:06	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/16/20 01:06	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 01:06	1
Toluene-d ₈ (Surr)	100		89 - 112		07/16/20 01:06	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/14/20 09:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	78		46 - 136	07/11/20 07:42	07/14/20 09:23	1
1,1,2,2-Tetrachloroethane (2C)	74		46 - 136	07/11/20 07:42	07/14/20 09:23	1

Client Sample ID: GW049-203

Lab Sample ID: 410-7140-4

Date Collected: 07/08/20 10:30

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/14/20 09:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	102		46 - 136	07/11/20 07:42	07/14/20 09:40	1
1,1,2,2-Tetrachloroethane (2C)	73		46 - 136	07/11/20 07:42	07/14/20 09:40	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW051-203

Lab Sample ID: 410-7140-5

Date Collected: 07/08/20 10:17

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 09:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	109		46 - 136				07/11/20 07:42	07/14/20 09:57	1
1,1,2,2-Tetrachloroethane (2C)	76		46 - 136				07/11/20 07:42	07/14/20 09:57	1

Client Sample ID: GW051-603

Lab Sample ID: 410-7140-6

Date Collected: 07/08/20 10:17

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/14/20 10:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	97		46 - 136				07/11/20 07:42	07/14/20 10:14	1
1,1,2,2-Tetrachloroethane (2C)	72		46 - 136				07/11/20 07:42	07/14/20 10:14	1

Client Sample ID: TB203-12

Lab Sample ID: 410-7140-7

Date Collected: 07/08/20 14:00

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.028	0.019	0.0095	ug/L		07/14/20 10:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136				07/11/20 07:42	07/14/20 10:31	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136				07/11/20 07:42	07/14/20 10:31	1

Client Sample ID: GW041-203

Lab Sample ID: 410-7140-8

Date Collected: 07/08/20 09:11

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.016	J	0.029	0.019	0.0096	ug/L		07/14/20 10:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	98		46 - 136				07/11/20 07:42	07/14/20 10:49	1
1,1,2,2-Tetrachloroethane (2C)	76		46 - 136				07/11/20 07:42	07/14/20 10:49	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/13/20 08:53	5
Chloride	57	D	20	15	10	mg/L		07/13/20 09:10	50
Sulfate	99	D	50	45	15	mg/L		07/13/20 09:10	50

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	91		0.20	0.15	0.096	mg/L		07/21/20 06:32	1
Magnesium	12		0.10	0.075	0.040	mg/L		07/21/20 06:32	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW041-203

Lab Sample ID: 410-7140-8

Date Collected: 07/08/20 09:11

Matrix: Water

Date Received: 07/09/20 10:56

Method: 6010C - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Potassium	3.7		0.50	0.38	0.20	mg/L		07/21/20 06:32	1
Sodium	32		1.0	0.50	0.24	mg/L		07/21/20 06:32	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/14/20 06:57	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/14/20 06:57	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U J1	0.0020	0.0016	0.00068	mg/L		08/04/20 14:51	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/25/20 13:09	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	2.4		0.10	0.090	0.040	mg/L		07/19/20 11:48	1
Bicarbonate Alkalinity as CaCO ₃	98		8.0	6.0	8.0	mg/L		07/10/20 22:07	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 22:07	1
Total Alkalinity as CaCO ₃ to pH 4.5	98		8.0	6.0	8.0	mg/L		07/10/20 22:07	1

Client Sample ID: TB203-10

Lab Sample ID: 410-7140-9

Date Collected: 07/08/20 14:00

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 12:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	86		46 - 136				07/11/20 07:42	07/14/20 12:14	1
1,1,2,2-Tetrachloroethane (2C)	77		46 - 136				07/11/20 07:42	07/14/20 12:14	1

Client Sample ID: GW050-203

Lab Sample ID: 410-7140-10

Date Collected: 07/08/20 09:55

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 12:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	108		46 - 136				07/11/20 07:42	07/14/20 12:31	1
1,1,2,2-Tetrachloroethane (2C)	79		46 - 136				07/11/20 07:42	07/14/20 12:31	1

Client Sample ID: GW034-203

Lab Sample ID: 410-7140-11

Date Collected: 07/08/20 11:43

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 12:48	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW034-203

Date Collected: 07/08/20 11:43

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-11

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	115		46 - 136	07/11/20 07:42	07/14/20 12:48	1
1,1,2,2-Tetrachloroethane (2C)	82		46 - 136	07/11/20 07:42	07/14/20 12:48	1

Client Sample ID: GW033-203

Date Collected: 07/08/20 11:31

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-12

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/14/20 13:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared		Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	130	J1	46 - 136			07/11/20 07:42		07/14/20 13:05	1
1,1,2,2-Tetrachloroethane (2C)	80	J1	46 - 136			07/11/20 07:42		07/14/20 13:05	1

Client Sample ID: TB203-13

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-13

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Method: 8071 - EDE, DEOP, and 1,2,3,4-TCB									
Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 13:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared		Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	86		46 - 136			07/11/20 07:42		07/14/20 13:22	1
1,1,2,2-Tetrachloroethane (2C)	77		46 - 136			07/11/20 07:42		07/14/20 13:22	1

Client Sample ID: GW244-445-203

Date Collected: 07/08/20 12:55

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-14

Matrix: Water

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Method: 8200 BOD - Volatile Organic Compounds (CONTO)									
Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 04:02	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 04:02	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 04:02	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 04:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118					07/16/20 04:02	1
4-Bromofluorobenzene (Surr)	93		85 - 114					07/16/20 04:02	1
Dibromofluoromethane (Surr)	102		80 - 119					07/16/20 04:02	1
Toluene-d8 (Surr)	101		89 - 112					07/16/20 04:02	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Method: 8071 - EDE, DEOP, and 1,2,3,4-TCDF									
Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U Q M	0.029	0.020	0.0098	ug/L		07/25/20 22:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared		Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	81		46 - 136			07/22/20 23:56		07/25/20 22:39	1
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136			07/22/20 23:56		07/25/20 22:39	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW244-445-203

Lab Sample ID: 410-7140-14

Date Collected: 07/08/20 12:55

Matrix: Water

Date Received: 07/09/20 10:56

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/13/20 10:53	5
Chloride	130	D	20	15	10	mg/L		07/13/20 11:10	50
Sulfate	320	D	50	45	15	mg/L		07/13/20 11:10	50

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	140		0.20	0.15	0.096	mg/L		07/21/20 06:26	1
Magnesium	22		0.10	0.075	0.040	mg/L		07/21/20 06:26	1
Potassium	4.4		0.50	0.38	0.20	mg/L		07/21/20 06:26	1
Sodium	58		1.0	0.50	0.24	mg/L		07/21/20 06:26	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/18/20 11:54	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/18/20 11:54	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00076	J	0.0020	0.0016	0.00068	mg/L		08/04/20 15:21	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/25/20 13:28	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	3.5		0.10	0.090	0.040	mg/L		07/19/20 11:53	1
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L		07/10/20 21:49	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 21:49	1
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L		07/10/20 21:49	1

Client Sample ID: GW240-449-203

Lab Sample ID: 410-7140-15

Date Collected: 07/08/20 12:25

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 04:24	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 04:24	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 04:24	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 04:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/16/20 04:24	1
4-Bromofluorobenzene (Surr)	98		85 - 114		07/16/20 04:24	1
Dibromofluoromethane (Surr)	101		80 - 119		07/16/20 04:24	1
Toluene-d8 (Surr)	106		89 - 112		07/16/20 04:24	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U Q M	0.029	0.020	0.0098	ug/L		07/25/20 22:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	77		46 - 136	07/22/20 23:56	07/25/20 22:56	1
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136	07/22/20 23:56	07/25/20 22:56	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW240-449-203

Lab Sample ID: 410-7140-15

Date Collected: 07/08/20 12:25

Matrix: Water

Date Received: 07/09/20 10:56

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/13/20 10:19	5
Chloride	130	J D	200	150	100	mg/L		07/13/20 10:36	500
Sulfate	71	D	5.0	4.5	1.5	mg/L		07/13/20 10:19	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	83		0.20	0.15	0.096	mg/L		07/21/20 06:36	1
Magnesium	12		0.10	0.075	0.040	mg/L		07/21/20 06:36	1
Potassium	3.1		0.50	0.38	0.20	mg/L		07/21/20 06:36	1
Sodium	29		1.0	0.50	0.24	mg/L		07/21/20 06:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 06:09	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 06:09	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0010	J	0.0020	0.0016	0.00068	mg/L		08/04/20 15:17	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/25/20 13:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.9		0.10	0.090	0.040	mg/L		07/19/20 11:55	1
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L		07/10/20 22:14	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 22:14	1
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L		07/10/20 22:14	1

Client Sample ID: TB203-08

Lab Sample ID: 410-7140-16

Date Collected: 07/08/20 14:00

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 01:28	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 01:28	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 01:28	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 01:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		07/16/20 01:28	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/16/20 01:28	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 01:28	1
Toluene-d8 (Surr)	101		89 - 112		07/16/20 01:28	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/14/20 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	74		46 - 136	07/11/20 07:42	07/14/20 13:39	1
1,1,2,2-Tetrachloroethane (2C)	68		46 - 136	07/11/20 07:42	07/14/20 13:39	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW230-203

Lab Sample ID: 410-7140-17

Date Collected: 07/08/20 08:08

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/14/20 13:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	84		46 - 136				07/11/20 07:42	07/14/20 13:56	1
1,1,2,2-Tetrachloroethane (2C)	62		46 - 136				07/11/20 07:42	07/14/20 13:56	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/13/20 11:45	5
Chloride	30	D	2.0	1.5	1.0	mg/L		07/13/20 11:45	5
Sulfate	53	D	5.0	4.5	1.5	mg/L		07/13/20 11:45	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	44		0.20	0.15	0.096	mg/L		07/21/20 06:14	1
Magnesium	6.1		0.10	0.075	0.040	mg/L		07/21/20 06:14	1
Potassium	2.5		0.50	0.38	0.20	mg/L		07/21/20 06:14	1
Sodium	23		1.0	0.50	0.24	mg/L		07/21/20 06:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 06:12	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 06:12	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00098	J	0.0020	0.0016	0.00068	mg/L		08/04/20 15:23	1
Lead	0.00021	J	0.00050	0.00025	0.000071	mg/L		07/25/20 13:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.72		0.10	0.090	0.040	mg/L		07/19/20 11:56	1
Bicarbonate Alkalinity as CaCO3	97		8.0	6.0	8.0	mg/L		07/11/20 00:55	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L		07/11/20 00:55	1
Total Alkalinity as CaCO3 to pH 4.5	97		8.0	6.0	8.0	mg/L		07/11/20 00:55	1

Client Sample ID: GW241-428-203

Lab Sample ID: 410-7140-18

Date Collected: 07/08/20 08:42

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0095	ug/L		07/14/20 14:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136				07/11/20 07:42	07/14/20 14:13	1
1,1,2,2-Tetrachloroethane (2C)	86		46 - 136				07/11/20 07:42	07/14/20 14:13	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/13/20 12:36	5
Chloride	41	D	20	15	10	mg/L		07/13/20 12:53	50

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW241-428-203

Lab Sample ID: 410-7140-18

Date Collected: 07/08/20 08:42

Matrix: Water

Date Received: 07/09/20 10:56

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	50	D	5.0	4.5	1.5	mg/L	-	07/13/20 12:36	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	54		0.20	0.15	0.096	mg/L	-	07/21/20 06:17	1
Magnesium	7.5		0.10	0.075	0.040	mg/L	-	07/21/20 06:17	1
Potassium	2.7		0.50	0.38	0.20	mg/L	-	07/21/20 06:17	1
Sodium	28		1.0	0.50	0.24	mg/L	-	07/21/20 06:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/20/20 06:16	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L	-	07/20/20 06:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00081	J	0.0020	0.0016	0.00068	mg/L	-	08/04/20 15:19	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/25/20 13:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.19		0.10	0.090	0.040	mg/L	-	07/19/20 12:00	1
Bicarbonate Alkalinity as CaCO ₃	130		8.0	6.0	8.0	mg/L	-	07/10/20 22:29	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 22:29	1
Total Alkalinity as CaCO ₃ to pH 4.5	130		8.0	6.0	8.0	mg/L	-	07/10/20 22:29	1

Client Sample ID: TB203-11

Lab Sample ID: 410-7140-19

Date Collected: 07/08/20 14:00

Matrix: Water

Date Received: 07/09/20 10:56

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L	-	07/14/20 14:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	78		46 - 136	07/11/20 07:42	07/14/20 14:30	1
1,1,2,2-Tetrachloroethane (2C)	69		46 - 136	07/11/20 07:42	07/14/20 14:30	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-7140-2	GW247-450-203	98	93	101	101
410-7140-3	TB203-09	99	93	100	100
410-7140-14	GW244-445-203	100	93	102	101
410-7140-15	GW240-449-203	98	98	101	106
410-7140-16	TB203-08	97	94	100	101
LCS 410-22956/4	Lab Control Sample	98	99	97	103
LCSD 410-22956/5	Lab Control Sample Dup	98	98	98	101
MB 410-22956/7	Method Blank	98	95	98	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-7140-1	GW032-203	89	72
410-7140-2	GW247-450-203	91	73
410-7140-3	TB203-09	78	74
410-7140-4	GW049-203	102	73
410-7140-5	GW051-203	109	76
410-7140-6	GW051-603	97	72
410-7140-7	TB203-12	73	64
410-7140-8	GW041-203	98	76
410-7140-8 MS	GW041-203	90	73
410-7140-8 MSD	GW041-203	96	72
410-7140-9	TB203-10	86	77
410-7140-10	GW050-203	108	79
410-7140-11	GW034-203	115	82
410-7140-12	GW033-203	130 J1	80 J1
410-7140-13	TB203-13	86	77
410-7140-14	GW244-445-203	81	63
410-7140-15	GW240-449-203	77	63
410-7140-16	TB203-08	74	68
410-7140-17	GW230-203	84	62
410-7140-18	GW241-428-203	100	86
410-7140-19	TB203-11	78	69
LCS 410-21495/2-A	Lab Control Sample	87	76
LCS 410-25374/2-A	Lab Control Sample	63	61
LCSD 410-21495/3-A	Lab Control Sample Dup	91	77
LCSD 410-25374/3-A	Lab Control Sample Dup	59	58
MB 410-21495/1-A	Method Blank	80	74
MB 410-25374/1-A	Method Blank	62	62

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-22956/7

Matrix: Water

Analysis Batch: 22956

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 00:01	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 00:01	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 00:01	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 00:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/16/20 00:01	1
4-Bromofluorobenzene (Surr)	95		85 - 114		07/16/20 00:01	1
Dibromofluoromethane (Surr)	98		80 - 119		07/16/20 00:01	1
Toluene-d8 (Surr)	101		89 - 112		07/16/20 00:01	1

Lab Sample ID: LCS 410-22956/4

Matrix: Water

Analysis Batch: 22956

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	18.7		ug/L		93	42 - 138
Ethylbenzene	20.0	20.1		ug/L		101	79 - 121
Toluene	20.0	19.2		ug/L		96	80 - 121
Xylenes, Total	60.0	61.2		ug/L		102	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	103		89 - 112

Lab Sample ID: LCSD 410-22956/5

Matrix: Water

Analysis Batch: 22956

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	18.9		ug/L		95	42 - 138	1	20
Ethylbenzene	20.0	20.3		ug/L		101	79 - 121	1	20
Toluene	20.0	18.6		ug/L		93	80 - 121	3	20
Xylenes, Total	60.0	62.0		ug/L		103	79 - 121	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	101		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-21495/1-A
Matrix: Water
Analysis Batch: 21982

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21495

Print Date: 7/13/20										
Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
	Result	Qualifier								
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/13/20 20:53	1	
Print Date: 7/13/20										
Surrogate	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier								
1,1,2,2-Tetrachloroethane (1C)	80		46 - 136					07/11/20 07:42	07/13/20 20:53	1
1,1,2,2-Tetrachloroethane (2C)	74		46 - 136					07/11/20 07:42	07/13/20 20:53	1

Lab Sample ID: LCS 410-21495/2-A
Matrix: Water
Analysis Batch: 21982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.129		ug/L		101	60 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,1,2,2-Tetrachloroethane (1C)	87		46 - 136				
1,1,2,2-Tetrachloroethane (2C)	76		46 - 136				

Lab Sample ID: LCSD 410-21495/3-A
Matrix: Water
Analysis Batch: 21982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.131		ug/L		102	60 - 140	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	91		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	77		46 - 136						

Lab Sample ID: 410-7140-8 MS
Matrix: Water
Analysis Batch: 21982

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.016	J	0.123	0.136		ug/L		97	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	90		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	73		46 - 136						

Lab Sample ID: 410-7140-8 MSD
Matrix: Water
Analysis Batch: 21982

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21495

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.016	J	0.122	0.142		ug/L		103	60 - 140	4	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-7140-8 MSD

Matrix: Water

Analysis Batch: 21982

Client Sample ID: GW041-203

Prep Type: Total/NA

Prep Batch: 21495

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	96		46 - 136
1,1,2,2-Tetrachloroethane (2C)	72		46 - 136

Lab Sample ID: MB 410-25374/1-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25374

Analyte	MB	MB	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)			0.020	U	0.030	0.020	0.010	ug/L		07/23/20 21:35	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)			62		46 - 136	07/22/20 23:56	07/23/20 21:35	1
1,1,2,2-Tetrachloroethane (2C)			62		46 - 136	07/22/20 23:56	07/23/20 21:35	1

Lab Sample ID: LCS 410-25374/2-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25374

Analyte	Spike	LCS	LCS	Added	Result	Qualifier	Unit	D	%Rec	%Rec.	Limits
Ethylene Dibromide (1C)				0.128	0.221	Q	ug/L		172		60 - 140

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)			63		46 - 136
1,1,2,2-Tetrachloroethane (2C)			61		46 - 136

Lab Sample ID: LCSD 410-25374/3-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25374

Analyte	Spike	LCSD	LCSD	Added	Result	Qualifier	Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
Ethylene Dibromide (1C)				0.128	0.214	Q	ug/L		167		60 - 140	3		20

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)			59		46 - 136
1,1,2,2-Tetrachloroethane (2C)			58		46 - 136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-21595/4

Matrix: Water

Analysis Batch: 21595

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide			0.40	U	0.50	0.40	0.25	mg/L		07/13/20 07:10	1
Chloride			0.30	U	0.40	0.30	0.20	mg/L		07/13/20 07:10	1
Sulfate			0.90	U	1.0	0.90	0.30	mg/L		07/13/20 07:10	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 410-21595/3

Matrix: Water

Analysis Batch: 21595

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	7.68		mg/L		102	90 - 110
Chloride	3.00	2.98		mg/L		99	90 - 110
Sulfate	7.50	7.53		mg/L		100	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-21781/1-A

Matrix: Water

Analysis Batch: 23974

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21781

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/18/20 11:29	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/18/20 11:29	1

Lab Sample ID: LCS 410-21781/2-A

Matrix: Water

Analysis Batch: 23974

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.409		mg/L		102	87 - 115
Manganese	0.0200	0.0204		mg/L		102	90 - 114

Lab Sample ID: MB 410-22073/1-A

Matrix: Water

Analysis Batch: 22231

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22073

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/14/20 06:51	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/14/20 06:51	1

Lab Sample ID: LCS 410-22073/2-A

Matrix: Water

Analysis Batch: 22231

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22073

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.415		mg/L		103	87 - 115
Manganese	0.0200	0.0219		mg/L		110	90 - 114

Lab Sample ID: MB 410-21272/1-A

Matrix: Water

Analysis Batch: 24615

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 21272

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/21/20 05:49	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/21/20 05:49	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/21/20 05:49	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/21/20 05:49	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-21272/2-A

Matrix: Water

Analysis Batch: 24615

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 21272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.403		mg/L		101	87 - 113
Magnesium	0.200	0.206		mg/L		103	85 - 113
Potassium	5.60	5.64		mg/L		101	86 - 114
Sodium	2.00	2.02		mg/L		101	87 - 115

Lab Sample ID: 410-7140-8 MS

Matrix: Water

Analysis Batch: 22231

Client Sample ID: GW041-203

Prep Type: Dissolved

Prep Batch: 22073

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U	0.402	0.394		mg/L		98	75 - 125
Manganese	0.0052	U	0.0200	0.0198		mg/L		99	75 - 125

Lab Sample ID: 410-7140-8 MSD

Matrix: Water

Analysis Batch: 22231

Client Sample ID: GW041-203

Prep Type: Dissolved

Prep Batch: 22073

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U	0.402	0.382		mg/L		95	75 - 125	3	20
Manganese	0.0052	U	0.0200	0.0189		mg/L		95	75 - 125	5	20

Lab Sample ID: 410-7140-8 DU

Matrix: Water

Analysis Batch: 22231

Client Sample ID: GW041-203

Prep Type: Dissolved

Prep Batch: 22073

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	0.10	U	0.10	U	mg/L		NC	20
Manganese	0.0052	U	0.0052	U	mg/L		NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-21245/1-A

Matrix: Water

Analysis Batch: 24796

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21245

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/21/20 14:40	1

Lab Sample ID: MB 410-21245/1-A

Matrix: Water

Analysis Batch: 30666

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21245

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/06/20 17:41	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		08/06/20 17:41	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-21245/2-A
Matrix: Water
Analysis Batch: 24796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21245

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.00492	0.00526		mg/L		107	88 - 115

Lab Sample ID: LCS 410-21245/2-A
Matrix: Water
Analysis Batch: 30666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21245

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0108		mg/L		109	84 - 116

Lab Sample ID: MB 410-21252/1-A
Matrix: Water
Analysis Batch: 29814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21252

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/04/20 14:47	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		08/04/20 14:47	1

Lab Sample ID: LCS 410-21252/2-A
Matrix: Water
Analysis Batch: 29814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0103		mg/L		104	84 - 116
Lead	0.00492	0.00517		mg/L		105	88 - 115

Lab Sample ID: 410-7140-8 MS
Matrix: Water
Analysis Batch: 26692

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.00025	U	0.00492	0.00500		mg/L		102	88 - 118

Lab Sample ID: 410-7140-8 MS
Matrix: Water
Analysis Batch: 29814

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0016	U J1	0.00989	0.0112		mg/L		114	84 - 116

Lab Sample ID: 410-7140-8 MSD
Matrix: Water
Analysis Batch: 26692

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.00025	U	0.00492	0.00514		mg/L		104	88 - 118	3	20

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-7140-8 MSD
Matrix: Water
Analysis Batch: 29814

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0016	U J1	0.00989	0.0110		mg/L	-	111	84 - 116	3	20

Lab Sample ID: 410-7140-8 DU
Matrix: Water
Analysis Batch: 26692

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	0.00025	U	0.00025	U	mg/L	-	NC	20

Lab Sample ID: 410-7140-8 DU
Matrix: Water
Analysis Batch: 29814

Client Sample ID: GW041-203
Prep Type: Total/NA
Prep Batch: 21252

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0016	U J1	0.0016	U	mg/L	-	NC	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-24043/99
Matrix: Water
Analysis Batch: 24043

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L	-	07/19/20 11:29	1

Lab Sample ID: LCS 410-24043/100
Matrix: Water
Analysis Batch: 24043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.48		mg/L	-	99	90 - 110

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 410-21931/14
Matrix: Water
Analysis Batch: 21931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 19:48	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 19:48	1
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 19:48	1

Lab Sample ID: MB 410-21931/41
Matrix: Water
Analysis Batch: 21931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 22:36	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/10/20 22:36	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method: SM2320 B - Alkalinity, Total (Continued)

Lab Sample ID: MB 410-21931/41

Matrix: Water

Analysis Batch: 21931

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L		07/10/20 22:36	1

Lab Sample ID: LCS 410-21931/15

Matrix: Water

Analysis Batch: 21931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	169		mg/L		90	82 - 106

Lab Sample ID: LCS 410-21931/42

Matrix: Water

Analysis Batch: 21931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	169		mg/L		90	82 - 106

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

GC/MS VOA

Analysis Batch: 22956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	8260C DOD	
410-7140-3	TB203-09	Total/NA	Water	8260C DOD	
410-7140-14	GW244-445-203	Total/NA	Water	8260C DOD	
410-7140-15	GW240-449-203	Total/NA	Water	8260C DOD	
410-7140-16	TB203-08	Total/NA	Water	8260C DOD	
MB 410-22956/7	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-22956/4	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-22956/5	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 21495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-1	GW032-203	Total/NA	Water	8011	
410-7140-2	GW247-450-203	Total/NA	Water	8011	
410-7140-3	TB203-09	Total/NA	Water	8011	
410-7140-4	GW049-203	Total/NA	Water	8011	
410-7140-5	GW051-203	Total/NA	Water	8011	
410-7140-6	GW051-603	Total/NA	Water	8011	
410-7140-7	TB203-12	Total/NA	Water	8011	
410-7140-8	GW041-203	Total/NA	Water	8011	
410-7140-9	TB203-10	Total/NA	Water	8011	
410-7140-10	GW050-203	Total/NA	Water	8011	
410-7140-11	GW034-203	Total/NA	Water	8011	
410-7140-12	GW033-203	Total/NA	Water	8011	
410-7140-13	TB203-13	Total/NA	Water	8011	
410-7140-16	TB203-08	Total/NA	Water	8011	
410-7140-17	GW230-203	Total/NA	Water	8011	
410-7140-18	GW241-428-203	Total/NA	Water	8011	
410-7140-19	TB203-11	Total/NA	Water	8011	
MB 410-21495/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-21495/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-21495/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-7140-8 MS	GW041-203	Total/NA	Water	8011	
410-7140-8 MSD	GW041-203	Total/NA	Water	8011	

Analysis Batch: 21982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-1	GW032-203	Total/NA	Water	8011	21495
410-7140-2	GW247-450-203	Total/NA	Water	8011	21495
410-7140-3	TB203-09	Total/NA	Water	8011	21495
410-7140-4	GW049-203	Total/NA	Water	8011	21495
410-7140-5	GW051-203	Total/NA	Water	8011	21495
410-7140-6	GW051-603	Total/NA	Water	8011	21495
410-7140-7	TB203-12	Total/NA	Water	8011	21495
410-7140-8	GW041-203	Total/NA	Water	8011	21495
410-7140-9	TB203-10	Total/NA	Water	8011	21495
410-7140-10	GW050-203	Total/NA	Water	8011	21495
410-7140-11	GW034-203	Total/NA	Water	8011	21495
410-7140-12	GW033-203	Total/NA	Water	8011	21495
410-7140-13	TB203-13	Total/NA	Water	8011	21495

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

GC Semi VOA (Continued)

Analysis Batch: 21982 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-16	TB203-08	Total/NA	Water	8011	21495
410-7140-17	GW230-203	Total/NA	Water	8011	21495
410-7140-18	GW241-428-203	Total/NA	Water	8011	21495
410-7140-19	TB203-11	Total/NA	Water	8011	21495
MB 410-21495/1-A	Method Blank	Total/NA	Water	8011	21495
LCS 410-21495/2-A	Lab Control Sample	Total/NA	Water	8011	21495
LCSD 410-21495/3-A	Lab Control Sample Dup	Total/NA	Water	8011	21495
410-7140-8 MS	GW041-203	Total/NA	Water	8011	21495
410-7140-8 MSD	GW041-203	Total/NA	Water	8011	21495

Prep Batch: 25374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-14	GW244-445-203	Total/NA	Water	8011	
410-7140-15	GW240-449-203	Total/NA	Water	8011	
MB 410-25374/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-25374/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-25374/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 25771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-25374/1-A	Method Blank	Total/NA	Water	8011	25374
LCS 410-25374/2-A	Lab Control Sample	Total/NA	Water	8011	25374
LCSD 410-25374/3-A	Lab Control Sample Dup	Total/NA	Water	8011	25374

Analysis Batch: 26363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-14	GW244-445-203	Total/NA	Water	8011	25374
410-7140-15	GW240-449-203	Total/NA	Water	8011	25374

HPLC/IC

Analysis Batch: 21595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	300.0	
410-7140-8	GW041-203	Total/NA	Water	300.0	
410-7140-8	GW041-203	Total/NA	Water	300.0	
410-7140-14	GW244-445-203	Total/NA	Water	300.0	
410-7140-14	GW244-445-203	Total/NA	Water	300.0	
410-7140-15	GW240-449-203	Total/NA	Water	300.0	
410-7140-15	GW240-449-203	Total/NA	Water	300.0	
410-7140-17	GW230-203	Total/NA	Water	300.0	
410-7140-18	GW241-428-203	Total/NA	Water	300.0	
410-7140-18	GW241-428-203	Total/NA	Water	300.0	
MB 410-21595/4	Method Blank	Total/NA	Water	300.0	
LCS 410-21595/3	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 21245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	3020A	
MB 410-21245/1-A	Method Blank	Total/NA	Water	3020A	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Metals (Continued)

Prep Batch: 21245 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-21245/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 21252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8	GW041-203	Total/NA	Water	3020A	
410-7140-14	GW244-445-203	Total/NA	Water	3020A	
410-7140-15	GW240-449-203	Total/NA	Water	3020A	
410-7140-17	GW230-203	Total/NA	Water	3020A	
410-7140-18	GW241-428-203	Total/NA	Water	3020A	
MB 410-21252/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-21252/2-A	Lab Control Sample	Total/NA	Water	3020A	
410-7140-8 MS	GW041-203	Total/NA	Water	3020A	
410-7140-8 MSD	GW041-203	Total/NA	Water	3020A	
410-7140-8 DU	GW041-203	Total/NA	Water	3020A	

Prep Batch: 21272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total Recoverable	Water	3005A	
410-7140-8	GW041-203	Total Recoverable	Water	3005A	
410-7140-14	GW244-445-203	Total Recoverable	Water	3005A	
410-7140-15	GW240-449-203	Total Recoverable	Water	3005A	
410-7140-17	GW230-203	Total Recoverable	Water	3005A	
410-7140-18	GW241-428-203	Total Recoverable	Water	3005A	
MB 410-21272/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-21272/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 21781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Dissolved	Water	Non-Digest Prep	
410-7140-14	GW244-445-203	Dissolved	Water	Non-Digest Prep	
410-7140-15	GW240-449-203	Dissolved	Water	Non-Digest Prep	
410-7140-17	GW230-203	Dissolved	Water	Non-Digest Prep	
410-7140-18	GW241-428-203	Dissolved	Water	Non-Digest Prep	
MB 410-21781/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-21781/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 22073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8	GW041-203	Dissolved	Water	Non-Digest Prep	
MB 410-22073/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-22073/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-7140-8 MS	GW041-203	Dissolved	Water	Non-Digest Prep	
410-7140-8 MSD	GW041-203	Dissolved	Water	Non-Digest Prep	
410-7140-8 DU	GW041-203	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 22231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8	GW041-203	Dissolved	Water	6010C	22073
MB 410-22073/1-A	Method Blank	Total/NA	Water	6010C	22073
LCS 410-22073/2-A	Lab Control Sample	Total/NA	Water	6010C	22073
410-7140-8 MS	GW041-203	Dissolved	Water	6010C	22073

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Metals (Continued)

Analysis Batch: 22231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8 MSD	GW041-203	Dissolved	Water	6010C	22073
410-7140-8 DU	GW041-203	Dissolved	Water	6010C	22073

Analysis Batch: 23974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Dissolved	Water	6010C	21781
410-7140-14	GW244-445-203	Dissolved	Water	6010C	21781
MB 410-21781/1-A	Method Blank	Total/NA	Water	6010C	21781
LCS 410-21781/2-A	Lab Control Sample	Total/NA	Water	6010C	21781

Analysis Batch: 24185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-15	GW240-449-203	Dissolved	Water	6010C	21781
410-7140-17	GW230-203	Dissolved	Water	6010C	21781
410-7140-18	GW241-428-203	Dissolved	Water	6010C	21781

Analysis Batch: 24615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total Recoverable	Water	6010C	21272
410-7140-8	GW041-203	Total Recoverable	Water	6010C	21272
410-7140-14	GW244-445-203	Total Recoverable	Water	6010C	21272
410-7140-15	GW240-449-203	Total Recoverable	Water	6010C	21272
410-7140-17	GW230-203	Total Recoverable	Water	6010C	21272
410-7140-18	GW241-428-203	Total Recoverable	Water	6010C	21272
MB 410-21272/1-A	Method Blank	Total Recoverable	Water	6010C	21272
LCS 410-21272/2-A	Lab Control Sample	Total Recoverable	Water	6010C	21272

Analysis Batch: 24796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	6020A	21245
MB 410-21245/1-A	Method Blank	Total/NA	Water	6020A	21245
LCS 410-21245/2-A	Lab Control Sample	Total/NA	Water	6020A	21245

Analysis Batch: 26692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8	GW041-203	Total/NA	Water	6020A	21252
410-7140-14	GW244-445-203	Total/NA	Water	6020A	21252
410-7140-15	GW240-449-203	Total/NA	Water	6020A	21252
410-7140-17	GW230-203	Total/NA	Water	6020A	21252
410-7140-18	GW241-428-203	Total/NA	Water	6020A	21252
410-7140-8 MS	GW041-203	Total/NA	Water	6020A	21252
410-7140-8 MSD	GW041-203	Total/NA	Water	6020A	21252
410-7140-8 DU	GW041-203	Total/NA	Water	6020A	21252

Analysis Batch: 29814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-8	GW041-203	Total/NA	Water	6020A	21252
410-7140-14	GW244-445-203	Total/NA	Water	6020A	21252
410-7140-15	GW240-449-203	Total/NA	Water	6020A	21252
410-7140-17	GW230-203	Total/NA	Water	6020A	21252
410-7140-18	GW241-428-203	Total/NA	Water	6020A	21252

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Metals (Continued)

Analysis Batch: 29814 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-21252/1-A	Method Blank	Total/NA	Water	6020A	21252
LCS 410-21252/2-A	Lab Control Sample	Total/NA	Water	6020A	21252
410-7140-8 MS	GW041-203	Total/NA	Water	6020A	21252
410-7140-8 MSD	GW041-203	Total/NA	Water	6020A	21252
410-7140-8 DU	GW041-203	Total/NA	Water	6020A	21252

Analysis Batch: 30666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	6020A	21245
MB 410-21245/1-A	Method Blank	Total/NA	Water	6020A	21245
LCS 410-21245/2-A	Lab Control Sample	Total/NA	Water	6020A	21245

General Chemistry

Analysis Batch: 21931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	SM2320 B	
410-7140-8	GW041-203	Total/NA	Water	SM2320 B	
410-7140-14	GW244-445-203	Total/NA	Water	SM2320 B	
410-7140-15	GW240-449-203	Total/NA	Water	SM2320 B	
410-7140-17	GW230-203	Total/NA	Water	SM2320 B	
410-7140-18	GW241-428-203	Total/NA	Water	SM2320 B	
MB 410-21931/14	Method Blank	Total/NA	Water	SM2320 B	
MB 410-21931/41	Method Blank	Total/NA	Water	SM2320 B	
LCS 410-21931/15	Lab Control Sample	Total/NA	Water	SM2320 B	
LCS 410-21931/42	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 24043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7140-2	GW247-450-203	Total/NA	Water	353.2	
410-7140-8	GW041-203	Total/NA	Water	353.2	
410-7140-14	GW244-445-203	Total/NA	Water	353.2	
410-7140-15	GW240-449-203	Total/NA	Water	353.2	
410-7140-17	GW230-203	Total/NA	Water	353.2	
410-7140-18	GW241-428-203	Total/NA	Water	353.2	
MB 410-24043/99	Method Blank	Total/NA	Water	353.2	
LCS 410-24043/100	Lab Control Sample	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW032-203

Date Collected: 07/08/20 11:21

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 08:49	AC3T	ELLE

Client Sample ID: GW247-450-203

Date Collected: 07/08/20 07:23

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	22956	07/16/20 03:40	TQ4J	ELLE
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 09:06	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 08:19	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	23974	07/18/20 11:58	LR7D	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:29	ULJC	ELLE
Total/NA	Prep	3020A			21245	07/10/20 10:15	UJL8	ELLE
Total/NA	Analysis	6020A		1	24796	07/21/20 15:24	UPJE	ELLE
Total/NA	Prep	3020A			21245	07/10/20 10:15	UJL8	ELLE
Total/NA	Analysis	6020A		1	30666	08/06/20 18:06	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 11:47	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/10/20 22:22	DI9Q	ELLE

Client Sample ID: TB203-09

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	22956	07/16/20 01:06	TQ4J	ELLE
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 09:23	AC3T	ELLE

Client Sample ID: GW049-203

Date Collected: 07/08/20 10:30

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 09:40	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW051-203

Date Collected: 07/08/20 10:17

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 09:57	AC3T	ELLE

Client Sample ID: GW051-603

Date Collected: 07/08/20 10:17

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 10:14	AC3T	ELLE

Client Sample ID: TB203-12

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 10:31	AC3T	ELLE

Client Sample ID: GW041-203

Date Collected: 07/08/20 09:11

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 10:49	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 08:53	GJ35	ELLE
Total/NA	Analysis	300.0		50	21595	07/13/20 09:10	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22073	07/14/20 03:05	UJL8	ELLE
Dissolved	Analysis	6010C		1	22231	07/14/20 06:57	ULJC	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:32	ULJC	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	26692	07/25/20 13:09	V5SW	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	29814	08/04/20 14:51	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 11:48	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/10/20 22:07	DI9Q	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: TB203-10

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 12:14	AC3T	ELLE

Client Sample ID: GW050-203

Date Collected: 07/08/20 09:55

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 12:31	AC3T	ELLE

Client Sample ID: GW034-203

Date Collected: 07/08/20 11:43

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 12:48	AC3T	ELLE

Client Sample ID: GW033-203

Date Collected: 07/08/20 11:31

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 13:05	AC3T	ELLE

Client Sample ID: TB203-13

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 13:22	AC3T	ELLE

Client Sample ID: GW244-445-203

Date Collected: 07/08/20 12:55

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	22956	07/16/20 04:02	TQ4J	ELLE
Total/NA	Prep	8011			25374	07/22/20 23:56	K2IL	ELLE
Total/NA	Analysis	8011		1	26363	07/25/20 22:39	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 10:53	GJ35	ELLE
Total/NA	Analysis	300.0		50	21595	07/13/20 11:10	GJ35	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW244-445-203

Date Collected: 07/08/20 12:55

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	23974	07/18/20 11:54	LR7D	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:26	ULJC	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	26692	07/25/20 13:28	V5SW	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	29814	08/04/20 15:21	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 11:53	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/10/20 21:49	DI9Q	ELLE

Client Sample ID: GW240-449-203

Date Collected: 07/08/20 12:25

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	22956	07/16/20 04:24	TQ4J	ELLE
Total/NA	Prep	8011			25374	07/22/20 23:56	K2IL	ELLE
Total/NA	Analysis	8011		1	26363	07/25/20 22:56	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 10:19	GJ35	ELLE
Total/NA	Analysis	300.0		500	21595	07/13/20 10:36	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:09	ULJC	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:36	ULJC	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	26692	07/25/20 13:20	V5SW	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	29814	08/04/20 15:17	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 11:55	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/10/20 22:14	DI9Q	ELLE

Client Sample ID: TB203-08

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	22956	07/16/20 01:28	TQ4J	ELLE
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 13:39	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Client Sample ID: GW230-203

Date Collected: 07/08/20 08:08

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 13:56	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 11:45	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:12	ULJC	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:14	ULJC	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	26692	07/25/20 13:30	V5SW	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	29814	08/04/20 15:23	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 11:56	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/11/20 00:55	DI9Q	ELLE

Client Sample ID: GW241-428-203

Date Collected: 07/08/20 08:42

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 14:13	AC3T	ELLE
Total/NA	Analysis	300.0		5	21595	07/13/20 12:36	GJ35	ELLE
Total/NA	Analysis	300.0		50	21595	07/13/20 12:53	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:16	ULJC	ELLE
Total Recoverable	Prep	3005A			21272	07/10/20 10:48	UAMX	ELLE
Total Recoverable	Analysis	6010C		1	24615	07/21/20 06:17	ULJC	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	26692	07/25/20 13:22	V5SW	ELLE
Total/NA	Prep	3020A			21252	07/10/20 10:23	UJL8	ELLE
Total/NA	Analysis	6020A		1	29814	08/04/20 15:19	V5SW	ELLE
Total/NA	Analysis	353.2		1	24043	07/19/20 12:00	P684	ELLE
Total/NA	Analysis	SM2320 B		1	21931	07/10/20 22:29	DI9Q	ELLE

Client Sample ID: TB203-11

Date Collected: 07/08/20 14:00

Date Received: 07/09/20 10:56

Lab Sample ID: 410-7140-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			21495	07/11/20 07:42	UKQ8	ELLE
Total/NA	Analysis	8011		1	21982	07/14/20 14:30	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-7140-1

Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
300.0	Anions, Ion Chromatography	MCAWW	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
SM2320 B	Alkalinity, Total	SM18	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7140-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-7140-1	GW032-203	Water	07/08/20 11:21	07/09/20 10:56	
410-7140-2	GW247-450-203	Water	07/08/20 07:23	07/09/20 10:56	
410-7140-3	TB203-09	Water	07/08/20 14:00	07/09/20 10:56	
410-7140-4	GW049-203	Water	07/08/20 10:30	07/09/20 10:56	
410-7140-5	GW051-203	Water	07/08/20 10:17	07/09/20 10:56	
410-7140-6	GW051-603	Water	07/08/20 10:17	07/09/20 10:56	
410-7140-7	TB203-12	Water	07/08/20 14:00	07/09/20 10:56	
410-7140-8	GW041-203	Water	07/08/20 09:11	07/09/20 10:56	
410-7140-9	TB203-10	Water	07/08/20 14:00	07/09/20 10:56	
410-7140-10	GW050-203	Water	07/08/20 09:55	07/09/20 10:56	
410-7140-11	GW034-203	Water	07/08/20 11:43	07/09/20 10:56	
410-7140-12	GW033-203	Water	07/08/20 11:31	07/09/20 10:56	
410-7140-13	TB203-13	Water	07/08/20 14:00	07/09/20 10:56	
410-7140-14	GW244-445-203	Water	07/08/20 12:55	07/09/20 10:56	
410-7140-15	GW240-449-203	Water	07/08/20 12:25	07/09/20 10:56	
410-7140-16	TB203-08	Water	07/08/20 14:00	07/09/20 10:56	
410-7140-17	GW230-203	Water	07/08/20 08:08	07/09/20 10:56	
410-7140-18	GW241-428-203	Water	07/08/20 08:42	07/09/20 10:56	
410-7140-19	TB203-11	Water	07/08/20 14:00	07/09/20 10:56	

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Eurofins Lancaster Laboratories Env, LLC



410-7140 Chain of Custody

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-032-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)			
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (B260C)	BTEX (B260C)	EDB (B011)	Total (As, Pb, Ca, K, Mg) (B20A/010C)	Dissolved Fe, Mn (B010C)	Chloride, bromide, sulfate (B010C)	Nitrate-Nitrite (B010C)	Alkalinity (Total, Carbonate, and Bicarbonate) (B010C)	Carbon Dioxide (B010C)	COMMENTS	
1	GW032-203	7-8-2020	1121	2				2							
2															
3															
4															
5															
6															
COMMENTS:															
SAMPLER(S): D. Schmeelk RELINQUISHED BY: <i>[Signature]</i> DATE: 7-8-2020 TIME: 1700 Printed Name and Signature: D. Schmeelk Printed Name and Signature: <i>[Signature]</i> Printed Name and Signature: <i>[Signature]</i> Printed Name and Signature: <i>[Signature]</i> COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0330 RECEIVED BY: <i>[Signature]</i> DATE: 7/9/20 TIME: 1056 Printed Name and Signature: Nicole Reiff Printed Name and Signature: <i>[Signature]</i> Printed Name and Signature: <i>[Signature]</i> Printed Name and Signature: <i>[Signature]</i>															

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EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-247-450-203																														
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020																																
PROJECT SITE AND PHASE: ST106/SS111		New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)																																		
ANALYSIS REQUIRED (Specify number of bottles)																																												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8260C)	Total (As, Pb, Cd, Ni, Hg) (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (5423.20B)	Carbon Dioxide (RSK-175)	Comments																														
1	GW247-450-203	7-8-2020	0723	10	1	3	1	2	1	1*	1	1	1																															
2																																												
3																																												
4																																												
5																																												
6																																												
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																																												
TB203-09 SAMPLER(S): <i>D. Schmeelk</i> COURIER AND SHIPPING NUMBER: FedEx <i>8155 2830 0330</i> <table border="1"> <thead> <tr> <th>RELINQUISHED BY:</th> <th>DATE</th> <th>TIME</th> <th>RECEIVED BY:</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td><i>D. Schmeelk</i></td> <td><i>7-8-2020</i></td> <td><i>1700</i></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td><i>Nicole Reiff</i></td> <td><i>7/9/20</i></td> <td><i>1056</i></td> </tr> </tbody> </table>															RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	<i>D. Schmeelk</i>	<i>7-8-2020</i>	<i>1700</i>																			<i>Nicole Reiff</i>	<i>7/9/20</i>	<i>1056</i>
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME																																							
<i>D. Schmeelk</i>	<i>7-8-2020</i>	<i>1700</i>																																										
			<i>Nicole Reiff</i>	<i>7/9/20</i>	<i>1056</i>																																							

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 594-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3					
				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8250C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, Ni, Mn (6020A, 6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS	
1	TB203-09	07-08-2020	1400	4	2	2	2								
2															
3															
4															
5															
Associated with: GW032-203 GW 247-450-203															
SAMPLER(S): G-Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0330											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: Galveston Begaye				07-08-2020		1700		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reith				7/9/20		1056	

qcm

EA 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-049-203					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)							
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS	
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	ED8 (8011)	Total (As Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	Carbon Dioxide (SM2320B)	Alkalinity (Total, Carbonate and Bicarbonate)	(RSC-1/3) Methane (RSC-1/75)		
1	GW049-203	7-8-2020	1030	2					2								
2																	
3																	
4																	
5																	
6																	
COMMENTS:																	
TB203-12																	
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0308													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schmeelk				7-8-2020		1700		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/9/20		1047			

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-051-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)						
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDR (8011)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (3512)	(Total Carbonate and Bicarbonate)	Alkalinity (SM2320B)		Carbon Dioxide (RSK-175)	Methane (RSK-175)		
1	GW051-203	7-8-2020	1017	2				2										
2	GW051-603	7-8-2020	1017	2				2										
3																		
4																		
5																		
6																		
COMMENTS:																		
TB203- 12																		
SAMPLER(S): D. Schuelek				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0308														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schuelek				7-8-2020		1700		Printed Name and Signature: _____										
Printed Name and Signature: _____								Printed Name and Signature: _____										
Printed Name and Signature: _____								Printed Name and Signature: Nicole Reiff				7/9/20		1047				

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-041-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)											
				ANALYSIS REQUIRED (Specify number of bottles)																			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	BTEXN	EDB	Total As,Pb,Cd,K,Mn,Mg	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity (Total, Carbonate, and Bicarbonate)	Carbon Dioxide	Comments								
1	GW041-203	7-8-2020	0911	15					6	3	3*	1	1	1		Please see Comments for requested MS/MSD analytes							
2																							
3																							
4																							
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered Please run MS/MSD on the following analytes only: VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe																							
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: TB203-10																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: D. Schmeelk				7-8-2020				1700				Printed Name and Signature: Nicole Reiff				7/9/20				1043			
Printed Name and Signature: [Signature]												Printed Name and Signature: [Signature]											
Printed Name and Signature: [Signature]												Printed Name and Signature: [Signature]											

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-10								
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020								
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3								
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS		
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Ca, K, Na, Mg (8011)	Dissolved Fe, Mn (8020A, 8010C)	Chloride, bromide, sulfate (8010C)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (353.2)			
1	TB203-10	07-08-2020	1400	2	2	2	2	2								
2																
3																
4																
5																
Associated with: GWO41-203																
SAMPLER(S): G-Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2836 0219 0326												
RELINQUISHED BY:				DATE:		TIME:		RECEIVED BY:				DATE:		TIME:		
Printed Name and Signature: Galveston Begaye				DATE: 07-08-2020		TIME: 1400		Printed Name and Signature:				DATE:		TIME:		
Printed Name and Signature:				DATE:		TIME:		Printed Name and Signature:				DATE:		TIME:		
Printed Name and Signature:				DATE:		TIME:		Printed Name and Signature:				DATE:		TIME:		
Printed Name and Signature:				DATE:		TIME:		Printed Name and Signature: Nicole Reiff				DATE: 7/9/20		TIME: 1043		

gem

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-034-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)											
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS								
					VOCs (BTEX)	(BTEX)	(BTEX)	EDS (BTEX)	Total (As, Pb, Cd, Ni, Mn) (BTEX)	Chloride, bromide, sulfate (BTEX)	Nitrate-Nitrite (BTEX)	(BTEX)	Carbon Dioxide (BTEX)	(BTEX)		(BTEX)							
1	GW034-203	7-8-2020	1143	2																			
2																							
3																							
4																							
5																							
6																							
COMMENTS:																							
TB203- 13																							
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0293																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: D. Schmeelk				7-8-2020				1700															
Printed Name and Signature:																							
Printed Name and Signature:																							
Printed Name and Signature:																							
Printed Name and Signature:																							
Printed Name and Signature:																							

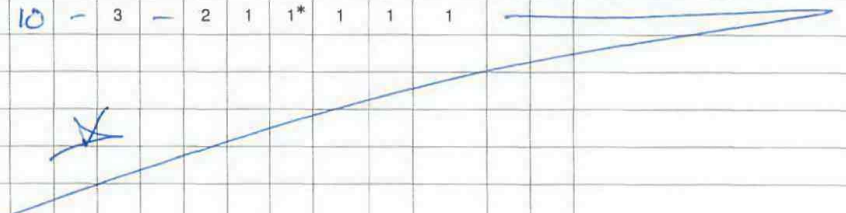
Qm

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-033-203																	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020															
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: 3 (Jul-Sep)																	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS							
				Total Number of Bottles	VOCs	BTEX	BTEXN	EDB	Total (As, Pb, Ca, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity	Carbon Dioxide	Methane								
1	GW033-203	7-8-2020	1131	2					2														
2																							
3																							
4																							
5																							
6																							
COMMENTS:																							
TB203-13																							
SAMPLER(S): <i>D. Schuelelk</i>				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0293																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: <i>D. Schuelelk</i>				7-8-2020				1700				Printed Name and Signature: <i>Nicole Reiff</i>				7/9/20				1041			
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											

gem

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-TB203-13					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3							
PROJECT SITE AND PHASE: ST100/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS					
				Total Number of Bottles	VOCs (9200C)	BTEX (9200C)	BTXN (9200C)	EDB (6011)	Disinfectant Pp, Mn (6020A/6010C)	Total As, Pb, Cd, K, Na, Mg (6011)	Chloride, Bromide, Sulfate (2010C)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)						
1	TB203-13	07-08-2020	1700	2	2	2	2	2											
2																			
3																			
4		07-08-2020																	
5																			
Associated with: GW033-203 GW034-203 GW050-203																			
SAMPLER(S): G. Begay				COURIER AND SHIPPING NUMBER: FedEx 30 0293 8155 2829-9940-X															
RELINQUISHED BY:				DATE:				TIME:				RECEIVED BY:				DATE:		TIME:	
Printed Name and Signature: Galveston Begay				DATE: 07-08-2020				TIME: 1700				Printed Name and Signature:							
Printed Name and Signature:												Printed Name and Signature:							
Printed Name and Signature:												Printed Name and Signature:							
Printed Name and Signature:												Printed Name and Signature: Nicole Reiff				7/9/20		1041	

QCM

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-244-445-203																	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmilh@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020															
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: 3 (Jul-Sep)																	
				ANALYSIS REQUIRED (Specify number of bottles)																			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (#260C)	BTEX (#260C)	EDS (#011)	Total (As, Pb, Cd, K, Na, Mg) (#020A/6010C)	Dissolved Fe, Mn (#010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (352.2)	Carbon Dioxide (352.2)	Methane (#SK-175)	COMMENTS								
1	GW244-445-203	7-8-2020	1255	10	-	3	-	2	1	1*	1	1											
2																							
3																							
4																							
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																							
TB203-08																							
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: D. Schmeelk				7-8-2020				1700															
Printed Name and Signature:																							
Printed Name and Signature:																							
Printed Name and Signature:																							
Printed Name and Signature:																							

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-240-449-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)				
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258								
ANALYSIS REQUIRED (Specify number of bottles)																
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8260C)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (6010C)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) (353.2)	Carbon Dioxide (SM2320B)	Methane (RSK-175)	COMMENTS	
1	GW240-449-203	7-8-2020	1225	10	-	3	-	2	1	1*	1	1				
2																
3																
4																
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																
TB203-08																
SAMPLER(S): D. Schueck/K								COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940								
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: D. Schueck				7-8-2020		1700		Printed Name and Signature: Nicole Reiff				7/9/20		1038		
Printed Name and Signature: [Signature]								Printed Name and Signature: [Signature]								
Printed Name and Signature: [Signature]								Printed Name and Signature: [Signature]								

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-08							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)											
				Total Number of Bottles	VOCs	BTEX	BTEXN	EDB	Disinfectant Res. Mm	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS		
1	TB203-08	07-08-2020	1400	4	2	2									
2															
3															
4															
5															
Associated with: GW 244-445-203 GW 240-449-203															
SAMPLER(S): G-Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9940											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: Galveston Begaye				07-08-2020		1700		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/9/20		1038	

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-241-428-203			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amarda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)					
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	BTEXN	ED8	Total (As Pb, Cd, K, Na, Mg) (6011)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (6010C)	Nitrate-Nitrite (353.2)	Alkalinity (Total Carbonate, and Bicarbonate) (353.2)	Carbon Dioxide (SM2320B)	Methane (MSK-175)	COMMENTS	
1	GW241-428-203	07-08-2020	0842	7					2	1	1*	1	1	1			
2																	
3																	
4																	
5																	
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																	
TB203-11																	
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0319													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schmeelk				7-8-2020		1700		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/9/20		1035			

qcm

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-7140-1

Login Number: 7140**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-7281-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

8/6/2020 5:22:38 PM

Jennifer Pursel, Operations Support Specialist
(717)556-7262

jenniferpursel@eurofinsus.com

Designee for

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

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The test results in this report meet all 2003 NELAP, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory Job ID: 410-7281-1

1

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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Measurement uncertainty values, as applicable, are available upon request.

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Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Jennifer Pursel
Operations Support Specialist
8/6/2020 5:22:38 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Eurofins Lancaster Laboratories Env, LLC

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8/6/2020

December 2020

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Job ID: 410-7281-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-7281-1

Receipt

The samples were received on 7/10/2020 10:58 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.5° C, 1.2° C, 1.4° C, 1.5° C and 2.4° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW009-203

Lab Sample ID: 410-7281-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.019	J	0.029	0.019	0.0095	ug/L	1		8011	Total/NA
Bromide	2.8	D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	180	J D	200	150	100	mg/L	500		300.0	Total/NA
Sulfate	230	J D	500	450	150	mg/L	500		300.0	Total/NA
Calcium	140		0.20	0.15	0.096	mg/L	1		6010C	Total Recoverable
Magnesium	20		0.10	0.075	0.040	mg/L	1		6010C	Total Recoverable
Potassium	3.7		0.50	0.38	0.20	mg/L	1		6010C	Total Recoverable
Sodium	45		1.0	0.50	0.24	mg/L	1		6010C	Total Recoverable
Manganese	0.0080	J	0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Nitrate Nitrite as N	1.7		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	140		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	140		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW009-603

Lab Sample ID: 410-7281-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.020	J	0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Bromide	2.9	D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	210	D	200	150	100	mg/L	500		300.0	Total/NA
Sulfate	340	J D	500	450	150	mg/L	500		300.0	Total/NA
Calcium	140		0.20	0.15	0.096	mg/L	1		6010C	Total Recoverable
Magnesium	20		0.10	0.075	0.040	mg/L	1		6010C	Total Recoverable
Potassium	3.6		0.50	0.38	0.20	mg/L	1		6010C	Total Recoverable
Sodium	45		1.0	0.50	0.24	mg/L	1		6010C	Total Recoverable
Manganese	0.0043	J	0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Nitrate Nitrite as N	1.7		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	170		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	170		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-15

Lab Sample ID: 410-7281-3

No Detections.

Client Sample ID: GWS4-446-203

Lab Sample ID: 410-7281-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.035		0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	180	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	330	D	50	45	15	mg/L	50		300.0	Total/NA
Calcium	190		0.20	0.15	0.096	mg/L	1		6010C	Total Recoverable
Magnesium	29		0.10	0.075	0.040	mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GWS4-446-203 (Continued)

Lab Sample ID: 410-7281-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Potassium	4.9		0.50	0.38	0.20	mg/L	1		6010C	Total
Sodium	64		1.0	0.50	0.24	mg/L	1		6010C	Recoverable
Nitrate Nitrite as N	6.8		0.50	0.45	0.20	mg/L	5		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	100		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	100		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW245-460-203

Lab Sample ID: 410-7281-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Bromide	1.6	J D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	52	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	50	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	59		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	8.4		0.10	0.075	0.040	mg/L	1		6010C	Recoverable
Potassium	2.6		0.50	0.38	0.20	mg/L	1		6010C	Total
Sodium	25		1.0	0.50	0.24	mg/L	1		6010C	Recoverable
Arsenic	0.0011	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-16

Lab Sample ID: 410-7281-6

No Detections.

Client Sample ID: GW243-425-203

Lab Sample ID: 410-7281-7

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.035		0.029	0.019	0.0097	ug/L	1		8011	Total/NA
Chloride	20	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	40	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	48		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	6.4		0.10	0.075	0.040	mg/L	1		6010C	Recoverable
Potassium	2.5		0.50	0.38	0.20	mg/L	1		6010C	Total
Sodium	24		1.0	0.50	0.24	mg/L	1		6010C	Recoverable
Arsenic	0.0014	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.000083	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	1.0		0.10	0.090	0.040	mg/L	1		353.2	Total/NA
Bicarbonate Alkalinity as CaCO ₃	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW243-425-603

Lab Sample ID: 410-7281-8

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.030		0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	21	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	41	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	49		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	6.7		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	2.5		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	25		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Arsenic	0.0013	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	150		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-17

Lab Sample ID: 410-7281-9

No Detections.

Client Sample ID: GW029-203

Lab Sample ID: 410-7281-10

No Detections.

Client Sample ID: GW030-203

Lab Sample ID: 410-7281-11

No Detections.

Client Sample ID: GW031-203

Lab Sample ID: 410-7281-12

No Detections.

Client Sample ID: FB203-01

Lab Sample ID: 410-7281-13

No Detections.

Client Sample ID: TB203-18

Lab Sample ID: 410-7281-14

No Detections.

Client Sample ID: GW201-203

Lab Sample ID: 410-7281-15

No Detections.

Client Sample ID: GW202-203

Lab Sample ID: 410-7281-16

No Detections.

Client Sample ID: GW203-203

Lab Sample ID: 410-7281-17

No Detections.

Client Sample ID: TB203-19

Lab Sample ID: 410-7281-18

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW009-203

Lab Sample ID: 410-7281-1

Date Collected: 07/09/20 12:20

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 17:55	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L	-	07/16/20 17:55	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 17:55	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L	-	07/16/20 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/16/20 17:55	1
4-Bromofluorobenzene (Surr)	95		85 - 114		07/16/20 17:55	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 17:55	1
Toluene-d8 (Surr)	102		89 - 112		07/16/20 17:55	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	J	0.029	0.019	0.0095	ug/L	-	07/23/20 03:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	101	J1	46 - 136	07/18/20 06:46	07/23/20 03:15	1
1,1,2,2-Tetrachloroethane (2C)	65	J1	46 - 136	07/18/20 06:46	07/23/20 03:15	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.8	D	2.5	2.0	1.3	mg/L	-	07/14/20 03:15	5
Chloride	180	J D	200	150	100	mg/L	-	07/14/20 03:32	500
Sulfate	230	J D	500	450	150	mg/L	-	07/14/20 03:32	500

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	140		0.20	0.15	0.096	mg/L	-	07/21/20 18:42	1
Magnesium	20		0.10	0.075	0.040	mg/L	-	07/21/20 09:16	1
Potassium	3.7		0.50	0.38	0.20	mg/L	-	07/21/20 09:16	1
Sodium	45		1.0	0.50	0.24	mg/L	-	07/21/20 09:16	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/20/20 06:55	1
Manganese	0.0080	J	0.010	0.0052	0.0031	mg/L	-	07/20/20 06:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L	-	08/04/20 11:20	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/20/20 11:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.7		0.10	0.090	0.040	mg/L	-	07/20/20 10:25	1
Bicarbonate Alkalinity as CaCO3	140		8.0	6.0	8.0	mg/L	-	07/14/20 00:49	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L	-	07/14/20 00:49	1
Total Alkalinity as CaCO3 to pH 4.5	140		8.0	6.0	8.0	mg/L	-	07/14/20 00:49	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW009-603

Lab Sample ID: 410-7281-2

Date Collected: 07/09/20 12:20

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 18:17	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L	-	07/16/20 18:17	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L	-	07/16/20 18:17	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L	-	07/16/20 18:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/16/20 18:17	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/16/20 18:17	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 18:17	1
Toluene-d8 (Surr)	102		89 - 112		07/16/20 18:17	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	J	0.029	0.019	0.0096	ug/L	-	07/23/20 03:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	99	J1	46 - 136	07/18/20 06:46	07/23/20 03:32	1
1,1,2,2-Tetrachloroethane (2C)	65	J1	46 - 136	07/18/20 06:46	07/23/20 03:32	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.9	D	2.5	2.0	1.3	mg/L	-	07/14/20 03:49	5
Chloride	210	D	200	150	100	mg/L	-	07/14/20 04:06	500
Sulfate	340	J D	500	450	150	mg/L	-	07/31/20 14:41	500

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	140		0.20	0.15	0.096	mg/L	-	07/21/20 18:45	1
Magnesium	20		0.10	0.075	0.040	mg/L	-	07/21/20 09:19	1
Potassium	3.6		0.50	0.38	0.20	mg/L	-	07/21/20 09:19	1
Sodium	45		1.0	0.50	0.24	mg/L	-	07/21/20 09:19	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/20/20 06:58	1
Manganese	0.0043	J	0.010	0.0052	0.0031	mg/L	-	07/20/20 06:58	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L	-	08/04/20 11:22	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/20/20 11:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.7		0.10	0.090	0.040	mg/L	-	07/21/20 10:46	1
Bicarbonate Alkalinity as CaCO3	170		8.0	6.0	8.0	mg/L	-	07/14/20 00:17	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L	-	07/14/20 00:17	1
Total Alkalinity as CaCO3 to pH 4.5	170		8.0	6.0	8.0	mg/L	-	07/14/20 00:17	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: TB203-15

Lab Sample ID: 410-7281-3

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 12:26	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 12:26	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 12:26	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 12:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		81 - 118		07/16/20 12:26	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/16/20 12:26	1
Dibromofluoromethane (Surr)	98		80 - 119		07/16/20 12:26	1
Toluene-d8 (Surr)	102		89 - 112		07/16/20 12:26	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/23/20 04:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136	07/18/20 06:46	07/23/20 04:23	1
1,1,2,2-Tetrachloroethane (2C)	60		46 - 136	07/18/20 06:46	07/23/20 04:23	1

Client Sample ID: GWS4-446-203

Lab Sample ID: 410-7281-4

Date Collected: 07/09/20 13:13

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 18:39	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 18:39	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 18:39	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/16/20 18:39	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/16/20 18:39	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 18:39	1
Toluene-d8 (Surr)	101		89 - 112		07/16/20 18:39	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.035		0.029	0.019	0.0096	ug/L		07/23/20 04:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136	07/18/20 06:46	07/23/20 04:39	1
1,1,2,2-Tetrachloroethane (2C)	65		46 - 136	07/18/20 06:46	07/23/20 04:39	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	20	U	25	20	13	mg/L		07/14/20 06:40	50
Chloride	180	D	20	15	10	mg/L		07/14/20 06:40	50
Sulfate	330	D	50	45	15	mg/L		07/14/20 06:40	50

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GWS4-446-203

Lab Sample ID: 410-7281-4

Date Collected: 07/09/20 13:13

Matrix: Water

Date Received: 07/10/20 10:58

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190		0.20	0.15	0.096	mg/L		07/21/20 18:48	1
Magnesium	29		0.10	0.075	0.040	mg/L		07/21/20 09:23	1
Potassium	4.9		0.50	0.38	0.20	mg/L		07/21/20 09:23	1
Sodium	64		1.0	0.50	0.24	mg/L		07/21/20 09:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 07:01	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 07:01	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/04/20 11:24	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/20/20 11:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	6.8		0.50	0.45	0.20	mg/L		07/21/20 10:51	5
Bicarbonate Alkalinity as CaCO3	100		8.0	6.0	8.0	mg/L		07/14/20 01:04	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L		07/14/20 01:04	1
Total Alkalinity as CaCO3 to pH 4.5	100		8.0	6.0	8.0	mg/L		07/14/20 01:04	1

Client Sample ID: GW245-460-203

Lab Sample ID: 410-7281-5

Date Collected: 07/09/20 06:33

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 19:01	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 19:01	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 19:01	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 19:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/16/20 19:01	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/16/20 19:01	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 19:01	1
Toluene-d8 (Surr)	101		89 - 112		07/16/20 19:01	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0097	ug/L		07/23/20 04:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	78		46 - 136	07/18/20 06:46	07/23/20 04:56	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136	07/18/20 06:46	07/23/20 04:56	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	1.6	J D	2.5	2.0	1.3	mg/L		07/14/20 04:23	5
Chloride	52	D	20	15	10	mg/L		07/14/20 04:40	50
Sulfate	50	D	5.0	4.5	1.5	mg/L		07/14/20 04:23	5

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW245-460-203

Lab Sample ID: 410-7281-5

Date Collected: 07/09/20 06:33

Matrix: Water

Date Received: 07/10/20 10:58

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	59		0.20	0.15	0.096	mg/L		07/21/20 08:57	1
Magnesium	8.4		0.10	0.075	0.040	mg/L		07/21/20 08:57	1
Potassium	2.6		0.50	0.38	0.20	mg/L		07/21/20 08:57	1
Sodium	25		1.0	0.50	0.24	mg/L		07/21/20 08:57	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 07:04	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 07:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0020	0.0016	0.00068	mg/L		08/04/20 11:25	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/20/20 11:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L		07/21/20 10:53	1
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L		07/14/20 00:25	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/14/20 00:25	1
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L		07/14/20 00:25	1

Client Sample ID: TB203-16

Lab Sample ID: 410-7281-6

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 12:48	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 12:48	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 12:48	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d ₄ (Surr)	100		81 - 118		07/16/20 12:48	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/16/20 12:48	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 12:48	1
Toluene-d ₈ (Surr)	102		89 - 112		07/16/20 12:48	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 05:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	65		46 - 136	07/18/20 06:46	07/23/20 05:13	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136	07/18/20 06:46	07/23/20 05:13	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW243-425-203

Lab Sample ID: 410-7281-7

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.035		0.029	0.019	0.0097	ug/L		07/23/20 05:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	97		46 - 136	07/18/20 06:46	07/23/20 05:30	1
1,1,2,2-Tetrachloroethane (2C)	68		46 - 136	07/18/20 06:46	07/23/20 05:30	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 04:57	5
Chloride	20	D	2.0	1.5	1.0	mg/L		07/14/20 04:57	5
Sulfate	40	D	5.0	4.5	1.5	mg/L		07/14/20 04:57	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	48		0.20	0.15	0.096	mg/L		07/21/20 18:39	1
Magnesium	6.4		0.10	0.075	0.040	mg/L		07/21/20 09:13	1
Potassium	2.5		0.50	0.38	0.20	mg/L		07/21/20 09:13	1
Sodium	24		1.0	0.50	0.24	mg/L		07/21/20 09:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 06:51	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 06:51	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0014	J	0.0020	0.0016	0.00068	mg/L		07/16/20 16:12	1
Lead	0.000083	J	0.00050	0.00025	0.000071	mg/L		07/16/20 16:12	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.0		0.10	0.090	0.040	mg/L		07/21/20 10:54	1
Bicarbonate Alkalinity as CaCO3	150		8.0	6.0	8.0	mg/L		07/14/20 00:43	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L		07/14/20 00:43	1
Total Alkalinity as CaCO3 to pH 4.5	150		8.0	6.0	8.0	mg/L		07/14/20 00:43	1

Client Sample ID: GW243-425-603

Lab Sample ID: 410-7281-8

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.030		0.029	0.019	0.0096	ug/L		07/23/20 05:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	85		46 - 136	07/18/20 06:46	07/23/20 05:47	1
1,1,2,2-Tetrachloroethane (2C)	66		46 - 136	07/18/20 06:46	07/23/20 05:47	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 05:31	5
Chloride	21	D	2.0	1.5	1.0	mg/L		07/14/20 05:31	5

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW243-425-603

Lab Sample ID: 410-7281-8

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	41	D	5.0	4.5	1.5	mg/L		07/14/20 05:31	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	49		0.20	0.15	0.096	mg/L		07/21/20 18:36	1
Magnesium	6.7		0.10	0.075	0.040	mg/L		07/21/20 09:10	1
Potassium	2.5		0.50	0.38	0.20	mg/L		07/21/20 09:10	1
Sodium	25		1.0	0.50	0.24	mg/L		07/21/20 09:10	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/20/20 06:48	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/20/20 06:48	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0013	J	0.0020	0.0016	0.00068	mg/L		07/16/20 16:10	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/16/20 16:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/21/20 10:58	1
Bicarbonate Alkalinity as CaCO ₃	150		8.0	6.0	8.0	mg/L		07/14/20 00:57	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/14/20 00:57	1
Total Alkalinity as CaCO ₃ to pH 4.5	150		8.0	6.0	8.0	mg/L		07/14/20 00:57	1

Client Sample ID: TB203-17

Lab Sample ID: 410-7281-9

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 06:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136	07/18/20 06:26	07/23/20 06:04	1
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136	07/18/20 06:26	07/23/20 06:04	1

Client Sample ID: GW029-203

Lab Sample ID: 410-7281-10

Date Collected: 07/09/20 08:01

Matrix: Water

Date Received: 07/10/20 10:58

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 06:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	66		46 - 136	07/18/20 06:26	07/23/20 06:20	1
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136	07/18/20 06:26	07/23/20 06:20	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW030-203

Date Collected: 07/09/20 08:25

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-11

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 06:37	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	81		46 - 136					07/18/20 06:26	07/23/20 06:37	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136					07/18/20 06:26	07/23/20 06:37	1

Client Sample ID: GW031-203

Date Collected: 07/09/20 09:11

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-12

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 06:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	75		46 - 136				07/18/20 06:26	07/23/20 06:54	1
1,1,2,2-Tetrachloroethane (2C)	67		46 - 136				07/18/20 06:26	07/23/20 06:54	1

Client Sample ID: FB203-01

Date Collected: 07/09/20 08:29

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-13

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/23/20 07:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	53		46 - 136				07/18/20 06:26	07/23/20 07:45	1
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136				07/18/20 06:26	07/23/20 07:45	1

Client Sample ID: TB203-18

Date Collected: 07/09/20 14:30

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-14

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 08:01	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	65		46 - 136					07/18/20 06:26	07/23/20 08:01	1
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136					07/18/20 06:26	07/23/20 08:01	1

Client Sample ID: GW201-203

Date Collected: 07/09/20 11:19

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-15

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 08:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136				07/18/20 06:26	07/23/20 08:18	1
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136				07/18/20 06:26	07/23/20 08:18	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW202-203

Date Collected: 07/09/20 11:30

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-16

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0097	ug/L		07/23/20 08:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	72		46 - 136	07/18/20 06:26	07/23/20 08:35	1
1,1,2,2-Tetrachloroethane (2C)	66		46 - 136	07/18/20 06:26	07/23/20 08:35	1

Client Sample ID: GW203-203

Date Collected: 07/09/20 11:45

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-17

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 08:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136	07/18/20 06:26	07/23/20 08:52	1
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136	07/18/20 06:26	07/23/20 08:52	1

Client Sample ID: TB203-19

Date Collected: 07/09/20 14:30

Date Received: 07/10/20 10:58

Lab Sample ID: 410-7281-18

Matrix: Water

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0097	ug/L		07/23/20 09:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	59		46 - 136	07/18/20 06:26	07/23/20 09:09	1
1,1,2,2-Tetrachloroethane (2C)	58		46 - 136	07/18/20 06:26	07/23/20 09:09	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-7281-1	GW009-203	102	95	100	102
410-7281-2	GW009-603	101	93	100	102
410-7281-3	TB203-15	96	94	98	102
410-7281-4	GWS4-446-203	99	93	100	101
410-7281-5	GW245-460-203	99	94	100	101
410-7281-6	TB203-16	100	93	100	102
LCS 410-23100/5	Lab Control Sample	99	99	98	103
LCSD 410-23100/7	Lab Control Sample Dup	98	100	97	103
MB 410-23100/9	Method Blank	98	94	100	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-7281-1	GW009-203	101 J1	65 J1
410-7281-2	GW009-603	99 J1	65 J1
410-7281-3	TB203-15	62	60
410-7281-4	GWS4-446-203	73	65
410-7281-5	GW245-460-203	78	64
410-7281-6	TB203-16	65	64
410-7281-7	GW243-425-203	97	68
410-7281-8	GW243-425-603	85	66
410-7281-9	TB203-17	51	51
410-7281-10	GW029-203	66	59
410-7281-11	GW030-203	81	64
410-7281-12	GW031-203	75	67
410-7281-13	FB203-01	53	56
410-7281-14	TB203-18	65	61
410-7281-15	GW201-203	62	55
410-7281-16	GW202-203	72	66
410-7281-17	GW203-203	62	55
410-7281-18	TB203-19	59	58
LCS 410-23890/2-A	Lab Control Sample	61	59
LCSD 410-23890/3-A	Lab Control Sample Dup	62	59
MB 410-23890/1-A	Method Blank	57	53

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-23100/9

Matrix: Water

Analysis Batch: 23100

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 11:43	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/16/20 11:43	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/16/20 11:43	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/16/20 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/16/20 11:43	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/16/20 11:43	1
Dibromofluoromethane (Surr)	100		80 - 119		07/16/20 11:43	1
Toluene-d8 (Surr)	102		89 - 112		07/16/20 11:43	1

Lab Sample ID: LCS 410-23100/5

Matrix: Water

Analysis Batch: 23100

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.3		ug/L		96	42 - 138
Ethylbenzene	20.0	20.5		ug/L		103	79 - 121
Toluene	20.0	20.0		ug/L		100	80 - 121
Xylenes, Total	60.0	63.0		ug/L		105	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	103		89 - 112

Lab Sample ID: LCSD 410-23100/7

Matrix: Water

Analysis Batch: 23100

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.2		ug/L		96	42 - 138	1	20
Ethylbenzene	20.0	20.8		ug/L		104	79 - 121	2	20
Toluene	20.0	20.1		ug/L		100	80 - 121	0	20
Xylenes, Total	60.0	62.5		ug/L		104	79 - 121	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	103		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-23890/1-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23890

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/22/20 20:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	57		46 - 136	07/18/20 06:46	07/22/20 20:15	1
1,1,2,2-Tetrachloroethane (2C)	53		46 - 136	07/18/20 06:46	07/22/20 20:15	1

Lab Sample ID: LCS 410-23890/2-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.145		ug/L		113	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	61		46 - 136
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136

Lab Sample ID: LCSD 410-23890/3-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23890

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.129		ug/L		100	60 - 140	12	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-21725/53

Matrix: Water

Analysis Batch: 21725

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/13/20 21:00	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/13/20 21:00	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/13/20 21:00	1

Lab Sample ID: LCS 410-21725/52

Matrix: Water

Analysis Batch: 21725

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	6.95		mg/L		93	90 - 110
Chloride	3.00	2.79		mg/L		93	90 - 110
Sulfate	7.50	7.32		mg/L		98	90 - 110

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 410-28244/4
Matrix: Water
Analysis Batch: 28244

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/31/20 05:33	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/31/20 05:33	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/31/20 05:33	1

Lab Sample ID: LCS 410-28244/3
Matrix: Water
Analysis Batch: 28244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	7.71		mg/L		103	90 - 110
Chloride	3.00	2.98		mg/L		99	90 - 110
Sulfate	7.50	7.63		mg/L		102	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-21781/1-A
Matrix: Water
Analysis Batch: 23974

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21781

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/18/20 11:29	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/18/20 11:29	1

Lab Sample ID: LCS 410-21781/2-A
Matrix: Water
Analysis Batch: 23974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.409		mg/L		102	87 - 115
Manganese	0.0200	0.0204		mg/L		102	90 - 114

Lab Sample ID: MB 410-21664/1-A
Matrix: Water
Analysis Batch: 24691

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 21664

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/21/20 08:29	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/21/20 08:29	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/21/20 08:29	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/21/20 08:29	1

Lab Sample ID: LCS 410-21664/2-A
Matrix: Water
Analysis Batch: 24691

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 21664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.399		mg/L		100	87 - 113
Magnesium	0.200	0.199		mg/L		100	85 - 113
Potassium	5.60	5.47		mg/L		98	86 - 114
Sodium	2.00	1.98		mg/L		99	87 - 115

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-21741/1-A
Matrix: Water
Analysis Batch: 23562

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21741

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/16/20 15:25	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/16/20 15:25	1

Lab Sample ID: LCS 410-21741/2-A
Matrix: Water
Analysis Batch: 23562

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0101		mg/L		102	84 - 116
Lead	0.00492	0.00499		mg/L		101	88 - 115

Lab Sample ID: MB 410-21897/1-A
Matrix: Water
Analysis Batch: 24362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21897

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/20/20 10:58	1

Lab Sample ID: MB 410-21897/1-A
Matrix: Water
Analysis Batch: 29459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21897

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/04/20 11:16	1

Lab Sample ID: LCS 410-21897/2-A
Matrix: Water
Analysis Batch: 24362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.00492	0.00508		mg/L		103	88 - 115

Lab Sample ID: LCS 410-21897/2-A
Matrix: Water
Analysis Batch: 29459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0106		mg/L		107	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-24338/61
Matrix: Water
Analysis Batch: 24338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/20/20 09:49	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 410-24338/62

Matrix: Water

Analysis Batch: 24338

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.41		mg/L		97	90 - 110

Lab Sample ID: MB 410-24726/60

Matrix: Water

Analysis Batch: 24726

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/21/20 10:28	1

Lab Sample ID: LCS 410-24726/61

Matrix: Water

Analysis Batch: 24726

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.44		mg/L		97	90 - 110

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 410-22395/24

Matrix: Water

Analysis Batch: 22395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1

Lab Sample ID: LCS 410-22395/25

Matrix: Water

Analysis Batch: 22395

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	168		mg/L		89	82 - 106

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

GC/MS VOA

Analysis Batch: 23100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	8260C DOD	
410-7281-2	GW009-603	Total/NA	Water	8260C DOD	
410-7281-3	TB203-15	Total/NA	Water	8260C DOD	
410-7281-4	GWS4-446-203	Total/NA	Water	8260C DOD	
410-7281-5	GW245-460-203	Total/NA	Water	8260C DOD	
410-7281-6	TB203-16	Total/NA	Water	8260C DOD	
MB 410-23100/9	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-23100/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-23100/7	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 23884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-9	TB203-17	Total/NA	Water	8011	
410-7281-10	GW029-203	Total/NA	Water	8011	
410-7281-11	GW030-203	Total/NA	Water	8011	
410-7281-12	GW031-203	Total/NA	Water	8011	
410-7281-13	FB203-01	Total/NA	Water	8011	
410-7281-14	TB203-18	Total/NA	Water	8011	
410-7281-15	GW201-203	Total/NA	Water	8011	
410-7281-16	GW202-203	Total/NA	Water	8011	
410-7281-17	GW203-203	Total/NA	Water	8011	
410-7281-18	TB203-19	Total/NA	Water	8011	

Prep Batch: 23890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	8011	
410-7281-2	GW009-603	Total/NA	Water	8011	
410-7281-3	TB203-15	Total/NA	Water	8011	
410-7281-4	GWS4-446-203	Total/NA	Water	8011	
410-7281-5	GW245-460-203	Total/NA	Water	8011	
410-7281-6	TB203-16	Total/NA	Water	8011	
410-7281-7	GW243-425-203	Total/NA	Water	8011	
410-7281-8	GW243-425-603	Total/NA	Water	8011	
MB 410-23890/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-23890/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-23890/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 25287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	8011	23890
410-7281-2	GW009-603	Total/NA	Water	8011	23890
410-7281-3	TB203-15	Total/NA	Water	8011	23890
410-7281-4	GWS4-446-203	Total/NA	Water	8011	23890
410-7281-5	GW245-460-203	Total/NA	Water	8011	23890
410-7281-6	TB203-16	Total/NA	Water	8011	23890
410-7281-7	GW243-425-203	Total/NA	Water	8011	23890
410-7281-8	GW243-425-603	Total/NA	Water	8011	23890
410-7281-9	TB203-17	Total/NA	Water	8011	23884
410-7281-10	GW029-203	Total/NA	Water	8011	23884

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

GC Semi VOA (Continued)

Analysis Batch: 25287 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-11	GW030-203	Total/NA	Water	8011	23884
410-7281-12	GW031-203	Total/NA	Water	8011	23884
410-7281-13	FB203-01	Total/NA	Water	8011	23884
410-7281-14	TB203-18	Total/NA	Water	8011	23884
410-7281-15	GW201-203	Total/NA	Water	8011	23884
410-7281-16	GW202-203	Total/NA	Water	8011	23884
410-7281-17	GW203-203	Total/NA	Water	8011	23884
410-7281-18	TB203-19	Total/NA	Water	8011	23884
MB 410-23890/1-A	Method Blank	Total/NA	Water	8011	23890
LCS 410-23890/2-A	Lab Control Sample	Total/NA	Water	8011	23890
LCSD 410-23890/3-A	Lab Control Sample Dup	Total/NA	Water	8011	23890

HPLC/IC

Analysis Batch: 21725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	300.0	
410-7281-1	GW009-203	Total/NA	Water	300.0	
410-7281-2	GW009-603	Total/NA	Water	300.0	
410-7281-2	GW009-603	Total/NA	Water	300.0	
410-7281-4	GWS4-446-203	Total/NA	Water	300.0	
410-7281-5	GW245-460-203	Total/NA	Water	300.0	
410-7281-5	GW245-460-203	Total/NA	Water	300.0	
410-7281-7	GW243-425-203	Total/NA	Water	300.0	
410-7281-8	GW243-425-603	Total/NA	Water	300.0	
MB 410-21725/53	Method Blank	Total/NA	Water	300.0	
LCS 410-21725/52	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 28244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-2	GW009-603	Total/NA	Water	300.0	
MB 410-28244/4	Method Blank	Total/NA	Water	300.0	
LCS 410-28244/3	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 21664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total Recoverable	Water	3005A	
410-7281-2	GW009-603	Total Recoverable	Water	3005A	
410-7281-4	GWS4-446-203	Total Recoverable	Water	3005A	
410-7281-5	GW245-460-203	Total Recoverable	Water	3005A	
410-7281-7	GW243-425-203	Total Recoverable	Water	3005A	
410-7281-8	GW243-425-603	Total Recoverable	Water	3005A	
MB 410-21664/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-21664/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 21741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-7	GW243-425-203	Total/NA	Water	3020A	
410-7281-8	GW243-425-603	Total/NA	Water	3020A	
MB 410-21741/1-A	Method Blank	Total/NA	Water	3020A	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Metals (Continued)

Prep Batch: 21741 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-21741/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 21781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Dissolved	Water	Non-Digest Prep	
410-7281-2	GW009-603	Dissolved	Water	Non-Digest Prep	
410-7281-4	GWS4-446-203	Dissolved	Water	Non-Digest Prep	
410-7281-5	GW245-460-203	Dissolved	Water	Non-Digest Prep	
410-7281-7	GW243-425-203	Dissolved	Water	Non-Digest Prep	
410-7281-8	GW243-425-603	Dissolved	Water	Non-Digest Prep	
MB 410-21781/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-21781/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 21897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	3020A	
410-7281-2	GW009-603	Total/NA	Water	3020A	
410-7281-4	GWS4-446-203	Total/NA	Water	3020A	
410-7281-5	GW245-460-203	Total/NA	Water	3020A	
MB 410-21897/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-21897/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 23562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-7	GW243-425-203	Total/NA	Water	6020A	21741
410-7281-8	GW243-425-603	Total/NA	Water	6020A	21741
MB 410-21741/1-A	Method Blank	Total/NA	Water	6020A	21741
LCS 410-21741/2-A	Lab Control Sample	Total/NA	Water	6020A	21741

Analysis Batch: 23974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-21781/1-A	Method Blank	Total/NA	Water	6010C	21781
LCS 410-21781/2-A	Lab Control Sample	Total/NA	Water	6010C	21781

Analysis Batch: 24185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Dissolved	Water	6010C	21781
410-7281-2	GW009-603	Dissolved	Water	6010C	21781
410-7281-4	GWS4-446-203	Dissolved	Water	6010C	21781
410-7281-5	GW245-460-203	Dissolved	Water	6010C	21781
410-7281-7	GW243-425-203	Dissolved	Water	6010C	21781
410-7281-8	GW243-425-603	Dissolved	Water	6010C	21781

Analysis Batch: 24362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	6020A	21897
410-7281-2	GW009-603	Total/NA	Water	6020A	21897
410-7281-4	GWS4-446-203	Total/NA	Water	6020A	21897
410-7281-5	GW245-460-203	Total/NA	Water	6020A	21897
MB 410-21897/1-A	Method Blank	Total/NA	Water	6020A	21897
LCS 410-21897/2-A	Lab Control Sample	Total/NA	Water	6020A	21897

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Metals

Analysis Batch: 24691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total Recoverable	Water	6010C	21664
410-7281-2	GW009-603	Total Recoverable	Water	6010C	21664
410-7281-4	GWS4-446-203	Total Recoverable	Water	6010C	21664
410-7281-5	GW245-460-203	Total Recoverable	Water	6010C	21664
410-7281-7	GW243-425-203	Total Recoverable	Water	6010C	21664
410-7281-8	GW243-425-603	Total Recoverable	Water	6010C	21664
MB 410-21664/1-A	Method Blank	Total Recoverable	Water	6010C	21664
LCS 410-21664/2-A	Lab Control Sample	Total Recoverable	Water	6010C	21664

Analysis Batch: 24873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total Recoverable	Water	6010C	21664
410-7281-2	GW009-603	Total Recoverable	Water	6010C	21664
410-7281-4	GWS4-446-203	Total Recoverable	Water	6010C	21664
410-7281-7	GW243-425-203	Total Recoverable	Water	6010C	21664
410-7281-8	GW243-425-603	Total Recoverable	Water	6010C	21664

Analysis Batch: 29459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	6020A	21897
410-7281-2	GW009-603	Total/NA	Water	6020A	21897
410-7281-4	GWS4-446-203	Total/NA	Water	6020A	21897
410-7281-5	GW245-460-203	Total/NA	Water	6020A	21897
MB 410-21897/1-A	Method Blank	Total/NA	Water	6020A	21897
LCS 410-21897/2-A	Lab Control Sample	Total/NA	Water	6020A	21897

General Chemistry

Analysis Batch: 22395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	SM2320 B	
410-7281-2	GW009-603	Total/NA	Water	SM2320 B	
410-7281-4	GWS4-446-203	Total/NA	Water	SM2320 B	
410-7281-5	GW245-460-203	Total/NA	Water	SM2320 B	
410-7281-7	GW243-425-203	Total/NA	Water	SM2320 B	
410-7281-8	GW243-425-603	Total/NA	Water	SM2320 B	
MB 410-22395/24	Method Blank	Total/NA	Water	SM2320 B	
LCS 410-22395/25	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 24338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-1	GW009-203	Total/NA	Water	353.2	
MB 410-24338/61	Method Blank	Total/NA	Water	353.2	
LCS 410-24338/62	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 24726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-2	GW009-603	Total/NA	Water	353.2	
410-7281-4	GWS4-446-203	Total/NA	Water	353.2	
410-7281-5	GW245-460-203	Total/NA	Water	353.2	
410-7281-7	GW243-425-203	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

General Chemistry (Continued)

Analysis Batch: 24726 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7281-8	GW243-425-603	Total/NA	Water	353.2	
MB 410-24726/60	Method Blank	Total/NA	Water	353.2	
LCS 410-24726/61	Lab Control Sample	Total/NA	Water	353.2	

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Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW009-203

Lab Sample ID: 410-7281-1

Date Collected: 07/09/20 12:20

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 17:55	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 03:15	AC3T	ELLE
Total/NA	Analysis	300.0		5	21725	07/14/20 03:15	GJ35	ELLE
Total/NA	Analysis	300.0		500	21725	07/14/20 03:32	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:55	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 09:16	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24873	07/21/20 18:42	UCIG	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	24362	07/20/20 11:20	V5SW	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	29459	08/04/20 11:20	V5SW	ELLE
Total/NA	Analysis	353.2		1	24338	07/20/20 10:25	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:49	DI9Q	ELLE

Client Sample ID: GW009-603

Lab Sample ID: 410-7281-2

Date Collected: 07/09/20 12:20

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 18:17	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 03:32	AC3T	ELLE
Total/NA	Analysis	300.0		500	28244	07/31/20 14:41	GJ35	ELLE
Total/NA	Analysis	300.0		5	21725	07/14/20 03:49	GJ35	ELLE
Total/NA	Analysis	300.0		500	21725	07/14/20 04:06	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:58	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 09:19	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24873	07/21/20 18:45	UCIG	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	24362	07/20/20 11:22	V5SW	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	29459	08/04/20 11:22	V5SW	ELLE
Total/NA	Analysis	353.2		1	24726	07/21/20 10:46	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:17	DI9Q	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: TB203-15

Lab Sample ID: 410-7281-3

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 12:26	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 04:23	AC3T	ELLE

Client Sample ID: GWS4-446-203

Lab Sample ID: 410-7281-4

Date Collected: 07/09/20 13:13

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 18:39	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 04:39	AC3T	ELLE
Total/NA	Analysis	300.0		50	21725	07/14/20 06:40	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 07:01	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 09:23	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24873	07/21/20 18:48	UCIG	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	24362	07/20/20 11:15	V5SW	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	29459	08/04/20 11:24	V5SW	ELLE
Total/NA	Analysis	353.2		5	24726	07/21/20 10:51	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 01:04	DI9Q	ELLE

Client Sample ID: GW245-460-203

Lab Sample ID: 410-7281-5

Date Collected: 07/09/20 06:33

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 19:01	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 04:56	AC3T	ELLE
Total/NA	Analysis	300.0		5	21725	07/14/20 04:23	GJ35	ELLE
Total/NA	Analysis	300.0		50	21725	07/14/20 04:40	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 07:04	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 08:57	ULJC	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	24362	07/20/20 11:24	V5SW	ELLE
Total/NA	Prep	3020A			21897	07/13/20 12:29	UJL8	ELLE
Total/NA	Analysis	6020A		1	29459	08/04/20 11:25	V5SW	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW245-460-203

Lab Sample ID: 410-7281-5

Date Collected: 07/09/20 06:33

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	24726	07/21/20 10:53	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:25	DI9Q	ELLE

Client Sample ID: TB203-16

Lab Sample ID: 410-7281-6

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23100	07/16/20 12:48	TQ4J	ELLE
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 05:13	AC3T	ELLE

Client Sample ID: GW243-425-203

Lab Sample ID: 410-7281-7

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 05:30	AC3T	ELLE
Total/NA	Analysis	300.0		5	21725	07/14/20 04:57	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:51	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 09:13	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24873	07/21/20 18:39	UCIG	ELLE
Total/NA	Prep	3020A			21741	07/13/20 08:01	UJL8	ELLE
Total/NA	Analysis	6020A		1	23562	07/16/20 16:12	V5SW	ELLE
Total/NA	Analysis	353.2		1	24726	07/21/20 10:54	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:43	DI9Q	ELLE

Client Sample ID: GW243-425-603

Lab Sample ID: 410-7281-8

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23890	07/18/20 06:46	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 05:47	AC3T	ELLE
Total/NA	Analysis	300.0		5	21725	07/14/20 05:31	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			21781	07/13/20 08:29	UJL8	ELLE
Dissolved	Analysis	6010C		1	24185	07/20/20 06:48	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24691	07/21/20 09:10	ULJC	ELLE
Total Recoverable	Prep	3005A			21664	07/13/20 01:53	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24873	07/21/20 18:36	UCIG	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: GW243-425-603

Lab Sample ID: 410-7281-8

Date Collected: 07/09/20 10:24

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			21741	07/13/20 08:01	UJL8	ELLE
Total/NA	Analysis	6020A		1	23562	07/16/20 16:10	V5SW	ELLE
Total/NA	Analysis	353.2		1	24726	07/21/20 10:58	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:57	DI9Q	ELLE

Client Sample ID: TB203-17

Lab Sample ID: 410-7281-9

Date Collected: 07/09/20 14:30

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 06:04	AC3T	ELLE

Client Sample ID: GW029-203

Lab Sample ID: 410-7281-10

Date Collected: 07/09/20 08:01

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 06:20	AC3T	ELLE

Client Sample ID: GW030-203

Lab Sample ID: 410-7281-11

Date Collected: 07/09/20 08:25

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 06:37	AC3T	ELLE

Client Sample ID: GW031-203

Lab Sample ID: 410-7281-12

Date Collected: 07/09/20 09:11

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 06:54	AC3T	ELLE

Client Sample ID: FB203-01

Lab Sample ID: 410-7281-13

Date Collected: 07/09/20 08:29

Matrix: Water

Date Received: 07/10/20 10:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 07:45	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Client Sample ID: TB203-18**Date Collected: 07/09/20 14:30****Date Received: 07/10/20 10:58****Lab Sample ID: 410-7281-14****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 08:01	AC3T	ELLE

Client Sample ID: GW201-203**Date Collected: 07/09/20 11:19****Date Received: 07/10/20 10:58****Lab Sample ID: 410-7281-15****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 08:18	AC3T	ELLE

Client Sample ID: GW202-203**Date Collected: 07/09/20 11:30****Date Received: 07/10/20 10:58****Lab Sample ID: 410-7281-16****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 08:35	AC3T	ELLE

Client Sample ID: GW203-203**Date Collected: 07/09/20 11:45****Date Received: 07/10/20 10:58****Lab Sample ID: 410-7281-17****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 08:52	AC3T	ELLE

Client Sample ID: TB203-19**Date Collected: 07/09/20 14:30****Date Received: 07/10/20 10:58****Lab Sample ID: 410-7281-18****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23884	07/18/20 06:26	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 09:09	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
353.2		Water	Nitrate Nitrite as N

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
300.0	Anions, Ion Chromatography	MCAWW	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
SM2320 B	Alkalinity, Total	SM18	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7281-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-7281-1	GW009-203	Water	07/09/20 12:20	07/10/20 10:58	
410-7281-2	GW009-603	Water	07/09/20 12:20	07/10/20 10:58	
410-7281-3	TB203-15	Water	07/09/20 14:30	07/10/20 10:58	
410-7281-4	GWS4-446-203	Water	07/09/20 13:13	07/10/20 10:58	
410-7281-5	GW245-460-203	Water	07/09/20 06:33	07/10/20 10:58	
410-7281-6	TB203-16	Water	07/09/20 14:30	07/10/20 10:58	
410-7281-7	GW243-425-203	Water	07/09/20 10:24	07/10/20 10:58	
410-7281-8	GW243-425-603	Water	07/09/20 10:24	07/10/20 10:58	
410-7281-9	TB203-17	Water	07/09/20 14:30	07/10/20 10:58	
410-7281-10	GW029-203	Water	07/09/20 08:01	07/10/20 10:58	
410-7281-11	GW030-203	Water	07/09/20 08:25	07/10/20 10:58	
410-7281-12	GW031-203	Water	07/09/20 09:11	07/10/20 10:58	
410-7281-13	FB203-01	Water	07/09/20 08:29	07/10/20 10:58	
410-7281-14	TB203-18	Water	07/09/20 14:30	07/10/20 10:58	
410-7281-15	GW201-203	Water	07/09/20 11:19	07/10/20 10:58	
410-7281-16	GW202-203	Water	07/09/20 11:30	07/10/20 10:58	
410-7281-17	GW203-203	Water	07/09/20 11:45	07/10/20 10:58	
410-7281-18	TB203-19	Water	07/09/20 14:30	07/10/20 10:58	

Eurofins Lancaster Laboratories Env, LLC



410-7281 Chain of Custody

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-009-203																														
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)																																
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																																				
ANALYSIS REQUIRED (Specify number of bottles)																																												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	(B260C) BTEX	COMMENTS																														
1	GW009-203	7-9-2020	1220	10	-	3	-	2	1	1*	1	1	1																															
2	GW009-603	7-9-2020	1220	10	-	3	-	2	1	1*	1	1	1																															
3																																												
4																																												
5																																												
6																																												
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																																												
TB203-15 SAMPLER(S): D. Schweelk COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0180 <table border="1"> <thead> <tr> <th>RELINQUISHED BY:</th> <th>DATE</th> <th>TIME</th> <th>RECEIVED BY:</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>D. Schweelk</td> <td>7-9-2020</td> <td>1730</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> 7/10/20 1047 KAM															RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	D. Schweelk	7-9-2020	1730																					
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME																																							
D. Schweelk	7-9-2020	1730																																										

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No. (410) 564-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		COC-TB203-15							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (a200C)	BTEX (a200C)	EDB (a200C)	Dissolved Fe, Mn (a200C)	Chloride, bromide, sulfate (a200C)	Nitrate-Nitrite (a200C)	Alkalinity (Total, Carbonate, and Bicarbonate) (a200C)	COMMENTS			
1	TB203-15	7-9-2020	1415	4	2	2	2								
2															
3															
4															
5															
Associated with: GW009-203 GW009-603															
SAMPLER(S): D. Schmeelk, G. Begauze				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0180											
RELINQUISHED BY: D. Schmeelk				DATE: 7-9-2020				TIME: 1730				RECEIVED BY: Leah Forman			
Printed Name and Signature: D. Schmeelk				DATE: 7-9-2020				TIME: 1730				DATE: 7/10/20			
Printed Name and Signature: [Signature]				DATE: 7-9-2020				TIME: 1730				DATE: 7/10/20			
Printed Name and Signature: [Signature]				DATE: 7-9-2020				TIME: 1730				DATE: 7/10/20			
Printed Name and Signature: [Signature]				DATE: 7-9-2020				TIME: 1730				DATE: 7/10/20			

EA		203 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7030 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S4-446-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111				New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)			
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Total, Carbonate, and Bicarbonate (5M2320B)	Carbon Dioxide (RSC-175)	COMMENTS	
1	GWS4-446-203	7-9-2020	13/3	10	-	3	-	2	1	1*	1	1	1		
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
SAMPLER(S): D. Schmeelk RELINQUISHED BY: D. Schmeelk <i>[Signature]</i> 7-9-2020 1730 Printed Name and Signature: _____ Printed Name and Signature: _____ Printed Name and Signature: _____ COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0190 RECEIVED BY: Leah Forman <i>[Signature]</i> 7/10/20 1046 Printed Name and Signature: _____ Printed Name and Signature: _____ Printed Name and Signature: _____															

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-245-460-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)											
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
ANALYSIS REQUIRED (Specify number of bottles)																							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Cd, Cr, Ni, Mn) (6020A, 6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	Total Carbonate and Bicarbonate (5M2320B)	Carbon Dioxide (RSK-175)	Comments									
1	GW245-460-203	7-9-2020	0633	10	-	3	-	2	1	1*	1	1	1										
2																							
3																							
4																							
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																							
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: TB203-16																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: D. Schmeelk				7-9-2020				1730				Printed Name and Signature: Leah Foreman				7/10/20				1046			

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1525		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-16							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8250C)	BTEX (8250C)	EDB (8011)	Dissolved Fe, Mn (8020A, 8010C)	Chloride, bromide, sulfate (8010C)	Alkalinity (Total, Carbonate, and Bicarbonate) (353.2)	(SM2320B)				
1	TB203-16	7-9-2020	14:30	4	2	2	2								
2															
3															
4															
5															
Associated with: GWS4-446-203 GW245-460-203															
SAMPLER(S): D. Schmeelk, G. Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0190											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: Dylan Schmeelk				7-9-2020		1730		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Leah Foreman				7/10/20		1046	

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-243-425-203																																								
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020																																										
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)																																												
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																																																				
ANALYSIS REQUIRED (Specify number of bottles)																																																						
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDH (8260C)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C) (8011)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Total Carbonate and Bicarbonate (5M.320B)	Carbon Dioxide (RSK-175)	Comments																																								
1	GW243-425-203	7-9-2020	1024	7				2	1	1*	1	1																																										
2	GW243-425-603	7-9-2020	1024	7				2	1	1*	1	1																																										
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COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																																																						
<table border="1"> <tr> <td colspan="4">SAMPLER(S): D. Schmeelk</td> <td colspan="4">COURIER AND SHIPPING NUMBER: TB203-17</td> </tr> <tr> <td colspan="4">RELINQUISHED BY: D. Schmeelk</td> <td colspan="4">RECEIVED BY: FedEx 8155 2829 9951</td> </tr> <tr> <td colspan="4">DATE: 7-9-2020</td> <td colspan="4">TIME: 1500</td> </tr> <tr> <td colspan="4">Printed Name and Signature: D. Schmeelk</td> <td colspan="4">Printed Name and Signature: LEAH FRYCORN</td> </tr> <tr> <td colspan="4">DATE: 7-9-2020</td> <td colspan="4">TIME: 1058</td> </tr> </table>															SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: TB203-17				RELINQUISHED BY: D. Schmeelk				RECEIVED BY: FedEx 8155 2829 9951				DATE: 7-9-2020				TIME: 1500				Printed Name and Signature: D. Schmeelk				Printed Name and Signature: LEAH FRYCORN				DATE: 7-9-2020				TIME: 1058			
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: TB203-17																																																		
RELINQUISHED BY: D. Schmeelk				RECEIVED BY: FedEx 8155 2829 9951																																																		
DATE: 7-9-2020				TIME: 1500																																																		
Printed Name and Signature: D. Schmeelk				Printed Name and Signature: LEAH FRYCORN																																																		
DATE: 7-9-2020				TIME: 1058																																																		

EA		225 Schöng Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		COC-TB203-17										
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, Ni, Hg, Mn (6020A, 8010C)	Discolored Fe, Mn (8010C)	Chloride, bromide, sulfate (3000)	Nitrate-Nitrite (3532)	(SM2320B) Alkalinity, Total Carbonate, and Bicarbonate					
1	TB203-17	7-9-2020	1415 1430	2	2	2												
2																		
3																		
4																		
5																		
Associated with: GW243-425-203 GW243-425-603																		
SAMPLER(S): D. Schmeelk, G. Begaye				CARRIER AND SHIPPING NUMBER: FedEx 8155 2829 9951														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schmeelk				7-9-2020		1730		Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature: L. Loh Folger				7/10/20		1056				

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EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-029-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020									
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)									
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(BTEX)	ED8	Total (As Pb, Ca, Na, Mg)	Chloride, bromide, sulfate	Nitrate-Nitrite	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	Carbon Dioxide	(SM2320B)	(RSK-175)	Comments
1	GW029-203	7-9-2020	0801	2				2									
2																	
3																	
4																	
5																	
6																	
COMMENTS:																	
SAMPLER(S): D. Schmeelk																	
COURIER AND SHIPPING NUMBER: TB203-18																	
RELINQUISHED BY: D. Schmeelk 7-9-2020 1730																	
RECEIVED BY: Nicole Reiff 7/10/20 1043																	

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EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-030-203			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTXN (8260C)	EDB (8911)	Total (As, Pb, Ca, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total Carbonate and Bicarbonate) (SM2320B)		Carbon Dioxide (RSC-175)	Methane (RSC-175)	
1	GW030-203	7-9-2020	0825	2					2								
2																	
3																	
4																	
5																	
6																	
COMMENTS:																	
TB203- 18																	
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 5155 2829 9962													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schmeelk				7-9-2020		1730		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/10/20		1043			

EA		225 Schwing Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-031-203		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)				
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258								
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	BTEXN	EDR	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity/Total Carbonate and Bicarbonate	Carbon Dioxide	Methane	COMMENTS
1	GW031-203	7-9-2020	0911	2				2								
2																
3																
4																
5																
6																
COMMENTS:																
SAMPLER(S): <u>D. Schuelek</u> RELINQUISHED BY: <u>D. Schuelek</u> DATE: <u>7-9-2020</u> TIME: <u>1730</u> COURIER AND SHIPPING NUMBER: <u>FedEx 8155 2829 9962</u> RECEIVED BY: <u>Nicole Ruff</u> DATE: <u>7/10/20</u> TIME: <u>1043</u>																

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EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-FB203-01	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3	
PROJECT SITE AND PHASE: ST106/SS110		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258					
				ANALYSIS REQUIRED (Specify number of bottles)					COMMENTS
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOICs	BTEX (BTEX)	EDB (EDB)	Total As, Pb, Ca, K, Na, Mg (EDB)	
1	FB203-01	7-9-2020	0829	2	—	2			Field blank associated with well KAFB-106029, KAFB-106030, and KAFB-106031
2									
3									
4									
5									
SAMPLER(S): D. Schneelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962					
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:	
Printed Name and Signature: D. Schneelk				7-9-2020		1730		Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature: Nicole Ruff	
								7/10/20 1042	

MR

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020		COC-TB203-18			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: 3					
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8250C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (8010C)	Dissolved Fe, Mn (8020A, 8010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	COMMENTS	
1	TB203-18	7-9-2020	1415-1430	2	2			2							
2															
3															
4															
5															
Associated with: GW029-203 GW030-203 GW031-203 FB203-01															
SAMPLER(S): D. Schuelek, G. Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9962											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schuelek				7-9-2020		1730		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/10/20		1043	

MR

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-201-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)								
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																
				ANALYSIS REQUIRED (Specify number of bottles)														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	BTEXN	ED8	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity/Total Carbonate and Bicarbonate	Carbon Dioxide	(RSK-175) Methane	(RSK-175) Carbon Dioxide	COMMENTS	
1	GW201-203	7-9-2020	1119	2					2									
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
SAMPLER(S): D. Schneelk RELINQUISHED BY: D. Schneelk <i>[Signature]</i> 7-9-2020 1730 Printed Name and Signature: D. Schneelk COURIER AND SHIPPING NUMBER: FedEx 9155 2829 9973 RECEIVED BY: Leah Foreman <i>[Signature]</i> 7/10/20 1051 Printed Name and Signature: Leah Foreman																		

EA		225 Schuling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-202-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020										
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs	(8260C) BTEX	(8260C) BTEX	EDB	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	(353.2)		(Total, Carbonate, and Bicarbonate)	(SM2320B)	Carbon Dioxide	(RSK-175) Methane
1	GW202-203	7-9-2020	1130	2					2									
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
TB203-19																		
SAMPLER(S): D. Schneelk				COURIER AND SHIPPING NUMBER: FedEx 9155 2929 9973														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schneelk				7-9-2020		1730												
Printed Name and Signature:																		
Printed Name and Signature:																		
Printed Name and Signature:								Leah Foreman				7/10/20		1051				

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-203-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)								
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As, Pb, Cd, Ni, Mn, Mg) (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) (SM2320B)		Carbon Dioxide (RSK-175)	Methane (RSK-175)	(RSK-175)	
1	GW203-203	7-9-2020	1145	2						2								
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
TB203-19																		
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9973														
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME				
Printed Name and Signature: D. Schmeelk				7-9-2020		1730		Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature:										
Printed Name and Signature:								Printed Name and Signature: Leah Foreman				7/10/20		1051				

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-19							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eest.com EA Amanda Smith: asmith@eest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eest.com EA		YEAR: 2020 QUARTER: 3							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7259											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)											
				Total Number of Bottles	VOCs (#250C)	BTEX (#250C)	BTEXN (#250C)	EDS (#011)	Total As Pb Cd K Na Mg (#020A/#010C)	Dissolved Fe, Mn (#010C)	Chloride, bromide, sulfate (#0010)	Nitrate-Nitrite (#353.2)	(#353.2) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS	
1	TB203-19	7-9-2020	1430	2	2			2							
2															
3															
4															
5															
Associated with: GW 203-203 GW 202-203 GW 201-203															
SAMPLER(S): D. Schmeelk, G. Begaye				COURIER AND SHIPPING NUMBER: FedEx 855 2829 9973											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-9-2020		1730		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Leah Friman				7/10/20		1051	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-7281-1

Login Number: 7281**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Reiff, Nicole L**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-7458-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
8/20/2020 1:52:27 PM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

LINKS

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results through
TotalAccess

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory Job ID: 410-7458-1

1

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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Measurement uncertainty values, as applicable, are available upon request.

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Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
8/20/2020 1:52:27 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
E	Result exceeded calibration range.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
E	Result exceeded calibration range.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Job ID: 410-7458-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-7458-1

Receipt

The samples were received on 7/11/2020 10:18 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.8° C, 0.9° C, 1.0° C, 1.1° C, 1.2° C, 1.2° C and 1.5° C.

GC/MS VOA

Method 8260C DOD: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: GWS8-451-203 (410-7458-6). Elevated reporting limits (RLs) are provided.

Method 8260C DOD: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: GWS2-451-203 (410-7458-2), GWS3-449-203 (410-7458-3), GWS5-446-203 (410-7458-4), GWS7-451-203 (410-7458-5) and GWS8-451-603 (410-7458-7). Elevated reporting limits (RLs) are provided.

Method 8260C DOD: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): GWS5-446-203 (410-7458-4). The sample container was received with headspace.

Method 8260C DOD: Surrogate recovery for the following sample was outside the upper control limit: GWS1-447-203 (410-7458-1). The matrix spike for this sample demonstrated similar surrogate recoveries, the results are attributed to sample matrix effects.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The 1,1,2,2-Tetrachloroethane surrogate recovery for the following samples was outside acceptance limits (low biased) on the primary column: GW152-484-203 (410-7458-11). Evidence of matrix interference is present. The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

Method 8011: The following samples required a dilution due to the nature of the sample matrix: GWS1-447-203 (410-7458-1), GWS1-447-203 (410-7458-1[MS]), GWS1-447-203 (410-7458-1[MSD]), GWS2-451-203 (410-7458-2), GWS3-449-203 (410-7458-3), GWS5-446-203 (410-7458-4) and GWS7-451-203 (410-7458-5). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8011: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 25374 recovered outside control limits for the following analytes: Ethylene Dibromide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: The following samples required a dilution due to the nature of the sample matrix: GWS8-451-203 (410-7458-6), GWS8-451-603 (410-7458-7), GW149-484-203 (410-7458-9) and GW153-484-203 (410-7458-12). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method 353.2: The reference method requires samples to be preserved to a pH of <2. The following sample(s) were received with insufficient preservation at a pH of 5: GWS8-451-603 (410-7458-7). The sample(s) were preserved to the appropriate pH in the laboratory.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Job ID: 410-7458-1 (Continued)

Laboratory: Eurofins Lancaster Laboratories Env, LLC (Conti

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS1-447-203**Lab Sample ID: 410-7458-1**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	500	D J1	10	8.0	4.0	ug/L	10		8260C DOD	Total/NA
Xylenes, Total	2800	J1	60	20	14	ug/L	10		8260C DOD	Total/NA
Benzene - DL	5000	D	100	50	20	ug/L	100		8260C DOD	Total/NA
Toluene - DL	6300	D	100	50	20	ug/L	100		8260C DOD	Total/NA
Ethylene Dibromide (1C)	28	D J1	5.8	3.9	1.9	ug/L	200		8011	Total/NA
Chloride	22	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	3.4	J D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	210	J1	0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	34	J1	0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.6		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	48	J1	1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	7.3	J1	0.21	0.10	0.041	mg/L	1		6010C	Recoverable Dissolved
Manganese	7.2	J1	0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0058	J1	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00024	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	550		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	550		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GWS2-451-203**Lab Sample ID: 410-7458-2**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1100	D	10	5.0	2.0	ug/L	10		8260C DOD	Total/NA
Ethylbenzene	130	D	10	8.0	4.0	ug/L	10		8260C DOD	Total/NA
Toluene	320	D	10	5.0	2.0	ug/L	10		8260C DOD	Total/NA
Xylenes, Total	1200		60	20	14	ug/L	10		8260C DOD	Total/NA
Ethylene Dibromide (1C)	150	D	57	38	19	ug/L	2000		8011	Total/NA
Chloride	96	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	8.7	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	160		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	26		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	3.8		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	43		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	0.075	J	0.21	0.10	0.041	mg/L	1		6010C	Recoverable Dissolved
Manganese	5.8		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0017	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00060		0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	370		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	370		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GWS3-449-203**Lab Sample ID: 410-7458-3**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	200	D	10	5.0	2.0	ug/L	10		8260C DOD	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS3-449-203 (Continued)

Lab Sample ID: 410-7458-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylbenzene	24	D	10	8.0	4.0	ug/L	10			8260C DOD	Total/NA
Toluene	5.0	J D	10	5.0	2.0	ug/L	10			8260C DOD	Total/NA
Xylenes, Total	450		60	20	14	ug/L	10			8260C DOD	Total/NA
Ethylene Dibromide (1C)	75	D	14	9.6	4.8	ug/L	500			8011	Total/NA
Bromide	1.5	J D	2.5	2.0	1.3	mg/L	5			300.0	Total/NA
Chloride	44	D	20	15	10	mg/L	50			300.0	Total/NA
Sulfate	2.9	J D	5.0	4.5	1.5	mg/L	5			300.0	Total/NA
Calcium	110		0.20	0.15	0.096	mg/L	1			6010C	Total
Magnesium	19		0.10	0.075	0.040	mg/L	1			6010C	Recoverable Total
Potassium	3.5		0.50	0.38	0.20	mg/L	1			6010C	Recoverable Total
Sodium	37		1.0	0.50	0.24	mg/L	1			6010C	Recoverable Total
Iron	3.8		0.21	0.10	0.041	mg/L	1			6010C	Recoverable Dissolved
Manganese	2.5		0.010	0.0052	0.0031	mg/L	1			6010C	Dissolved
Arsenic	0.0066		0.0020	0.0016	0.00068	mg/L	1			6020A	Total/NA
Lead	0.00040	J	0.00050	0.00025	0.000071	mg/L	1			6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	390		8.0	6.0	8.0	mg/L	1			SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	390		8.0	6.0	8.0	mg/L	1			SM2320 B	Total/NA

Client Sample ID: GWS5-446-203

Lab Sample ID: 410-7458-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	990	D	20	10	4.0	ug/L	20			8260C DOD	Total/NA
Ethylbenzene	1300	D	20	16	8.0	ug/L	20			8260C DOD	Total/NA
Toluene	3400	D	20	10	4.0	ug/L	20			8260C DOD	Total/NA
Xylenes, Total	2400		120	40	28	ug/L	20			8260C DOD	Total/NA
Ethylene Dibromide (1C)	3.1	D	0.58	0.39	0.19	ug/L	20			8011	Total/NA
Chloride	21	D	2.0	1.5	1.0	mg/L	5			300.0	Total/NA
Calcium	72		0.20	0.15	0.096	mg/L	1			6010C	Total
Magnesium	11		0.10	0.075	0.040	mg/L	1			6010C	Recoverable Total
Potassium	2.7		0.50	0.38	0.20	mg/L	1			6010C	Recoverable Total
Sodium	28		1.0	0.50	0.24	mg/L	1			6010C	Recoverable Total
Iron	1.7		0.21	0.10	0.041	mg/L	1			6010C	Recoverable Dissolved
Manganese	2.1		0.010	0.0052	0.0031	mg/L	1			6010C	Dissolved
Arsenic	0.0032		0.0020	0.0016	0.00068	mg/L	1			6020A	Total/NA
Lead	0.00046	J	0.00050	0.00025	0.000071	mg/L	1			6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	230		8.0	6.0	8.0	mg/L	1			SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	230		8.0	6.0	8.0	mg/L	1			SM2320 B	Total/NA

Client Sample ID: GWS7-451-203

Lab Sample ID: 410-7458-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	520	D	10	5.0	2.0	ug/L	10			8260C DOD	Total/NA
Ethylbenzene	1000	D	10	8.0	4.0	ug/L	10			8260C DOD	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS7-451-203 (Continued)

Lab Sample ID: 410-7458-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	1700	D	10	5.0	2.0	ug/L	10		8260C DOD	Total/NA
Xylenes, Total	3300		60	20	14	ug/L	10		8260C DOD	Total/NA
Ethylene Dibromide (1C)	36	D	5.7	3.8	1.9	ug/L	200		8011	Total/NA
Chloride	25	D J1	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	3.2	J D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	100		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	16		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	3.2		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	37		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	1.1		0.21	0.10	0.041	mg/L	1		6010C	Recoverable Dissolved
Manganese	3.5		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0078		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.000083	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	330		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	330		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GWS8-451-203

Lab Sample ID: 410-7458-6

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5000	D	100	50	20	ug/L	100		8260C DOD	Total/NA
Ethylbenzene	150	D	100	80	40	ug/L	100		8260C DOD	Total/NA
Toluene	3300	D	100	50	20	ug/L	100		8260C DOD	Total/NA
Xylenes, Total	2000		600	200	140	ug/L	100		8260C DOD	Total/NA
Ethylene Dibromide (1C)	310	D	57	38	19	ug/L	2000		8011	Total/NA
Chloride	11	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	5.0	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	190		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	28		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.2		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	43		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Manganese	4.9		0.010	0.0052	0.0031	mg/L	1		6010C	Recoverable Dissolved
Arsenic	0.0034		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	460		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	460		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GWS8-451-603

Lab Sample ID: 410-7458-7

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4800	D	50	25	10	ug/L	50		8260C DOD	Total/NA
Ethylbenzene	150	D	50	40	20	ug/L	50		8260C DOD	Total/NA
Toluene	3200	D	50	25	10	ug/L	50		8260C DOD	Total/NA
Xylenes, Total	2000		300	100	70	ug/L	50		8260C DOD	Total/NA
Ethylene Dibromide (1C)	370	D	58	39	19	ug/L	2000		8011	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS8-451-603 (Continued)

Lab Sample ID: 410-7458-7

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.2	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Sulfate	5.1	D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	190		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	27		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.1		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	43		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	0.29		0.21	0.10	0.041	mg/L	1		6010C	Dissolved
Manganese	5.1		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0034		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	440		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	440		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GWS9-447-203

Lab Sample ID: 410-7458-8

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	620	D	10	8.0	4.0	ug/L	10		8260C DOD	Total/NA
Toluene	1700	D	10	5.0	2.0	ug/L	10		8260C DOD	Total/NA
Xylenes, Total	1300		60	20	14	ug/L	10		8260C DOD	Total/NA
Benzene - DL	4200	D	100	50	20	ug/L	100		8260C DOD	Total/NA
Ethylene Dibromide (1C)	0.21		0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	81	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	290	D	50	45	15	mg/L	50		300.0	Total/NA
Calcium	190		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	28		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.4		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	42		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	0.50		0.21	0.10	0.041	mg/L	1		6010C	Dissolved
Manganese	1.5		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0015	J	0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00014	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	280		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	280		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW149-484-203

Lab Sample ID: 410-7458-9

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	11	D	2.9	1.9	0.96	ug/L	100		8011	Total/NA
Chloride	11	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Calcium	62		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	9.2		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	2.9		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW149-484-203 (Continued)

Lab Sample ID: 410-7458-9

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Sodium	28		1.0	0.50	0.24	mg/L	1		6010C	Total
Iron	0.047	J	0.21	0.10	0.041	mg/L	1		6010C	Recoverable Dissolved
Manganese	0.84		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0025		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00088		0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	240		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	240		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW151-484-203

Lab Sample ID: 410-7458-10

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.023	J	0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	71	D	40	30	20	mg/L	100		300.0	Total/NA
Sulfate	350	D	100	90	30	mg/L	100		300.0	Total/NA
Calcium	190		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	26		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.4		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	42		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: GW152-484-203

Lab Sample ID: 410-7458-11

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (2C)	0.019	J M J1	0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Bromide	1.3	J D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	70	D	20	15	10	mg/L	50		300.0	Total/NA
Sulfate	1.5	J D	5.0	4.5	1.5	mg/L	5		300.0	Total/NA
Calcium	170		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	26		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	4.1		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	44		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Iron	1.4		0.21	0.10	0.041	mg/L	1		6010C	Dissolved
Manganese	4.6		0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Arsenic	0.0032		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00034	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	490		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	490		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW153-484-203

Lab Sample ID: 410-7458-12

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	30	D	5.7	3.8	1.9	ug/L	200		8011	Total/NA
Bromide	1.3	J D	2.5	2.0	1.3	mg/L	5		300.0	Total/NA
Chloride	13	D	2.0	1.5	1.0	mg/L	5		300.0	Total/NA
Calcium	130		0.20	0.15	0.096	mg/L	1		6010C	Total
Magnesium	19		0.10	0.075	0.040	mg/L	1		6010C	Recoverable Total
Potassium	3.5		0.50	0.38	0.20	mg/L	1		6010C	Recoverable Total
Sodium	37		1.0	0.50	0.24	mg/L	1		6010C	Recoverable Total
Arsenic	0.0020		0.0020	0.0016	0.00068	mg/L	1		6020A	Total/NA
Lead	0.00011	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	350		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	350		8.0	6.0	8.0	mg/L	1		SM2320 B	Total/NA

Client Sample ID: TB203-20

Lab Sample ID: 410-7458-13

No Detections.

Client Sample ID: TB203-21

Lab Sample ID: 410-7458-14

No Detections.

Client Sample ID: TB203-22

Lab Sample ID: 410-7458-15

No Detections.

Client Sample ID: TB203-23

Lab Sample ID: 410-7458-16

No Detections.

Client Sample ID: TB203-24

Lab Sample ID: 410-7458-17

No Detections.

Client Sample ID: TB203-25

Lab Sample ID: 410-7458-18

No Detections.

Client Sample ID: TB203-26

Lab Sample ID: 410-7458-19

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS1-447-203

Lab Sample ID: 410-7458-1

Date Collected: 07/10/20 07:52

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	500	D J1	10	8.0	4.0	ug/L		07/20/20 01:35	10
Xylenes, Total	2800	J1	60	20	14	ug/L		07/20/20 01:35	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/20/20 01:35	10
4-Bromofluorobenzene (Surr)	115	Q	85 - 114		07/20/20 01:35	10
Dibromofluoromethane (Surr)	94		80 - 119		07/20/20 01:35	10
Toluene-d8 (Surr)	86	Q	89 - 112		07/20/20 01:35	10

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	5000	D	100	50	20	ug/L		07/20/20 02:40	100
Toluene	6300	D	100	50	20	ug/L		07/20/20 02:40	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/20/20 02:40	100
4-Bromofluorobenzene (Surr)	105		85 - 114		07/20/20 02:40	100
Dibromofluoromethane (Surr)	98		80 - 119		07/20/20 02:40	100
Toluene-d8 (Surr)	101		89 - 112		07/20/20 02:40	100

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	28	D J1	5.8	3.9	1.9	ug/L		07/24/20 06:17	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 06:17	200
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 06:17	200

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 14:07	5
Chloride	22	D	2.0	1.5	1.0	mg/L		07/14/20 14:07	5
Sulfate	3.4	J D	5.0	4.5	1.5	mg/L		07/14/20 14:07	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	210	J1	0.20	0.15	0.096	mg/L		07/15/20 08:25	1
Magnesium	34	J1	0.10	0.075	0.040	mg/L		07/15/20 08:25	1
Potassium	4.6		0.50	0.38	0.20	mg/L		07/15/20 08:25	1
Sodium	48	J1	1.0	0.50	0.24	mg/L		07/15/20 08:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	7.3	J1	0.21	0.10	0.041	mg/L		07/24/20 11:47	1
Manganese	7.2	J1	0.010	0.0052	0.0031	mg/L		07/23/20 21:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0058	J1	0.0020	0.0016	0.00068	mg/L		07/28/20 14:00	1
Lead	0.00024	J	0.00050	0.00025	0.000071	mg/L		07/28/20 14:00	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS1-447-203

Lab Sample ID: 410-7458-1

Date Collected: 07/10/20 07:52

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/22/20 07:10	1
Bicarbonate Alkalinity as CaCO ₃	550		8.0	6.0	8.0	mg/L		07/13/20 22:33	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 22:33	1
Total Alkalinity as CaCO ₃ to pH 4.5	550		8.0	6.0	8.0	mg/L		07/13/20 22:33	1

Client Sample ID: GWS2-451-203

Lab Sample ID: 410-7458-2

Date Collected: 07/10/20 12:22

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1100	D	10	5.0	2.0	ug/L		07/17/20 23:53	10
Ethylbenzene	130	D	10	8.0	4.0	ug/L		07/17/20 23:53	10
Toluene	320	D	10	5.0	2.0	ug/L		07/17/20 23:53	10
Xylenes, Total	1200		60	20	14	ug/L		07/17/20 23:53	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/17/20 23:53	10
4-Bromofluorobenzene (Surr)	110		85 - 114		07/17/20 23:53	10
Dibromofluoromethane (Surr)	96		80 - 119		07/17/20 23:53	10
Toluene-d8 (Surr)	98		89 - 112		07/17/20 23:53	10

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	150	D	57	38	19	ug/L		07/24/20 07:07	2000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 07:07	2000
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 07:07	2000

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 14:24	5
Chloride	96	D	20	15	10	mg/L		07/14/20 14:41	50
Sulfate	8.7	D	5.0	4.5	1.5	mg/L		07/14/20 14:24	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	160		0.20	0.15	0.096	mg/L		07/20/20 23:10	1
Magnesium	26		0.10	0.075	0.040	mg/L		07/20/20 23:10	1
Potassium	3.8		0.50	0.38	0.20	mg/L		07/20/20 23:10	1
Sodium	43		1.0	0.50	0.24	mg/L		07/20/20 23:10	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.075	J	0.21	0.10	0.041	mg/L		07/14/20 08:16	1
Manganese	5.8		0.010	0.0052	0.0031	mg/L		07/14/20 08:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0017	J	0.0020	0.0016	0.00068	mg/L		08/04/20 14:23	1
Lead	0.00060		0.00050	0.00025	0.000071	mg/L		07/20/20 19:32	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS2-451-203

Lab Sample ID: 410-7458-2

Date Collected: 07/10/20 12:22

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:06	1
Bicarbonate Alkalinity as CaCO ₃	370		8.0	6.0	8.0	mg/L		07/13/20 23:35	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 23:35	1
Total Alkalinity as CaCO ₃ to pH 4.5	370		8.0	6.0	8.0	mg/L		07/13/20 23:35	1

Client Sample ID: GWS3-449-203

Lab Sample ID: 410-7458-3

Date Collected: 07/10/20 11:45

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	200	D	10	5.0	2.0	ug/L		07/18/20 00:37	10
Ethylbenzene	24	D	10	8.0	4.0	ug/L		07/18/20 00:37	10
Toluene	5.0	J D	10	5.0	2.0	ug/L		07/18/20 00:37	10
Xylenes, Total	450		60	20	14	ug/L		07/18/20 00:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/18/20 00:37	10
4-Bromofluorobenzene (Surr)	105		85 - 114		07/18/20 00:37	10
Dibromofluoromethane (Surr)	98		80 - 119		07/18/20 00:37	10
Toluene-d8 (Surr)	100		89 - 112		07/18/20 00:37	10

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	75	D	14	9.6	4.8	ug/L		07/24/20 07:24	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	Q	46 - 136	07/18/20 06:32	07/24/20 07:24	500
1,1,2,2-Tetrachloroethane (2C)	0	Q	46 - 136	07/18/20 06:32	07/24/20 07:24	500

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	1.5	J D	2.5	2.0	1.3	mg/L		07/14/20 16:31	5
Chloride	44	D	20	15	10	mg/L		07/14/20 16:48	50
Sulfate	2.9	J D	5.0	4.5	1.5	mg/L		07/14/20 16:31	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	110		0.20	0.15	0.096	mg/L		07/20/20 23:13	1
Magnesium	19		0.10	0.075	0.040	mg/L		07/20/20 23:13	1
Potassium	3.5		0.50	0.38	0.20	mg/L		07/20/20 23:13	1
Sodium	37		1.0	0.50	0.24	mg/L		07/20/20 23:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	3.8		0.21	0.10	0.041	mg/L		07/14/20 08:20	1
Manganese	2.5		0.010	0.0052	0.0031	mg/L		07/14/20 08:20	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0066		0.0020	0.0016	0.00068	mg/L		08/04/20 14:25	1
Lead	0.00040	J	0.00050	0.00025	0.000071	mg/L		07/20/20 19:33	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS3-449-203

Lab Sample ID: 410-7458-3

Date Collected: 07/10/20 11:45

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:08	1
Bicarbonate Alkalinity as CaCO ₃	390		8.0	6.0	8.0	mg/L		07/13/20 22:56	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 22:56	1
Total Alkalinity as CaCO ₃ to pH 4.5	390		8.0	6.0	8.0	mg/L		07/13/20 22:56	1

Client Sample ID: GWS5-446-203

Lab Sample ID: 410-7458-4

Date Collected: 07/10/20 09:55

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	990	D	20	10	4.0	ug/L		07/18/20 01:21	20
Ethylbenzene	1300	D	20	16	8.0	ug/L		07/18/20 01:21	20
Toluene	3400	D	20	10	4.0	ug/L		07/18/20 01:21	20
Xylenes, Total	2400		120	40	28	ug/L		07/18/20 01:21	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/18/20 01:21	20
4-Bromofluorobenzene (Surr)	104		85 - 114		07/18/20 01:21	20
Dibromofluoromethane (Surr)	97		80 - 119		07/18/20 01:21	20
Toluene-d8 (Surr)	102		89 - 112		07/18/20 01:21	20

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	3.1	D	0.58	0.39	0.19	ug/L		07/24/20 07:41	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 07:41	20
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136	07/18/20 06:32	07/24/20 07:41	20

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 17:05	5
Chloride	21	D	2.0	1.5	1.0	mg/L		07/14/20 17:05	5
Sulfate	4.5	U	5.0	4.5	1.5	mg/L		07/14/20 17:05	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	72		0.20	0.15	0.096	mg/L		07/14/20 15:14	1
Magnesium	11		0.10	0.075	0.040	mg/L		07/14/20 15:14	1
Potassium	2.7		0.50	0.38	0.20	mg/L		07/14/20 15:14	1
Sodium	28		1.0	0.50	0.24	mg/L		07/14/20 15:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1.7		0.21	0.10	0.041	mg/L		07/14/20 08:23	1
Manganese	2.1		0.010	0.0052	0.0031	mg/L		07/14/20 08:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0032		0.0020	0.0016	0.00068	mg/L		08/04/20 14:27	1
Lead	0.00046	J	0.00050	0.00025	0.000071	mg/L		07/20/20 19:35	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS5-446-203

Lab Sample ID: 410-7458-4

Date Collected: 07/10/20 09:55

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:09	1
Bicarbonate Alkalinity as CaCO ₃	230		8.0	6.0	8.0	mg/L		07/14/20 00:03	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/14/20 00:03	1
Total Alkalinity as CaCO ₃ to pH 4.5	230		8.0	6.0	8.0	mg/L		07/14/20 00:03	1

Client Sample ID: GWS7-451-203

Lab Sample ID: 410-7458-5

Date Collected: 07/10/20 10:40

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	520	D	10	5.0	2.0	ug/L		07/18/20 02:05	10
Ethylbenzene	1000	D	10	8.0	4.0	ug/L		07/18/20 02:05	10
Toluene	1700	D	10	5.0	2.0	ug/L		07/18/20 02:05	10
Xylenes, Total	3300		60	20	14	ug/L		07/18/20 02:05	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/18/20 02:05	10
4-Bromofluorobenzene (Surr)	107		85 - 114		07/18/20 02:05	10
Dibromofluoromethane (Surr)	98		80 - 119		07/18/20 02:05	10
Toluene-d8 (Surr)	100		89 - 112		07/18/20 02:05	10

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	36	D	5.7	3.8	1.9	ug/L		07/24/20 07:58	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	Q	46 - 136	07/18/20 06:32	07/24/20 07:58	200
1,1,2,2-Tetrachloroethane (2C)	0	Q	46 - 136	07/18/20 06:32	07/24/20 07:58	200

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 15:42	5
Chloride	25	D J1	2.0	1.5	1.0	mg/L		07/14/20 15:42	5
Sulfate	3.2	J D	5.0	4.5	1.5	mg/L		07/14/20 15:42	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	100		0.20	0.15	0.096	mg/L		07/14/20 15:18	1
Magnesium	16		0.10	0.075	0.040	mg/L		07/14/20 15:18	1
Potassium	3.2		0.50	0.38	0.20	mg/L		07/14/20 15:18	1
Sodium	37		1.0	0.50	0.24	mg/L		07/14/20 15:18	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1.1		0.21	0.10	0.041	mg/L		07/14/20 08:26	1
Manganese	3.5		0.010	0.0052	0.0031	mg/L		07/14/20 08:26	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0078		0.0020	0.0016	0.00068	mg/L		08/04/20 14:28	1
Lead	0.000083	J	0.00050	0.00025	0.000071	mg/L		07/20/20 19:37	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS7-451-203

Lab Sample ID: 410-7458-5

Date Collected: 07/10/20 10:40

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:10	1
Bicarbonate Alkalinity as CaCO ₃	330		8.0	6.0	8.0	mg/L		07/13/20 23:50	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 23:50	1
Total Alkalinity as CaCO ₃ to pH 4.5	330		8.0	6.0	8.0	mg/L		07/13/20 23:50	1

Client Sample ID: GWS8-451-203

Lab Sample ID: 410-7458-6

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	5000	D	100	50	20	ug/L		07/20/20 03:03	100
Ethylbenzene	150	D	100	80	40	ug/L		07/20/20 03:03	100
Toluene	3300	D	100	50	20	ug/L		07/20/20 03:03	100
Xylenes, Total	2000		600	200	140	ug/L		07/20/20 03:03	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/20/20 03:03	100
4-Bromofluorobenzene (Surr)	105		85 - 114		07/20/20 03:03	100
Dibromofluoromethane (Surr)	97		80 - 119		07/20/20 03:03	100
Toluene-d8 (Surr)	100		89 - 112		07/20/20 03:03	100

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	310	D	57	38	19	ug/L		07/29/20 00:30	2000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 00:30	2000
1,1,2,2-Tetrachloroethane (2C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 00:30	2000

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 17:38	5
Chloride	11	D	2.0	1.5	1.0	mg/L		07/14/20 17:38	5
Sulfate	5.0	D	5.0	4.5	1.5	mg/L		07/14/20 17:38	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190		0.20	0.15	0.096	mg/L		07/14/20 15:28	1
Magnesium	28		0.10	0.075	0.040	mg/L		07/14/20 15:28	1
Potassium	4.2		0.50	0.38	0.20	mg/L		07/14/20 15:28	1
Sodium	43		1.0	0.50	0.24	mg/L		07/14/20 15:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/15/20 10:43	1
Manganese	4.9		0.010	0.0052	0.0031	mg/L		07/15/20 10:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0034		0.0020	0.0016	0.00068	mg/L		07/28/20 14:11	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/28/20 14:11	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS8-451-203

Lab Sample ID: 410-7458-6

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:11	1
Bicarbonate Alkalinity as CaCO ₃	460		8.0	6.0	8.0	mg/L		07/13/20 23:03	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 23:03	1
Total Alkalinity as CaCO ₃ to pH 4.5	460		8.0	6.0	8.0	mg/L		07/13/20 23:03	1

Client Sample ID: GWS8-451-603

Lab Sample ID: 410-7458-7

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	4800	D	50	25	10	ug/L		07/18/20 02:49	50
Ethylbenzene	150	D	50	40	20	ug/L		07/18/20 02:49	50
Toluene	3200	D	50	25	10	ug/L		07/18/20 02:49	50
Xylenes, Total	2000		300	100	70	ug/L		07/18/20 02:49	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/18/20 02:49	50
4-Bromofluorobenzene (Surr)	108		85 - 114		07/18/20 02:49	50
Dibromofluoromethane (Surr)	98		80 - 119		07/18/20 02:49	50
Toluene-d8 (Surr)	99		89 - 112		07/18/20 02:49	50

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	370	D	58	39	19	ug/L		07/29/20 00:47	2000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136	07/18/20 06:32	07/29/20 00:47	2000
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136	07/18/20 06:32	07/29/20 00:47	2000

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 17:54	5
Chloride	9.2	D	2.0	1.5	1.0	mg/L		07/14/20 17:54	5
Sulfate	5.1	D	5.0	4.5	1.5	mg/L		07/14/20 17:54	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190		0.20	0.15	0.096	mg/L		07/14/20 15:32	1
Magnesium	27		0.10	0.075	0.040	mg/L		07/14/20 15:32	1
Potassium	4.1		0.50	0.38	0.20	mg/L		07/14/20 15:32	1
Sodium	43		1.0	0.50	0.24	mg/L		07/14/20 15:32	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.29		0.21	0.10	0.041	mg/L		07/15/20 10:47	1
Manganese	5.1		0.010	0.0052	0.0031	mg/L		07/15/20 10:47	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0034		0.0020	0.0016	0.00068	mg/L		07/28/20 14:13	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/28/20 14:13	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS8-451-603

Lab Sample ID: 410-7458-7

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:15	1
Bicarbonate Alkalinity as CaCO ₃	440		8.0	6.0	8.0	mg/L		07/13/20 23:28	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 23:28	1
Total Alkalinity as CaCO ₃ to pH 4.5	440		8.0	6.0	8.0	mg/L		07/13/20 23:28	1

Client Sample ID: GWS9-447-203

Lab Sample ID: 410-7458-8

Date Collected: 07/10/20 13:00

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	620	D	10	8.0	4.0	ug/L		07/20/20 03:25	10
Toluene	1700	D	10	5.0	2.0	ug/L		07/20/20 03:25	10
Xylenes, Total	1300		60	20	14	ug/L		07/20/20 03:25	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d ₄ (Surr)	104		81 - 118		07/20/20 03:25	10
4-Bromofluorobenzene (Surr)	107		85 - 114		07/20/20 03:25	10
Dibromofluoromethane (Surr)	97		80 - 119		07/20/20 03:25	10
Toluene-d ₈ (Surr)	100		89 - 112		07/20/20 03:25	10

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	4200	D	100	50	20	ug/L		07/20/20 03:47	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d ₄ (Surr)	102		81 - 118		07/20/20 03:47	100
4-Bromofluorobenzene (Surr)	103		85 - 114		07/20/20 03:47	100
Dibromofluoromethane (Surr)	98		80 - 119		07/20/20 03:47	100
Toluene-d ₈ (Surr)	102		89 - 112		07/20/20 03:47	100

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.21		0.029	0.019	0.0096	ug/L		07/23/20 12:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136	07/18/20 06:32	07/23/20 12:31	1
1,1,2,2-Tetrachloroethane (2C)	82		46 - 136	07/18/20 06:32	07/23/20 12:31	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	20	U	25	20	13	mg/L		07/14/20 18:11	50
Chloride	81	D	20	15	10	mg/L		07/14/20 18:11	50
Sulfate	290	D	50	45	15	mg/L		07/14/20 18:11	50

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190		0.20	0.15	0.096	mg/L		07/14/20 15:35	1
Magnesium	28		0.10	0.075	0.040	mg/L		07/14/20 15:35	1
Potassium	4.4		0.50	0.38	0.20	mg/L		07/14/20 15:35	1
Sodium	42		1.0	0.50	0.24	mg/L		07/14/20 15:35	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS9-447-203

Lab Sample ID: 410-7458-8

Date Collected: 07/10/20 13:00

Matrix: Water

Date Received: 07/11/20 10:18

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.50		0.21	0.10	0.041	mg/L		07/15/20 10:50	1
Manganese	1.5		0.010	0.0052	0.0031	mg/L		07/15/20 10:50	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0015	J	0.0020	0.0016	0.00068	mg/L		07/28/20 14:18	1
Lead	0.00014	J	0.00050	0.00025	0.000071	mg/L		07/28/20 14:18	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:16	1
Bicarbonate Alkalinity as CaCO ₃	280		8.0	6.0	8.0	mg/L		07/13/20 23:57	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 23:57	1
Total Alkalinity as CaCO ₃ to pH 4.5	280		8.0	6.0	8.0	mg/L		07/13/20 23:57	1

Client Sample ID: GW149-484-203

Lab Sample ID: 410-7458-9

Date Collected: 07/10/20 09:10

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	11	D	2.9	1.9	0.96	ug/L		07/29/20 01:03	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 01:03	100
1,1,2,2-Tetrachloroethane (2C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 01:03	100

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/14/20 19:17	5
Chloride	11	D	2.0	1.5	1.0	mg/L		07/14/20 19:17	5
Sulfate	4.5	U	5.0	4.5	1.5	mg/L		07/14/20 19:17	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	62		0.20	0.15	0.096	mg/L		07/14/20 15:39	1
Magnesium	9.2		0.10	0.075	0.040	mg/L		07/14/20 15:39	1
Potassium	2.9		0.50	0.38	0.20	mg/L		07/14/20 15:39	1
Sodium	28		1.0	0.50	0.24	mg/L		07/14/20 15:39	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.047	J	0.21	0.10	0.041	mg/L		07/15/20 10:54	1
Manganese	0.84		0.010	0.0052	0.0031	mg/L		07/15/20 10:54	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0025		0.0020	0.0016	0.00068	mg/L		07/28/20 14:20	1
Lead	0.00088		0.00050	0.00025	0.000071	mg/L		07/28/20 14:20	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW149-484-203

Lab Sample ID: 410-7458-9

Date Collected: 07/10/20 09:10

Matrix: Water

Date Received: 07/11/20 10:18

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L	-	07/25/20 08:18	1
Bicarbonate Alkalinity as CaCO ₃	240		8.0	6.0	8.0	mg/L	-	07/13/20 23:42	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/13/20 23:42	1
Total Alkalinity as CaCO ₃ to pH 4.5	240		8.0	6.0	8.0	mg/L	-	07/13/20 23:42	1

Client Sample ID: GW151-484-203

Lab Sample ID: 410-7458-10

Date Collected: 07/10/20 13:36

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.023	J	0.029	0.019	0.0096	ug/L	-	07/23/20 13:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136				07/18/20 06:32	07/23/20 13:05	1
1,1,2,2-Tetrachloroethane (2C)	81		46 - 136				07/18/20 06:32	07/23/20 13:05	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	40	U	50	40	25	mg/L	-	07/14/20 19:34	100
Chloride	71	D	40	30	20	mg/L	-	07/14/20 19:34	100
Sulfate	350	D	100	90	30	mg/L	-	07/14/20 19:34	100

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190		0.20	0.15	0.096	mg/L	-	07/14/20 15:42	1
Magnesium	26		0.10	0.075	0.040	mg/L	-	07/14/20 15:42	1
Potassium	4.4		0.50	0.38	0.20	mg/L	-	07/14/20 15:42	1
Sodium	42		1.0	0.50	0.24	mg/L	-	07/14/20 15:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L	-	07/15/20 10:57	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L	-	07/15/20 10:57	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L	-	07/28/20 14:22	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/28/20 14:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L	-	07/25/20 08:19	1
Bicarbonate Alkalinity as CaCO ₃	160		8.0	6.0	8.0	mg/L	-	07/14/20 00:10	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L	-	07/14/20 00:10	1
Total Alkalinity as CaCO ₃ to pH 4.5	160		8.0	6.0	8.0	mg/L	-	07/14/20 00:10	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW152-484-203

Lab Sample ID: 410-7458-11

Date Collected: 07/10/20 07:15

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (2C)	0.019	J M J1	0.029	0.019	0.0096	ug/L	-	07/23/20 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	35	J1 Q	46 - 136	07/18/20 06:32	07/23/20 13:21	1
1,1,2,2-Tetrachloroethane (2C)	96	J1	46 - 136	07/18/20 06:32	07/23/20 13:21	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	1.3	J D	2.5	2.0	1.3	mg/L	-	07/14/20 20:07	5
Chloride	70	D	20	15	10	mg/L	-	07/14/20 20:23	50
Sulfate	1.5	J D	5.0	4.5	1.5	mg/L	-	07/14/20 20:07	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	170		0.20	0.15	0.096	mg/L	-	07/14/20 15:45	1
Magnesium	26		0.10	0.075	0.040	mg/L	-	07/14/20 15:45	1
Potassium	4.1		0.50	0.38	0.20	mg/L	-	07/14/20 15:45	1
Sodium	44		1.0	0.50	0.24	mg/L	-	07/14/20 15:45	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	1.4		0.21	0.10	0.041	mg/L	-	07/15/20 10:27	1
Manganese	4.6		0.010	0.0052	0.0031	mg/L	-	07/15/20 10:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0032		0.0020	0.0016	0.00068	mg/L	-	07/28/20 14:24	1
Lead	0.00034	J	0.00050	0.00025	0.000071	mg/L	-	07/28/20 14:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L	-	07/25/20 08:20	1
Bicarbonate Alkalinity as CaCO3	490		8.0	6.0	8.0	mg/L	-	07/13/20 23:20	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L	-	07/13/20 23:20	1
Total Alkalinity as CaCO3 to pH 4.5	490		8.0	6.0	8.0	mg/L	-	07/13/20 23:20	1

Client Sample ID: GW153-484-203

Lab Sample ID: 410-7458-12

Date Collected: 07/10/20 14:18

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	30	D	5.7	3.8	1.9	ug/L	-	07/29/20 01:20	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 01:20	200
1,1,2,2-Tetrachloroethane (2C)	0	Q	46 - 136	07/18/20 06:32	07/29/20 01:20	200

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	1.3	J D	2.5	2.0	1.3	mg/L	-	07/14/20 20:40	5
Chloride	13	D	2.0	1.5	1.0	mg/L	-	07/14/20 20:40	5

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW153-484-203

Lab Sample ID: 410-7458-12

Date Collected: 07/10/20 14:18

Matrix: Water

Date Received: 07/11/20 10:18

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	4.5	U	5.0	4.5	1.5	mg/L		07/14/20 20:40	5

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	130		0.20	0.15	0.096	mg/L		07/14/20 15:49	1
Magnesium	19		0.10	0.075	0.040	mg/L		07/14/20 15:49	1
Potassium	3.5		0.50	0.38	0.20	mg/L		07/14/20 15:49	1
Sodium	37		1.0	0.50	0.24	mg/L		07/14/20 15:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/15/20 10:30	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/15/20 10:30	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0020		0.0020	0.0016	0.00068	mg/L		08/04/20 14:30	1
Lead	0.00011	J	0.00050	0.00025	0.000071	mg/L		07/20/20 19:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:26	1
Bicarbonate Alkalinity as CaCO ₃	350		8.0	6.0	8.0	mg/L		07/13/20 22:49	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 22:49	1
Total Alkalinity as CaCO ₃ to pH 4.5	350		8.0	6.0	8.0	mg/L		07/13/20 22:49	1

Client Sample ID: TB203-20

Lab Sample ID: 410-7458-13

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 20:57	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 20:57	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 20:57	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 20:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/17/20 20:57	1
4-Bromofluorobenzene (Surr)	101		85 - 114		07/17/20 20:57	1
Dibromofluoromethane (Surr)	99		80 - 119		07/17/20 20:57	1
Toluene-d8 (Surr)	103		89 - 112		07/17/20 20:57	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136	07/18/20 06:32	07/23/20 14:29	1
1,1,2,2-Tetrachloroethane (2C)	60		46 - 136	07/18/20 06:32	07/23/20 14:29	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: TB203-21

Lab Sample ID: 410-7458-14

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 21:19	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 21:19	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 21:19	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/17/20 21:19	1
4-Bromofluorobenzene (Surr)	100		85 - 114		07/17/20 21:19	1
Dibromofluoromethane (Surr)	98		80 - 119		07/17/20 21:19	1
Toluene-d8 (Surr)	103		89 - 112		07/17/20 21:19	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0097	ug/L		07/24/20 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136	07/22/20 23:56	07/24/20 02:21	1
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136	07/22/20 23:56	07/24/20 02:21	1

Client Sample ID: TB203-22

Lab Sample ID: 410-7458-15

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 21:41	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 21:41	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 21:41	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 21:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/17/20 21:41	1
4-Bromofluorobenzene (Surr)	100		85 - 114		07/17/20 21:41	1
Dibromofluoromethane (Surr)	99		80 - 119		07/17/20 21:41	1
Toluene-d8 (Surr)	103		89 - 112		07/17/20 21:41	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0095	ug/L		07/23/20 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	70		46 - 136	07/18/20 06:32	07/23/20 14:46	1
1,1,2,2-Tetrachloroethane (2C)	67		46 - 136	07/18/20 06:32	07/23/20 14:46	1

Client Sample ID: TB203-23

Lab Sample ID: 410-7458-16

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:03	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 22:03	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: TB203-23

Lab Sample ID: 410-7458-16

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:03	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118					07/17/20 22:03	1
4-Bromofluorobenzene (Surr)	100		85 - 114					07/17/20 22:03	1
Dibromofluoromethane (Surr)	99		80 - 119					07/17/20 22:03	1
Toluene-d8 (Surr)	103		89 - 112					07/17/20 22:03	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.029	0.020	0.0098	ug/L		07/23/20 15:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	63		46 - 136				07/18/20 06:32	07/23/20 15:03	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136				07/18/20 06:32	07/23/20 15:03	1

Client Sample ID: TB203-24

Lab Sample ID: 410-7458-17

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:25	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 22:25	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:25	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 22:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118					07/17/20 22:25	1
4-Bromofluorobenzene (Surr)	100		85 - 114					07/17/20 22:25	1
Dibromofluoromethane (Surr)	100		80 - 119					07/17/20 22:25	1
Toluene-d8 (Surr)	103		89 - 112					07/17/20 22:25	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/23/20 15:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136				07/18/20 06:32	07/23/20 15:19	1
1,1,2,2-Tetrachloroethane (2C)	66		46 - 136				07/18/20 06:32	07/23/20 15:19	1

Client Sample ID: TB203-25

Lab Sample ID: 410-7458-18

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:47	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 22:47	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 22:47	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 22:47	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: TB203-25

Lab Sample ID: 410-7458-18

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/17/20 22:47	1
4-Bromofluorobenzene (Surr)	99		85 - 114		07/17/20 22:47	1
Dibromofluoromethane (Surr)	98		80 - 119		07/17/20 22:47	1
Toluene-d8 (Surr)	104		89 - 112		07/17/20 22:47	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/23/20 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	69		46 - 136	07/18/20 06:38	07/23/20 15:36	1
1,1,2,2-Tetrachloroethane (2C)	68		46 - 136	07/18/20 06:38	07/23/20 15:36	1

Client Sample ID: TB203-26

Lab Sample ID: 410-7458-19

Date Collected: 07/10/20 10:30

Matrix: Water

Date Received: 07/11/20 10:18

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 13:40	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 13:40	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 13:40	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		07/17/20 13:40	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/17/20 13:40	1
Dibromofluoromethane (Surr)	99		80 - 119		07/17/20 13:40	1
Toluene-d8 (Surr)	99		89 - 112		07/17/20 13:40	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/23/20 15:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	66		46 - 136	07/18/20 06:38	07/23/20 15:53	1
1,1,2,2-Tetrachloroethane (2C)	66		46 - 136	07/18/20 06:38	07/23/20 15:53	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-7458-1	GWS1-447-203	102	115 Q	94	86 Q
410-7458-1 - DL	GWS1-447-203	100	105	98	101
410-7458-1 MS	GWS1-447-203	104	112	97	88 Q
410-7458-1 MSD	GWS1-447-203	105	112	98	89
410-7458-2	GWS2-451-203	99	110	96	98
410-7458-3	GWS3-449-203	100	105	98	100
410-7458-4	GWS5-446-203	99	104	97	102
410-7458-5	GWS7-451-203	100	107	98	100
410-7458-6	GWS8-451-203	100	105	97	100
410-7458-7	GWS8-451-603	100	108	98	99
410-7458-8	GWS9-447-203	104	107	97	100
410-7458-8 - DL	GWS9-447-203	102	103	98	102
410-7458-13	TB203-20	100	101	99	103
410-7458-14	TB203-21	100	100	98	103
410-7458-15	TB203-22	102	100	99	103
410-7458-16	TB203-23	100	100	99	103
410-7458-17	TB203-24	100	100	100	103
410-7458-18	TB203-25	100	99	98	104
410-7458-19	TB203-26	105	94	99	99
LCS 410-23543/5	Lab Control Sample	103	100	97	102
LCS 410-23780/4	Lab Control Sample	101	101	101	102
LCS 410-24067/5	Lab Control Sample	101	102	101	101
LCSD 410-23543/7	Lab Control Sample Dup	103	101	98	102
LCSD 410-23780/5	Lab Control Sample Dup	101	102	100	102
LCSD 410-24067/6	Lab Control Sample Dup	99	103	101	101
MB 410-23543/9	Method Blank	104	95	97	100
MB 410-23780/7	Method Blank	99	101	100	103
MB 410-24067/9	Method Blank	101	100	98	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-7458-1	GWS1-447-203	0 M Q	0 M Q
410-7458-1 MS	GWS1-447-203	0 M Q	0 M Q
410-7458-1 MSD	GWS1-447-203	0 M Q	0 M Q
410-7458-2	GWS2-451-203	0 M Q	0 M Q
410-7458-3	GWS3-449-203	0 Q	0 Q
410-7458-4	GWS5-446-203	0 M Q	0 M Q
410-7458-5	GWS7-451-203	0 Q	0 Q
410-7458-6	GWS8-451-203	0 Q	0 Q
410-7458-7	GWS8-451-603	0 M Q	0 M Q

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Surrogate Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-7458-1

Project/Site: Kirtland AFB Bulk Fuels Facility

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)**Matrix: Water****Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1122TCA1	1122TCA2
		(46-136)	(46-136)
410-7458-8	GWS9-447-203	56	82
410-7458-9	GW149-484-203	0 Q	0 Q
410-7458-10	GW151-484-203	62	81
410-7458-11	GW152-484-203	35 J1 Q	96 J1
410-7458-12	GW153-484-203	0 Q	0 Q
410-7458-13	TB203-20	60	60
410-7458-14	TB203-21	60	61
410-7458-15	TB203-22	70	67
410-7458-16	TB203-23	63	64
410-7458-17	TB203-24	62	66
410-7458-18	TB203-25	69	68
410-7458-19	TB203-26	66	66
LCS 410-23885/2-A	Lab Control Sample	73	65
LCS 410-23886/2-A	Lab Control Sample	60	59
LCS 410-25374/2-A	Lab Control Sample	63	61
LCSD 410-23885/3-A	Lab Control Sample Dup	73	70
LCSD 410-23886/3-A	Lab Control Sample Dup	51	55
LCSD 410-25374/3-A	Lab Control Sample Dup	59	58
MB 410-23885/1-A	Method Blank	63	62
MB 410-23886/1-A	Method Blank	56	56
MB 410-25374/1-A	Method Blank	62	62

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-23543/9

Matrix: Water

Analysis Batch: 23543

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 11:53	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 11:53	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 11:53	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 11:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		81 - 118		07/17/20 11:53	1
4-Bromofluorobenzene (Surr)	95		85 - 114		07/17/20 11:53	1
Dibromofluoromethane (Surr)	97		80 - 119		07/17/20 11:53	1
Toluene-d8 (Surr)	100		89 - 112		07/17/20 11:53	1

Lab Sample ID: LCS 410-23543/5

Matrix: Water

Analysis Batch: 23543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	17.9		ug/L		89	42 - 138
Ethylbenzene	20.0	18.5		ug/L		92	79 - 121
Toluene	20.0	18.1		ug/L		91	80 - 121
Xylenes, Total	60.0	55.6		ug/L		93	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	102		89 - 112

Lab Sample ID: LCSD 410-23543/7

Matrix: Water

Analysis Batch: 23543

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	17.9		ug/L		90	42 - 138	0	20
Ethylbenzene	20.0	18.5		ug/L		92	79 - 121	0	20
Toluene	20.0	18.2		ug/L		91	80 - 121	0	20
Xylenes, Total	60.0	55.8		ug/L		93	79 - 121	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		81 - 118
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	102		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-23780/7

Matrix: Water

Analysis Batch: 23780

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 20:18	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/17/20 20:18	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/17/20 20:18	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/17/20 20:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/17/20 20:18	1
4-Bromofluorobenzene (Surr)	101		85 - 114		07/17/20 20:18	1
Dibromofluoromethane (Surr)	100		80 - 119		07/17/20 20:18	1
Toluene-d8 (Surr)	103		89 - 112		07/17/20 20:18	1

Lab Sample ID: LCS 410-23780/4

Matrix: Water

Analysis Batch: 23780

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	20.8		ug/L		104	42 - 138
Ethylbenzene	20.0	21.4		ug/L		107	79 - 121
Toluene	20.0	21.2		ug/L		106	80 - 121
Xylenes, Total	60.0	63.7		ug/L		106	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	102		89 - 112

Lab Sample ID: LCSD 410-23780/5

Matrix: Water

Analysis Batch: 23780

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.6		ug/L		103	42 - 138	1	20
Ethylbenzene	20.0	21.1		ug/L		105	79 - 121	2	20
Toluene	20.0	20.8		ug/L		104	80 - 121	2	20
Xylenes, Total	60.0	62.5		ug/L		104	79 - 121	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	102		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-24067/9

Matrix: Water

Analysis Batch: 24067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/19/20 20:26	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/19/20 20:26	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/19/20 20:26	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/19/20 20:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/19/20 20:26	1
4-Bromofluorobenzene (Surr)	100		85 - 114		07/19/20 20:26	1
Dibromofluoromethane (Surr)	98		80 - 119		07/19/20 20:26	1
Toluene-d8 (Surr)	102		89 - 112		07/19/20 20:26	1

Lab Sample ID: LCS 410-24067/5

Matrix: Water

Analysis Batch: 24067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	21.2		ug/L		106	42 - 138
Ethylbenzene	20.0	21.9		ug/L		109	79 - 121
Toluene	20.0	21.7		ug/L		108	80 - 121
Xylenes, Total	60.0	65.1		ug/L		109	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: LCSD 410-24067/6

Matrix: Water

Analysis Batch: 24067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.5		ug/L		103	42 - 138	3	20
Ethylbenzene	20.0	21.3		ug/L		106	79 - 121	3	20
Toluene	20.0	21.0		ug/L		105	80 - 121	3	20
Xylenes, Total	60.0	63.2		ug/L		105	79 - 121	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	103		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	101		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-7458-1 MS

Matrix: Water

Analysis Batch: 24067

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5200	E D J1	200	5630	E D 4	ug/L		223	42 - 138
Ethylbenzene	500	D J1	200	761	D J1	ug/L		128	79 - 121
Toluene	6000	E D J1	200	6430	E D 4	ug/L		233	80 - 121
Xylenes, Total	2800	J1	600	3730	4	ug/L		155	79 - 121
Surrogate	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	104		81 - 118						
4-Bromofluorobenzene (Surr)	112		85 - 114						
Dibromofluoromethane (Surr)	97		80 - 119						
Toluene-d8 (Surr)	88	Q	89 - 112						

Lab Sample ID: 410-7458-1 MSD

Matrix: Water

Analysis Batch: 24067

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	5200	E D J1	200	5740	E D 4	ug/L		282	42 - 138	2	20
Ethylbenzene	500	D J1	200	780	D J1	ug/L		138	79 - 121	3	20
Toluene	6000	E D J1	200	6560	E D 4	ug/L		298	80 - 121	2	20
Xylenes, Total	2800	J1	600	3830	4	ug/L		172	79 - 121	3	20
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
1,2-Dichloroethane-d4 (Surr)	105		81 - 118								
4-Bromofluorobenzene (Surr)	112		85 - 114								
Dibromofluoromethane (Surr)	98		80 - 119								
Toluene-d8 (Surr)	89		89 - 112								

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-23885/1-A

Matrix: Water

Analysis Batch: 24396

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23885

Top Data: 2009										
Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
	Result	Qualifier								
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L	-	07/20/20 18:49	1	
Bottom Data: 2009										
Surrogate	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier								
1,1,2,2-Tetrachloroethane (1C)	63		46 - 136					07/18/20 06:32	07/20/20 18:49	1
1,1,2,2-Tetrachloroethane (2C)	62		46 - 136					07/18/20 06:32	07/20/20 18:49	1

Lab Sample ID: LCS 410-23885/2-A

Matrix: Water

Analysis Batch: 24396

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.123		ug/L		96	60 - 140

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-23885/2-A

Matrix: Water

Analysis Batch: 24396

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23885

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136
1,1,2,2-Tetrachloroethane (2C)	65		46 - 136

Lab Sample ID: LCSD 410-23885/3-A

Matrix: Water

Analysis Batch: 24396

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23885

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.129		ug/L	-	101	60 - 140	5	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	70		46 - 136						

Lab Sample ID: 410-7458-1 MS

Matrix: Water

Analysis Batch: 25771

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Prep Batch: 23885

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	28	D J1	0.125	29.9	D M 4	ug/L	-	1875	60 - 140		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136								
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136								

Lab Sample ID: 410-7458-1 MSD

Matrix: Water

Analysis Batch: 25771

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Prep Batch: 23885

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	28	D J1	0.123	28.2	D 4	ug/L	-	504	60 - 140	6	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	0	M Q	46 - 136								
1,1,2,2-Tetrachloroethane (2C)	0	M Q	46 - 136								

Lab Sample ID: MB 410-23886/1-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23886

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L	-	07/22/20 21:05	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136	07/18/20 06:38	07/22/20 21:05	1			
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136	07/18/20 06:38	07/22/20 21:05	1			

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-23886/2-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.125		ug/L		98	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136

Lab Sample ID: LCSD 410-23886/3-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.114		ug/L		89	60 - 140	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136

Lab Sample ID: MB 410-25374/1-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25374

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		07/23/20 21:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	62		46 - 136	07/22/20 23:56	07/23/20 21:35	1
1,1,2,2-Tetrachloroethane (2C)	62		46 - 136	07/22/20 23:56	07/23/20 21:35	1

Lab Sample ID: LCS 410-25374/2-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25374

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.221	Q	ug/L		172	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	63		46 - 136
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136

Lab Sample ID: LCSD 410-25374/3-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25374

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.214	Q	ug/L		167	60 - 140	3	20

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 410-25374/3-A

Matrix: Water

Analysis Batch: 25771

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25374

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	59		46 - 136
1,1,2,2-Tetrachloroethane (2C)	58		46 - 136

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-22101/4

Matrix: Water

Analysis Batch: 22101

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/14/20 06:34	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/14/20 06:34	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/14/20 06:34	1

Lab Sample ID: LCS 410-22101/3

Matrix: Water

Analysis Batch: 22101

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	7.24		mg/L		96	90 - 110
Chloride	3.00	2.84		mg/L		95	90 - 110
Sulfate	7.50	7.10		mg/L		95	90 - 110

Lab Sample ID: MB 410-23963/35

Matrix: Water

Analysis Batch: 23963

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/14/20 14:52	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/14/20 14:52	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/14/20 14:52	1

Lab Sample ID: LCS 410-23963/34

Matrix: Water

Analysis Batch: 23963

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	7.87		mg/L		105	90 - 110
Chloride	3.00	3.05		mg/L		102	90 - 110
Sulfate	7.50	7.79		mg/L		104	90 - 110

Lab Sample ID: 410-7458-5 MS

Matrix: Water

Analysis Batch: 23963

Client Sample ID: GWS7-451-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	2.0	U	25.0	26.8	D	mg/L		107	90 - 110
Chloride	25	D J1	10.0	37.0	E D J1	mg/L		120	90 - 110
Sulfate	3.2	J D	25.0	28.4	D	mg/L		101	90 - 110

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 410-7458-5 DU

Matrix: Water

Analysis Batch: 23963

Client Sample ID: GWS7-451-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bromide	2.0	U	2.0	U	mg/L		NC	15
Chloride	25	D J1	24.8	D	mg/L		0.4	15
Sulfate	3.2	J D	3.32	J D	mg/L		3	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-22073/1-A

Matrix: Water

Analysis Batch: 22231

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22073

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/14/20 06:51	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/14/20 06:51	1

Lab Sample ID: LCS 410-22073/2-A

Matrix: Water

Analysis Batch: 22231

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22073

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.415		mg/L		103	87 - 115
Manganese	0.0200	0.0219		mg/L		110	90 - 114

Lab Sample ID: MB 410-22467/1-A

Matrix: Water

Analysis Batch: 22739

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22467

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/15/20 10:01	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/15/20 10:01	1

Lab Sample ID: LCS 410-22467/2-A

Matrix: Water

Analysis Batch: 22739

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.443		mg/L		110	87 - 115
Manganese	0.0200	0.0222		mg/L		111	90 - 114

Lab Sample ID: MB 410-22470/1-A

Matrix: Water

Analysis Batch: 25846

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22470

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/23/20 21:36	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/23/20 21:36	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-22470/2-A
Matrix: Water
Analysis Batch: 25846

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.0200	0.0224		mg/L		112	90 - 114

Lab Sample ID: LCS 410-22470/2-A
Matrix: Water
Analysis Batch: 26057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.422		mg/L		105	87 - 115

Lab Sample ID: MB 410-22069/1-A
Matrix: Water
Analysis Batch: 24535

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 22069

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/20/20 21:39	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/20/20 21:39	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/20/20 21:39	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/20/20 21:39	1

Lab Sample ID: LCS 410-22069/2-A
Matrix: Water
Analysis Batch: 24535

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 22069

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.418		mg/L		104	87 - 113
Magnesium	0.200	0.210		mg/L		105	85 - 113
Potassium	5.60	5.47		mg/L		98	86 - 114
Sodium	2.00	2.04		mg/L		102	87 - 115

Lab Sample ID: MB 410-22070/1-A
Matrix: Water
Analysis Batch: 22447

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 22070

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.38	U	0.50	0.38	0.24	mg/L		07/14/20 14:49	1
Magnesium	0.19	U	0.25	0.19	0.10	mg/L		07/14/20 14:49	1
Potassium	0.94	U	1.3	0.94	0.51	mg/L		07/14/20 14:49	1
Sodium	1.3	U	2.5	1.3	0.60	mg/L		07/14/20 14:49	1

Lab Sample ID: LCS 410-22070/2-A
Matrix: Water
Analysis Batch: 22447

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 22070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	1.00	1.07		mg/L		107	87 - 113
Magnesium	0.500	0.522		mg/L		104	85 - 113
Potassium	14.0	13.7		mg/L		98	86 - 114
Sodium	5.00	4.86		mg/L		97	87 - 115

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 410-22393/1-A

Matrix: Water

Analysis Batch: 22711

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 22393

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/15/20 08:19	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/15/20 08:19	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/15/20 08:19	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/15/20 08:19	1

Lab Sample ID: LCS 410-22393/2-A

Matrix: Water

Analysis Batch: 22711

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 22393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.414		mg/L		103	87 - 113
Magnesium	0.200	0.208		mg/L		104	85 - 113
Potassium	5.60	5.72		mg/L		102	86 - 114
Sodium	2.00	2.09		mg/L		105	87 - 115

Lab Sample ID: 410-7458-1 MS

Matrix: Water

Analysis Batch: 22711

Client Sample ID: GWS1-447-203

Prep Type: Total Recoverable

Prep Batch: 22393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	210	J1	0.400	177	4	mg/L		-6987	75 - 125
Magnesium	34	J1	0.200	29.3	4	mg/L		-2156	75 - 125
Potassium	4.6		5.60	9.66		mg/L		91	75 - 125
Sodium	48	J1	2.00	44.9	4	mg/L		-142	75 - 125

Lab Sample ID: 410-7458-1 MSD

Matrix: Water

Analysis Batch: 22711

Client Sample ID: GWS1-447-203

Prep Type: Total Recoverable

Prep Batch: 22393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	210	J1	0.400	189	4	mg/L		-3983	75 - 125	7	20
Magnesium	34	J1	0.200	31.2	4	mg/L		-1169	75 - 125	7	20
Potassium	4.6		5.60	10.2		mg/L		100	75 - 125	5	20
Sodium	48	J1	2.00	47.0	4	mg/L		-38	75 - 125	5	20

Lab Sample ID: 410-7458-1 DU

Matrix: Water

Analysis Batch: 22711

Client Sample ID: GWS1-447-203

Prep Type: Total Recoverable

Prep Batch: 22393

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Calcium	210	J1	200		mg/L		3	20
Magnesium	34	J1	32.8		mg/L		2	20
Potassium	4.6		4.45		mg/L		2	20
Sodium	48	J1	46.5		mg/L		3	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 410-7458-1 MS

Matrix: Water

Analysis Batch: 25846

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	7.2	J1	0.0200	6.56	4	mg/L	-	-3382	90 - 114

Lab Sample ID: 410-7458-1 MS

Matrix: Water

Analysis Batch: 26057

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	7.3	J1	0.402	0.943	4	mg/L	-	-1574	87 - 115

Lab Sample ID: 410-7458-1 MSD

Matrix: Water

Analysis Batch: 25846

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	7.2	J1	0.0200	7.23	4	mg/L	-	-24	90 - 114	10	20

Lab Sample ID: 410-7458-1 MSD

Matrix: Water

Analysis Batch: 26057

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	7.3	J1	0.402	1.53	4 J1	mg/L	-	-1428	87 - 115	47	20

Lab Sample ID: 410-7458-1 DU

Matrix: Water

Analysis Batch: 25846

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Manganese	7.2	J1	7.64		mg/L	-	5	20

Lab Sample ID: 410-7458-1 DU

Matrix: Water

Analysis Batch: 26057

Client Sample ID: GWS1-447-203

Prep Type: Dissolved

Prep Batch: 22470

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	7.3	J1	5.65	J1	mg/L	-	25	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-22068/1-A

Matrix: Water

Analysis Batch: 24676

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22068

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L	-	07/20/20 18:43	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 410-22068/1-A
Matrix: Water
Analysis Batch: 29812

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 22068

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/04/20 13:55	1

Lab Sample ID: LCS 410-22068/2-A
Matrix: Water
Analysis Batch: 24676

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.00492	0.00520		mg/L		106	88 - 115

Lab Sample ID: LCS 410-22068/2-A
Matrix: Water
Analysis Batch: 29812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0104		mg/L		106	84 - 116

Lab Sample ID: MB 410-22396/1-A
Matrix: Water
Analysis Batch: 27454

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 22396

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/28/20 13:56	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/28/20 13:56	1

Lab Sample ID: LCS 410-22396/2-A
Matrix: Water
Analysis Batch: 27454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.00972		mg/L		98	84 - 116
Lead	0.00492	0.00497		mg/L		101	88 - 115

Lab Sample ID: 410-7458-1 MS
Matrix: Water
Analysis Batch: 27454

Client Sample ID: GWS1-447-203
Prep Type: Total/NA
Prep Batch: 22396

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0058	J1	0.00989	0.0180	J1	mg/L		123	84 - 116
Lead	0.00024	J	0.00492	0.00513		mg/L		99	88 - 118

Lab Sample ID: 410-7458-1 MSD
Matrix: Water
Analysis Batch: 27454

Client Sample ID: GWS1-447-203
Prep Type: Total/NA
Prep Batch: 22396

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0058	J1	0.00989	0.0218	J1	mg/L		161	84 - 116	19	20
Lead	0.00024	J	0.00492	0.00526		mg/L		102	88 - 118	3	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-7458-1 DU

Matrix: Water

Analysis Batch: 27454

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Prep Batch: 22396

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0058	J1	0.00686		mg/L		16	20
Lead	0.00024	J	0.000108	J	mg/L		76	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-25154/20

Matrix: Water

Analysis Batch: 25154

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/22/20 06:34	1

Lab Sample ID: LCS 410-25154/21

Matrix: Water

Analysis Batch: 25154

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.49		mg/L		99	90 - 110

Lab Sample ID: MB 410-26352/20

Matrix: Water

Analysis Batch: 26352

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 08:00	1

Lab Sample ID: LCS 410-26352/21

Matrix: Water

Analysis Batch: 26352

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.57		mg/L		103	90 - 110

Lab Sample ID: 410-7458-11 MS

Matrix: Water

Analysis Batch: 26352

Client Sample ID: GW152-484-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.090	U	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: 410-7458-11 DU

Matrix: Water

Analysis Batch: 26352

Client Sample ID: GW152-484-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate Nitrite as N	0.090	U	0.090	U	mg/L		NC	10

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 410-22395/24

Matrix: Water

Analysis Batch: 22395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L		07/13/20 21:54	1

Lab Sample ID: LCS 410-22395/25

Matrix: Water

Analysis Batch: 22395

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	168		mg/L		89	82 - 106

Lab Sample ID: 410-7458-1 DU

Matrix: Water

Analysis Batch: 22395

Client Sample ID: GWS1-447-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bicarbonate Alkalinity as CaCO ₃	550		547		mg/L		0	
Carbonate Alkalinity as CaCO ₃	6.0	U	6.0	U	mg/L		NC	
Total Alkalinity as CaCO ₃ to pH 4.5	550		547		mg/L		0	5

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

GC/MS VOA

Analysis Batch: 23543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-19	TB203-26	Total/NA	Water	8260C DOD	
MB 410-23543/9	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-23543/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-23543/7	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

Analysis Batch: 23780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total/NA	Water	8260C DOD	
410-7458-3	GWS3-449-203	Total/NA	Water	8260C DOD	
410-7458-4	GWS5-446-203	Total/NA	Water	8260C DOD	
410-7458-5	GWS7-451-203	Total/NA	Water	8260C DOD	
410-7458-7	GWS8-451-603	Total/NA	Water	8260C DOD	
410-7458-13	TB203-20	Total/NA	Water	8260C DOD	
410-7458-14	TB203-21	Total/NA	Water	8260C DOD	
410-7458-15	TB203-22	Total/NA	Water	8260C DOD	
410-7458-16	TB203-23	Total/NA	Water	8260C DOD	
410-7458-17	TB203-24	Total/NA	Water	8260C DOD	
410-7458-18	TB203-25	Total/NA	Water	8260C DOD	
MB 410-23780/7	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-23780/4	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-23780/5	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

Analysis Batch: 24067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	8260C DOD	
410-7458-1 - DL	GWS1-447-203	Total/NA	Water	8260C DOD	
410-7458-6	GWS8-451-203	Total/NA	Water	8260C DOD	
410-7458-8	GWS9-447-203	Total/NA	Water	8260C DOD	
410-7458-8 - DL	GWS9-447-203	Total/NA	Water	8260C DOD	
MB 410-24067/9	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-24067/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-24067/6	Lab Control Sample Dup	Total/NA	Water	8260C DOD	
410-7458-1 MS	GWS1-447-203	Total/NA	Water	8260C DOD	
410-7458-1 MSD	GWS1-447-203	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 23885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	8011	
410-7458-2	GWS2-451-203	Total/NA	Water	8011	
410-7458-3	GWS3-449-203	Total/NA	Water	8011	
410-7458-4	GWS5-446-203	Total/NA	Water	8011	
410-7458-5	GWS7-451-203	Total/NA	Water	8011	
410-7458-6	GWS8-451-203	Total/NA	Water	8011	
410-7458-7	GWS8-451-603	Total/NA	Water	8011	
410-7458-8	GWS9-447-203	Total/NA	Water	8011	
410-7458-9	GW149-484-203	Total/NA	Water	8011	
410-7458-10	GW151-484-203	Total/NA	Water	8011	
410-7458-11	GW152-484-203	Total/NA	Water	8011	
410-7458-12	GW153-484-203	Total/NA	Water	8011	

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

GC Semi VOA (Continued)

Prep Batch: 23885 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-13	TB203-20	Total/NA	Water	8011	
410-7458-15	TB203-22	Total/NA	Water	8011	
410-7458-16	TB203-23	Total/NA	Water	8011	
410-7458-17	TB203-24	Total/NA	Water	8011	
MB 410-23885/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-23885/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-23885/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-7458-1 MS	GWS1-447-203	Total/NA	Water	8011	
410-7458-1 MSD	GWS1-447-203	Total/NA	Water	8011	

Prep Batch: 23886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-18	TB203-25	Total/NA	Water	8011	
410-7458-19	TB203-26	Total/NA	Water	8011	
MB 410-23886/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-23886/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-23886/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 24396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-23885/1-A	Method Blank	Total/NA	Water	8011	23885
LCS 410-23885/2-A	Lab Control Sample	Total/NA	Water	8011	23885
LCSD 410-23885/3-A	Lab Control Sample Dup	Total/NA	Water	8011	23885

Analysis Batch: 25287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-8	GWS9-447-203	Total/NA	Water	8011	23885
410-7458-10	GW151-484-203	Total/NA	Water	8011	23885
410-7458-11	GW152-484-203	Total/NA	Water	8011	23885
410-7458-13	TB203-20	Total/NA	Water	8011	23885
410-7458-15	TB203-22	Total/NA	Water	8011	23885
410-7458-16	TB203-23	Total/NA	Water	8011	23885
410-7458-17	TB203-24	Total/NA	Water	8011	23885
410-7458-18	TB203-25	Total/NA	Water	8011	23886
410-7458-19	TB203-26	Total/NA	Water	8011	23886
MB 410-23886/1-A	Method Blank	Total/NA	Water	8011	23886
LCS 410-23886/2-A	Lab Control Sample	Total/NA	Water	8011	23886
LCSD 410-23886/3-A	Lab Control Sample Dup	Total/NA	Water	8011	23886

Prep Batch: 25374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-14	TB203-21	Total/NA	Water	8011	
MB 410-25374/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-25374/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-25374/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 25771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	8011	23885
410-7458-2	GWS2-451-203	Total/NA	Water	8011	23885
410-7458-3	GWS3-449-203	Total/NA	Water	8011	23885

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

GC Semi VOA (Continued)

Analysis Batch: 25771 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-4	GWS5-446-203	Total/NA	Water	8011	23885
410-7458-5	GWS7-451-203	Total/NA	Water	8011	23885
410-7458-14	TB203-21	Total/NA	Water	8011	25374
MB 410-25374/1-A	Method Blank	Total/NA	Water	8011	25374
LCS 410-25374/2-A	Lab Control Sample	Total/NA	Water	8011	25374
LCSD 410-25374/3-A	Lab Control Sample Dup	Total/NA	Water	8011	25374
410-7458-1 MS	GWS1-447-203	Total/NA	Water	8011	23885
410-7458-1 MSD	GWS1-447-203	Total/NA	Water	8011	23885

Analysis Batch: 27290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-6	GWS8-451-203	Total/NA	Water	8011	23885
410-7458-7	GWS8-451-603	Total/NA	Water	8011	23885
410-7458-9	GW149-484-203	Total/NA	Water	8011	23885
410-7458-12	GW153-484-203	Total/NA	Water	8011	23885

HPLC/IC

Analysis Batch: 22101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	300.0	
410-7458-2	GWS2-451-203	Total/NA	Water	300.0	
410-7458-2	GWS2-451-203	Total/NA	Water	300.0	
MB 410-22101/4	Method Blank	Total/NA	Water	300.0	
LCS 410-22101/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 23963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-3	GWS3-449-203	Total/NA	Water	300.0	
410-7458-3	GWS3-449-203	Total/NA	Water	300.0	
410-7458-4	GWS5-446-203	Total/NA	Water	300.0	
410-7458-5	GWS7-451-203	Total/NA	Water	300.0	
410-7458-6	GWS8-451-203	Total/NA	Water	300.0	
410-7458-7	GWS8-451-603	Total/NA	Water	300.0	
410-7458-8	GWS9-447-203	Total/NA	Water	300.0	
410-7458-9	GW149-484-203	Total/NA	Water	300.0	
410-7458-10	GW151-484-203	Total/NA	Water	300.0	
410-7458-11	GW152-484-203	Total/NA	Water	300.0	
410-7458-11	GW152-484-203	Total/NA	Water	300.0	
410-7458-12	GW153-484-203	Total/NA	Water	300.0	
MB 410-23963/35	Method Blank	Total/NA	Water	300.0	
LCS 410-23963/34	Lab Control Sample	Total/NA	Water	300.0	
410-7458-5 MS	GWS7-451-203	Total/NA	Water	300.0	
410-7458-5 DU	GWS7-451-203	Total/NA	Water	300.0	

Metals

Prep Batch: 22068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total/NA	Water	3020A	
410-7458-3	GWS3-449-203	Total/NA	Water	3020A	
410-7458-4	GWS5-446-203	Total/NA	Water	3020A	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Metals (Continued)

Prep Batch: 22068 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-5	GWS7-451-203	Total/NA	Water	3020A	
410-7458-12	GW153-484-203	Total/NA	Water	3020A	
MB 410-22068/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-22068/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 22069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total Recoverable	Water	3005A	
410-7458-3	GWS3-449-203	Total Recoverable	Water	3005A	
MB 410-22069/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-22069/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 22070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-4	GWS5-446-203	Total Recoverable	Water	3005A	
410-7458-5	GWS7-451-203	Total Recoverable	Water	3005A	
410-7458-6	GWS8-451-203	Total Recoverable	Water	3005A	
410-7458-7	GWS8-451-603	Total Recoverable	Water	3005A	
410-7458-8	GWS9-447-203	Total Recoverable	Water	3005A	
410-7458-9	GW149-484-203	Total Recoverable	Water	3005A	
410-7458-10	GW151-484-203	Total Recoverable	Water	3005A	
410-7458-11	GW152-484-203	Total Recoverable	Water	3005A	
410-7458-12	GW153-484-203	Total Recoverable	Water	3005A	
MB 410-22070/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-22070/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 22073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Dissolved	Water	Non-Digest Prep	
410-7458-3	GWS3-449-203	Dissolved	Water	Non-Digest Prep	
410-7458-4	GWS5-446-203	Dissolved	Water	Non-Digest Prep	
410-7458-5	GWS7-451-203	Dissolved	Water	Non-Digest Prep	
MB 410-22073/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-22073/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 22231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Dissolved	Water	6010C	22073
410-7458-3	GWS3-449-203	Dissolved	Water	6010C	22073
410-7458-4	GWS5-446-203	Dissolved	Water	6010C	22073
410-7458-5	GWS7-451-203	Dissolved	Water	6010C	22073
MB 410-22073/1-A	Method Blank	Total/NA	Water	6010C	22073
LCS 410-22073/2-A	Lab Control Sample	Total/NA	Water	6010C	22073

Prep Batch: 22393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total Recoverable	Water	3005A	
MB 410-22393/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-22393/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-7458-1 MS	GWS1-447-203	Total Recoverable	Water	3005A	
410-7458-1 MSD	GWS1-447-203	Total Recoverable	Water	3005A	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Metals (Continued)

Prep Batch: 22393 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1 DU	GWS1-447-203	Total Recoverable	Water	3005A	

Prep Batch: 22396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	3020A	
410-7458-6	GWS8-451-203	Total/NA	Water	3020A	
410-7458-7	GWS8-451-603	Total/NA	Water	3020A	
410-7458-8	GWS9-447-203	Total/NA	Water	3020A	
410-7458-9	GW149-484-203	Total/NA	Water	3020A	
410-7458-10	GW151-484-203	Total/NA	Water	3020A	
410-7458-11	GW152-484-203	Total/NA	Water	3020A	
MB 410-22396/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-22396/2-A	Lab Control Sample	Total/NA	Water	3020A	
410-7458-1 MS	GWS1-447-203	Total/NA	Water	3020A	
410-7458-1 MSD	GWS1-447-203	Total/NA	Water	3020A	
410-7458-1 DU	GWS1-447-203	Total/NA	Water	3020A	

Analysis Batch: 22447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-4	GWS5-446-203	Total Recoverable	Water	6010C	22070
410-7458-5	GWS7-451-203	Total Recoverable	Water	6010C	22070
410-7458-6	GWS8-451-203	Total Recoverable	Water	6010C	22070
410-7458-7	GWS8-451-603	Total Recoverable	Water	6010C	22070
410-7458-8	GWS9-447-203	Total Recoverable	Water	6010C	22070
410-7458-9	GW149-484-203	Total Recoverable	Water	6010C	22070
410-7458-10	GW151-484-203	Total Recoverable	Water	6010C	22070
410-7458-11	GW152-484-203	Total Recoverable	Water	6010C	22070
410-7458-12	GW153-484-203	Total Recoverable	Water	6010C	22070
MB 410-22070/1-A	Method Blank	Total Recoverable	Water	6010C	22070
LCS 410-22070/2-A	Lab Control Sample	Total Recoverable	Water	6010C	22070

Prep Batch: 22467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-6	GWS8-451-203	Dissolved	Water	Non-Digest Prep	
410-7458-7	GWS8-451-603	Dissolved	Water	Non-Digest Prep	
410-7458-8	GWS9-447-203	Dissolved	Water	Non-Digest Prep	
410-7458-9	GW149-484-203	Dissolved	Water	Non-Digest Prep	
410-7458-10	GW151-484-203	Dissolved	Water	Non-Digest Prep	
410-7458-11	GW152-484-203	Dissolved	Water	Non-Digest Prep	
410-7458-12	GW153-484-203	Dissolved	Water	Non-Digest Prep	
MB 410-22467/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-22467/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 22470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Dissolved	Water	Non-Digest Prep	
MB 410-22470/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-22470/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-7458-1 MS	GWS1-447-203	Dissolved	Water	Non-Digest Prep	
410-7458-1 MSD	GWS1-447-203	Dissolved	Water	Non-Digest Prep	
410-7458-1 DU	GWS1-447-203	Dissolved	Water	Non-Digest Prep	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Metals

Analysis Batch: 22711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total Recoverable	Water	6010C	22393
MB 410-22393/1-A	Method Blank	Total Recoverable	Water	6010C	22393
LCS 410-22393/2-A	Lab Control Sample	Total Recoverable	Water	6010C	22393
410-7458-1 MS	GWS1-447-203	Total Recoverable	Water	6010C	22393
410-7458-1 MSD	GWS1-447-203	Total Recoverable	Water	6010C	22393
410-7458-1 DU	GWS1-447-203	Total Recoverable	Water	6010C	22393

Analysis Batch: 22739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-6	GWS8-451-203	Dissolved	Water	6010C	22467
410-7458-7	GWS8-451-603	Dissolved	Water	6010C	22467
410-7458-8	GWS9-447-203	Dissolved	Water	6010C	22467
410-7458-9	GW149-484-203	Dissolved	Water	6010C	22467
410-7458-10	GW151-484-203	Dissolved	Water	6010C	22467
410-7458-11	GW152-484-203	Dissolved	Water	6010C	22467
410-7458-12	GW153-484-203	Dissolved	Water	6010C	22467
MB 410-22467/1-A	Method Blank	Total/NA	Water	6010C	22467
LCS 410-22467/2-A	Lab Control Sample	Total/NA	Water	6010C	22467

Analysis Batch: 24535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total Recoverable	Water	6010C	22069
410-7458-3	GWS3-449-203	Total Recoverable	Water	6010C	22069
MB 410-22069/1-A	Method Blank	Total Recoverable	Water	6010C	22069
LCS 410-22069/2-A	Lab Control Sample	Total Recoverable	Water	6010C	22069

Analysis Batch: 24676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total/NA	Water	6020A	22068
410-7458-3	GWS3-449-203	Total/NA	Water	6020A	22068
410-7458-4	GWS5-446-203	Total/NA	Water	6020A	22068
410-7458-5	GWS7-451-203	Total/NA	Water	6020A	22068
410-7458-12	GW153-484-203	Total/NA	Water	6020A	22068
MB 410-22068/1-A	Method Blank	Total/NA	Water	6020A	22068
LCS 410-22068/2-A	Lab Control Sample	Total/NA	Water	6020A	22068

Analysis Batch: 25846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Dissolved	Water	6010C	22470
MB 410-22470/1-A	Method Blank	Total/NA	Water	6010C	22470
LCS 410-22470/2-A	Lab Control Sample	Total/NA	Water	6010C	22470
410-7458-1 MS	GWS1-447-203	Dissolved	Water	6010C	22470
410-7458-1 MSD	GWS1-447-203	Dissolved	Water	6010C	22470
410-7458-1 DU	GWS1-447-203	Dissolved	Water	6010C	22470

Analysis Batch: 26057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Dissolved	Water	6010C	22470
LCS 410-22470/2-A	Lab Control Sample	Total/NA	Water	6010C	22470
410-7458-1 MS	GWS1-447-203	Dissolved	Water	6010C	22470
410-7458-1 MSD	GWS1-447-203	Dissolved	Water	6010C	22470

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Metals (Continued)

Analysis Batch: 26057 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1 DU	GWS1-447-203	Dissolved	Water	6010C	22470

Analysis Batch: 27454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	6020A	22396
410-7458-6	GWS8-451-203	Total/NA	Water	6020A	22396
410-7458-7	GWS8-451-603	Total/NA	Water	6020A	22396
410-7458-8	GWS9-447-203	Total/NA	Water	6020A	22396
410-7458-9	GW149-484-203	Total/NA	Water	6020A	22396
410-7458-10	GW151-484-203	Total/NA	Water	6020A	22396
410-7458-11	GW152-484-203	Total/NA	Water	6020A	22396
MB 410-22396/1-A	Method Blank	Total/NA	Water	6020A	22396
LCS 410-22396/2-A	Lab Control Sample	Total/NA	Water	6020A	22396
410-7458-1 MS	GWS1-447-203	Total/NA	Water	6020A	22396
410-7458-1 MSD	GWS1-447-203	Total/NA	Water	6020A	22396
410-7458-1 DU	GWS1-447-203	Total/NA	Water	6020A	22396

Analysis Batch: 29812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total/NA	Water	6020A	22068
410-7458-3	GWS3-449-203	Total/NA	Water	6020A	22068
410-7458-4	GWS5-446-203	Total/NA	Water	6020A	22068
410-7458-5	GWS7-451-203	Total/NA	Water	6020A	22068
410-7458-12	GW153-484-203	Total/NA	Water	6020A	22068
MB 410-22068/1-A	Method Blank	Total/NA	Water	6020A	22068
LCS 410-22068/2-A	Lab Control Sample	Total/NA	Water	6020A	22068

General Chemistry

Analysis Batch: 22395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	SM2320 B	
410-7458-2	GWS2-451-203	Total/NA	Water	SM2320 B	
410-7458-3	GWS3-449-203	Total/NA	Water	SM2320 B	
410-7458-4	GWS5-446-203	Total/NA	Water	SM2320 B	
410-7458-5	GWS7-451-203	Total/NA	Water	SM2320 B	
410-7458-6	GWS8-451-203	Total/NA	Water	SM2320 B	
410-7458-7	GWS8-451-603	Total/NA	Water	SM2320 B	
410-7458-8	GWS9-447-203	Total/NA	Water	SM2320 B	
410-7458-9	GW149-484-203	Total/NA	Water	SM2320 B	
410-7458-10	GW151-484-203	Total/NA	Water	SM2320 B	
410-7458-11	GW152-484-203	Total/NA	Water	SM2320 B	
410-7458-12	GW153-484-203	Total/NA	Water	SM2320 B	
MB 410-22395/24	Method Blank	Total/NA	Water	SM2320 B	
LCS 410-22395/25	Lab Control Sample	Total/NA	Water	SM2320 B	
410-7458-1 DU	GWS1-447-203	Total/NA	Water	SM2320 B	

Analysis Batch: 25154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-1	GWS1-447-203	Total/NA	Water	353.2	
MB 410-25154/20	Method Blank	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

General Chemistry (Continued)

Analysis Batch: 25154 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-25154/21	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 26352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7458-2	GWS2-451-203	Total/NA	Water	353.2	
410-7458-3	GWS3-449-203	Total/NA	Water	353.2	
410-7458-4	GWS5-446-203	Total/NA	Water	353.2	
410-7458-5	GWS7-451-203	Total/NA	Water	353.2	
410-7458-6	GWS8-451-203	Total/NA	Water	353.2	
410-7458-7	GWS8-451-603	Total/NA	Water	353.2	
410-7458-8	GWS9-447-203	Total/NA	Water	353.2	
410-7458-9	GW149-484-203	Total/NA	Water	353.2	
410-7458-10	GW151-484-203	Total/NA	Water	353.2	
410-7458-11	GW152-484-203	Total/NA	Water	353.2	
410-7458-12	GW153-484-203	Total/NA	Water	353.2	
MB 410-26352/20	Method Blank	Total/NA	Water	353.2	
LCS 410-26352/21	Lab Control Sample	Total/NA	Water	353.2	
410-7458-11 MS	GW152-484-203	Total/NA	Water	353.2	
410-7458-11 DU	GW152-484-203	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS1-447-203

Lab Sample ID: 410-7458-1

Date Collected: 07/10/20 07:52

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		10	24067	07/20/20 01:35	ULCP	ELLE
Total/NA	Analysis	8260C DOD	DL	100	24067	07/20/20 02:40	ULCP	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		200	25771	07/24/20 06:17	AC3T	ELLE
Total/NA	Analysis	300.0		5	22101	07/14/20 14:07	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22470	07/14/20 17:59	UJLA	ELLE
Dissolved	Analysis	6010C		1	25846	07/23/20 21:42	LR7D	ELLE
Dissolved	Prep	Non-Digest Prep			22470	07/14/20 17:59	UJLA	ELLE
Dissolved	Analysis	6010C		1	26057	07/24/20 11:47	LR7D	ELLE
Total Recoverable	Prep	3005A			22393	07/14/20 15:12	UJLA	ELLE
Total Recoverable	Analysis	6010C		1	22711	07/15/20 08:25	ULJC	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:00	V5SW	ELLE
Total/NA	Analysis	353.2		1	25154	07/22/20 07:10	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 22:33	DI9Q	ELLE

Client Sample ID: GWS2-451-203

Lab Sample ID: 410-7458-2

Date Collected: 07/10/20 12:22

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		10	23780	07/17/20 23:53	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		2000	25771	07/24/20 07:07	AC3T	ELLE
Total/NA	Analysis	300.0		5	22101	07/14/20 14:24	GJ35	ELLE
Total/NA	Analysis	300.0		50	22101	07/14/20 14:41	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22073	07/14/20 03:05	UJL8	ELLE
Dissolved	Analysis	6010C		1	22231	07/14/20 08:16	ULJC	ELLE
Total Recoverable	Prep	3005A			22069	07/14/20 02:40	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24535	07/20/20 23:10	UCIG	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	24676	07/20/20 19:32	V5SW	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	29812	08/04/20 14:23	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:06	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:35	DI9Q	ELLE

Client Sample ID: GWS3-449-203

Lab Sample ID: 410-7458-3

Date Collected: 07/10/20 11:45

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		10	23780	07/18/20 00:37	NSK7	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS3-449-203

Date Collected: 07/10/20 11:45

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		500	25771	07/24/20 07:24	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 16:31	GJ35	ELLE
Total/NA	Analysis	300.0		50	23963	07/14/20 16:48	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22073	07/14/20 03:05	UJL8	ELLE
Dissolved	Analysis	6010C		1	22231	07/14/20 08:20	ULJC	ELLE
Total Recoverable	Prep	3005A			22069	07/14/20 02:40	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24535	07/20/20 23:13	UCIG	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	24676	07/20/20 19:33	V5SW	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	29812	08/04/20 14:25	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:08	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 22:56	DI9Q	ELLE

Client Sample ID: GWS5-446-203

Date Collected: 07/10/20 09:55

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		20	23780	07/18/20 01:21	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		20	25771	07/24/20 07:41	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 17:05	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22073	07/14/20 03:05	UJL8	ELLE
Dissolved	Analysis	6010C		1	22231	07/14/20 08:23	ULJC	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:14	UCIG	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	24676	07/20/20 19:35	V5SW	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	29812	08/04/20 14:27	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:09	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:03	DI9Q	ELLE

Client Sample ID: GWS7-451-203

Date Collected: 07/10/20 10:40

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		10	23780	07/18/20 02:05	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		200	25771	07/24/20 07:58	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 15:42	GJ35	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS7-451-203

Lab Sample ID: 410-7458-5

Date Collected: 07/10/20 10:40

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	Non-Digest Prep			22073	07/14/20 03:05	UJL8	ELLE
Dissolved	Analysis	6010C		1	22231	07/14/20 08:26	ULJC	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:18	UCIG	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	24676	07/20/20 19:37	V5SW	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	29812	08/04/20 14:28	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:10	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:50	DI9Q	ELLE

Client Sample ID: GWS8-451-203

Lab Sample ID: 410-7458-6

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		100	24067	07/20/20 03:03	ULCP	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		2000	27290	07/29/20 00:30	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 17:38	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:43	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:28	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:11	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:11	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:03	DI9Q	ELLE

Client Sample ID: GWS8-451-603

Lab Sample ID: 410-7458-7

Date Collected: 07/10/20 15:00

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		50	23780	07/18/20 02:49	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		2000	27290	07/29/20 00:47	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 17:54	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:47	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:32	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:13	V5SW	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GWS8-451-603**Lab Sample ID: 410-7458-7****Date Collected: 07/10/20 15:00****Matrix: Water****Date Received: 07/11/20 10:18**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	26352	07/25/20 08:15	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:28	DI9Q	ELLE

Client Sample ID: GWS9-447-203**Lab Sample ID: 410-7458-8****Date Collected: 07/10/20 13:00****Matrix: Water****Date Received: 07/11/20 10:18**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		10	24067	07/20/20 03:25	ULCP	ELLE
Total/NA	Analysis	8260C DOD	DL	100	24067	07/20/20 03:47	ULCP	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 12:31	AC3T	ELLE
Total/NA	Analysis	300.0		50	23963	07/14/20 18:11	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:50	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:35	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:18	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:16	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:57	DI9Q	ELLE

Client Sample ID: GW149-484-203**Lab Sample ID: 410-7458-9****Date Collected: 07/10/20 09:10****Matrix: Water****Date Received: 07/11/20 10:18**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		100	27290	07/29/20 01:03	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 19:17	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:54	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:39	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:20	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:18	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:42	DI9Q	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW151-484-203

Lab Sample ID: 410-7458-10

Date Collected: 07/10/20 13:36

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 13:05	AC3T	ELLE
Total/NA	Analysis	300.0		100	23963	07/14/20 19:34	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:57	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:42	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:22	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:19	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/14/20 00:10	DI9Q	ELLE

Client Sample ID: GW152-484-203

Lab Sample ID: 410-7458-11

Date Collected: 07/10/20 07:15

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 13:21	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 20:07	GJ35	ELLE
Total/NA	Analysis	300.0		50	23963	07/14/20 20:23	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:27	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:45	UCIG	ELLE
Total/NA	Prep	3020A			22396	07/14/20 15:16	UJLA	ELLE
Total/NA	Analysis	6020A		1	27454	07/28/20 14:24	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:20	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 23:20	DI9Q	ELLE

Client Sample ID: GW153-484-203

Lab Sample ID: 410-7458-12

Date Collected: 07/10/20 14:18

Matrix: Water

Date Received: 07/11/20 10:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		200	27290	07/29/20 01:20	AC3T	ELLE
Total/NA	Analysis	300.0		5	23963	07/14/20 20:40	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			22467	07/14/20 17:50	UJLA	ELLE
Dissolved	Analysis	6010C		1	22739	07/15/20 10:30	LR7D	ELLE
Total Recoverable	Prep	3005A			22070	07/14/20 02:43	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	22447	07/14/20 15:49	UCIG	ELLE
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	24676	07/20/20 19:39	V5SW	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: GW153-484-203**Date Collected: 07/10/20 14:18****Date Received: 07/11/20 10:18****Lab Sample ID: 410-7458-12****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			22068	07/14/20 02:22	UJL8	ELLE
Total/NA	Analysis	6020A		1	29812	08/04/20 14:30	V5SW	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 08:26	P684	ELLE
Total/NA	Analysis	SM2320 B		1	22395	07/13/20 22:49	DI9Q	ELLE

Client Sample ID: TB203-20**Date Collected: 07/10/20 10:30****Date Received: 07/11/20 10:18****Lab Sample ID: 410-7458-13****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 20:57	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 14:29	AC3T	ELLE

Client Sample ID: TB203-21**Date Collected: 07/10/20 10:30****Date Received: 07/11/20 10:18****Lab Sample ID: 410-7458-14****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 21:19	NSK7	ELLE
Total/NA	Prep	8011			25374	07/22/20 23:56	K2IL	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 02:21	AC3T	ELLE

Client Sample ID: TB203-22**Date Collected: 07/10/20 10:30****Date Received: 07/11/20 10:18****Lab Sample ID: 410-7458-15****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 21:41	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 14:46	AC3T	ELLE

Client Sample ID: TB203-23**Date Collected: 07/10/20 10:30****Date Received: 07/11/20 10:18****Lab Sample ID: 410-7458-16****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 22:03	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 15:03	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Client Sample ID: TB203-24

Date Collected: 07/10/20 10:30

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 22:25	NSK7	ELLE
Total/NA	Prep	8011			23885	07/18/20 06:32	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 15:19	AC3T	ELLE

Client Sample ID: TB203-25

Date Collected: 07/10/20 10:30

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23780	07/17/20 22:47	NSK7	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 15:36	AC3T	ELLE

Client Sample ID: TB203-26

Date Collected: 07/10/20 10:30

Date Received: 07/11/20 10:18

Lab Sample ID: 410-7458-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	23543	07/17/20 13:40	NSK7	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25287	07/23/20 15:53	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-7458-1

Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
300.0	Anions, Ion Chromatography	MCAWW	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
SM2320 B	Alkalinity, Total	SM18	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7458-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-7458-1	GWS1-447-203	Water	07/10/20 07:52	07/11/20 10:18	
410-7458-2	GWS2-451-203	Water	07/10/20 12:22	07/11/20 10:18	
410-7458-3	GWS3-449-203	Water	07/10/20 11:45	07/11/20 10:18	
410-7458-4	GWS5-446-203	Water	07/10/20 09:55	07/11/20 10:18	
410-7458-5	GWS7-451-203	Water	07/10/20 10:40	07/11/20 10:18	
410-7458-6	GWS8-451-203	Water	07/10/20 15:00	07/11/20 10:18	
410-7458-7	GWS8-451-603	Water	07/10/20 15:00	07/11/20 10:18	
410-7458-8	GWS9-447-203	Water	07/10/20 13:00	07/11/20 10:18	
410-7458-9	GW149-484-203	Water	07/10/20 09:10	07/11/20 10:18	
410-7458-10	GW151-484-203	Water	07/10/20 13:36	07/11/20 10:18	
410-7458-11	GW152-484-203	Water	07/10/20 07:15	07/11/20 10:18	
410-7458-12	GW153-484-203	Water	07/10/20 14:18	07/11/20 10:18	
410-7458-13	TB203-20	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-14	TB203-21	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-15	TB203-22	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-16	TB203-23	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-17	TB203-24	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-18	TB203-25	Water	07/10/20 10:30	07/11/20 10:18	
410-7458-19	TB203-26	Water	07/10/20 10:30	07/11/20 10:18	

Eurofins Lancaster Laboratories Env, LLC



410-7458 Chain of Custody

EA										225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625										CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S1-447-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility					PROJECT NUMBER: 62735DM02					LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601					FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA					FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA					YEAR: 2020						
PROJECT SITE AND PHASE: ST106/SS111					New PO					LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258										QUARTER: 3 (Jul-Sep)											
ANALYSIS REQUIRED (Specify number of bottles)																	COMMENTS														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (#260C)	BTEX (#260C)	EDB (#011)	Total As, Pb, Ca, K, Na, Mg (#020A, #010C)	Dissolved Fe, Mn (#010C)	Chloride, bromide, sulfate (#000)	Nitrate-Nitrite (#332)	Total, Carbonate, and Bicarbonate (#142320B)	Carbon Dioxide (#175)	Methane (#175)	(#175)	COMMENTS															
1	GWS1-447-203	7-10-2020	0752	24	1	9	1	6	3	3*	1	1	1			Please see Comments for requested MS/MSD analytes															
2																															
3																															
4																															
5																															
6																															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																															
Please run MS/MSD on the following analytes only: VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe																															
SAMPLER(S): D. Schmeckel										COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0205										TB203-20											
RELINQUISHED BY:					DATE		TIME		RECEIVED BY:					DATE		TIME															
Printed Name and Signature: D. Schmeckel					7-10-2020		1900		Printed Name and Signature:																						
Printed Name and Signature:									Printed Name and Signature:																						
Printed Name and Signature:									Printed Name and Signature:																						
Printed Name and Signature:									Printed Name and Signature: Michelle Ruff					7/11/20		1018															

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S2-451-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111				New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)			
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	COMMENTS	
1	GWS2-451-203	7-10-2020	1222	10	-	3	-	2	1	1*	1	1	1		
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
SAMPLER(S): D. Schmeelk RELINQUISHED BY: D. Schmeelk DATE: 7-10-2020 TIME: 1900 PRINTED NAME AND SIGNATURE: D. Schmeelk PRINTED NAME AND SIGNATURE: _____ PRINTED NAME AND SIGNATURE: _____														TB203- 22 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227 RECEIVED BY: _____ DATE: _____ TIME: _____ PRINTED NAME AND SIGNATURE: _____ PRINTED NAME AND SIGNATURE: Nicole Reiff 7/11/20 1001	

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S3-449-203					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111				New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)					
ANALYSIS REQUIRED (Specify number of bottles)																	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (5M2320B)	Carbon Dioxide (RISK-175)	Methane (RISK-175)	COMMENTS	
1	GWS3-449-203	7-10-2020	1145	10	—	3	—	2	1	1*	1	1	1				
2																	
3																	
4																	
5																	
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																	
SAMPLER(S): D. Schmeelk										COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227							
RELINQUISHED BY:										RECEIVED BY:							
DATE: 7-10-2020 TIME: 1900										DATE: TIME:							
Printed Name and Signature: D. Schmeelk										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature: Nicole Reiff							

 225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S5-446-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)											
PROJECT SITE AND PHASE: ST106/SS111				New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
ANALYSIS REQUIRED (Specify number of bottles)																							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(BTEX)	(BTEX)	ED8	(BTEX)	Total (As, Pb, Cd, Cu, Ni, Mn)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	(SM2320B)	Carbon Dioxide	(RSK-175)	Methane	(RSK-175)	COMMENTS	
1	GWS5-446-203	7-10-2020	0955	10	1	3	1	2	1	1*	1	1	1	1	1	1							
2																							
3																							
4																							
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																							
SAMPLER(S): D. Schmeelk														COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238									
RELINQUISHED BY: D. Schmeelk														RECEIVED BY: Enrique Sanchez									
DATE: 7-10-2020 TIME: 1900														DATE: 7/10/20 TIME: 1018									
Printed Name and Signature: D. Schmeelk														Printed Name and Signature: Enrique Sanchez									
Printed Name and Signature:														Printed Name and Signature:									
Printed Name and Signature:														Printed Name and Signature:									

EA		225 Schuling Circle Suite 450 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S7-451-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)			
PROJECT SITE AND PHASE: ST106/SS111				Now PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Cd, Cu, Ni, Mn) (6020A, 6010C)	Disolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate and Bicarbonate) (5842320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	COMMENTS
1	GWS7-451-203	7-10-2020	1040	10	-	3	-	2	1	1*	1	1			
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
Please combine this 1 sample into one SDG and invoice SDG to 62735DM02.1017.06															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 9155 2830-0238-X											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-10-2020		1900		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							

qm

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S8-451-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmilh@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)					
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate)	Carbon Dioxide (SM2320B)	(RSK-175) Methane (RSK-175)	COMMENTS
1	GWS8-451-203	7-10-2020	1500	10	3	3	2	1	1*	1	1	1			
2	GWS8-451-603	7-10-2020	1500	10	3	3	2	1	1*	1	1	1			
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
SAMPLER(S): D. Schmeelk RELINQUISHED BY: D. Schmeelk DATE: 7-10-2020 TIME: 1900 COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9995 RECEIVED BY: Enrique Sanchez DATE: 7/11/20 TIME: 1000															

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-S9-447-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		New PO				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)					
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDR (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (3000)	Nitrate-Nitrite (3532)	Alkalinity (Total, Carbonate, and Bicarbonate) (3523)	Carbon Dioxide (3523)	Comments
1	GWS9-447-203	7-10-2020	1300	10	3	2	1	1*	1	1	1				
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
SAMPLER(S): D. Schueelk														TB203- 23	
RELINQUISHED BY: D. Schueelk														COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238	
DATE: 7-10-2020 TIME: 1900														RECEIVED BY: E. Sanchez	
Printed Name and Signature: D. Schueelk														DATE: 7-11-2020 TIME: 1018	
Printed Name and Signature: E. Sanchez															
Printed Name and Signature: E. Sanchez															
Printed Name and Signature: E. Sanchez															

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-149-484-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)					
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258													
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (a260C) (a260C) BTEX (a260C)	BTX (a260C)	ED8 (a260C)	ED8 (a260C)	ED8 (a260C)	ED8 (a260C)	ED8 (a260C)	ED8 (a260C)	ED8 (a260C)	COMMENTS	
1	GW149-484-203	7-10-2020	0910	7											
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
TB203- 26															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9984											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-10-2020		1900		Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: Nicole Rust				7/11/20		1021	

qm

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-151-484-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)					
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8250C)	BTEX (8260C)	ED8 (8260C)	Total As, Pb, Cu, K, Na, Mg (8011)	Dissolved Fe, Mn (8200A/6010C)	Chloride, bromide, sulfate (6010C)	Nitrate-Nitrite (3000)	(3532) Alkalinity (Total, Carbonate, and Bicarbonate)	(542320B) Carbon Dioxide	(RSK-175) Methane (RSK-175)	COMMENTS
1	GW151-484-203	7-10-2020	1336	7	—	—	—	2	1	1*	1	1	—	—	
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
TB203- 25															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0216											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-10-2020		1900		Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: Nicole Reiff				7/11/20		1019	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-152-484-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: 3 (Jul-Sep)					
		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258													
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total (As, Pb, Ca, K, Na, Mg) (6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (52120B)	Carbon Dioxide (RSK-175)	Comments	
1	GW152-484-203	7-10-2020	0715	7	—	—	2	1	1*	1	1	1	—		
2															
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered															
TB203-25															
SAMPLER(S): D. Schmeelke				COURIER AND SHIPPING NUMBER: FedEx 9155 2830 0216											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelke				7-10-2020		1900		Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: _____							
Printed Name and Signature: _____								Printed Name and Signature: Nicole Reiff				7/11/20		1019	

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-153-484-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)											
ANALYSIS REQUIRED (Specify number of bottles)																							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(BTEX)	BTEXN	EDR	(B11)	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	(3332)	Alkalinity (Total, Carbonate, and Bicarbonate)	(SM2320B)	Carbon Dioxide	(B5K-175)	Methane	(B5K-175)	COMMENTS	
1	GW153-484-203	7-10-2020	1418	7					2	1	1*	1	1	1									
2																							
3																							
4																							
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																							
SAMPLER(S): D. Schmeelk														COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9984									
RELINQUISHED BY: D. Schmeelk														RECEIVED BY: Nicole Ruff									
DATE: 7-10-2020														TIME: 1900									
Printed Name and Signature: D. Schmeelk														Printed Name and Signature: Nicole Ruff									
Printed Name and Signature: [Signature]														Printed Name and Signature: [Signature]									
Printed Name and Signature: [Signature]														Printed Name and Signature: [Signature]									

QRM

EA		225 Schöng Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-20				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3				
				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS				
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) BTEX	(8260C) BTEX	(8011) EDB	Total As Pb, Ca, K, Na, Mg (6020A, 6010C)	(6010C) Dissolved Fe, Mn	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	(SM2320B) Alkalinity (Total Carbonate and Bicarbonate)
1	TB203-20	7-10-2020	1030	4	2	2	2					
2												
3												
4												
5												
Associated with: GWS1-447-203												
SAMPLER(S): J. Messenger				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0205								
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME	
Printed Name and Signature: Joshua Messenger				7-10-2020	1900	Printed Name and Signature:						
Printed Name and Signature:						Printed Name and Signature:						
Printed Name and Signature:						Printed Name and Signature:						
Printed Name and Signature:						Printed Name and Signature: Nicole Reitt				7/11/20	1018	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				COC-TB203-21			
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				YEAR: 2020 QUARTER: 3			
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Disolved Fe, Mn (6020A/6010C)	Total As, Pb, Cd, K, Na, Mg	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2220B)	COMMENTS	
1	TB203-21	7-10-2020	1030	4	2	2	2								
2															
3															
4															
5															
Associated with: GWS8-451-203 GWS8-451-603															
SAMPLER(S): J. Messenger D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2829 9995											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-10-2020		1900		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Enrique Sanchez				7-10-2020		1900	

EA		225 Schümg Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-22							
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER 62599DM01		LABORATORY NAME AND CONTACT Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8250C) VOCs	(8250C) BTEX	(8250C) BTEXN	(8011) EDB	Total As, Pb, Ca, K, Na, Mg (8020A, 8010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)		
1	TB203-22	7-10-2020	1030	4	-	2	-	2							
2															
3															
4															
5															
Associated with: GWS2-451-203 GWS3-449-203															
SAMPLER(S): JM				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0227											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: J Messenger				7-10-2020		1900		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reiff				7/11/20		1001	

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER															
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		COC-TB203-23															
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)							COMMENTS												
				Total Number of Bottles	VOCs	BTEX	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)			
1	TB203-23	7-10-2020	1030	4	-	2	-	2															
2																							
3																							
4																							
5																							
Associated with: GW S7-451-203 ✓ GW S9-447-203 GW S5-446-203																							
SAMPLER(S): <i>jm</i>				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0238																			
RELINQUISHED BY: <i>J. Messenger</i>				DATE: 7-10-2020				TIME: 1900				RECEIVED BY: <i>Enrique Sanchez</i>				DATE: 7-11-2020				TIME: 1018			
Printed Name and Signature: <i>J. Messenger</i>																							
Printed Name and Signature: <i>J. Messenger</i>																							
Printed Name and Signature: <i>J. Messenger</i>																							
Printed Name and Signature: <i>J. Messenger</i>																							

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB203-24							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmth@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7259											
				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total As Pb, Cd, K, Na, Mg (6020A, 6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300 D)	Nitrate-Nitrite (353.2)	Alkalinity (Total Carbonate, and Bicarbonate) (353.2)	(SM2320B)		
1	TB203-24	7-10-2020	1030	4	-	2	-	2							
2															
3															
4															
5															
Associated with: GWS7-451-203															
SAMPLER(S): J. Messenger, D. Schuelek				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0010											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schuelek				7-10-2020		1900									
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: W MATHERS				7/11/20		0915	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-7458-1

Login Number: 7458**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-7707-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility
Revision: 2

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

10/14/2020 8:14:10 AM

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

Designee for

Darlene Bandy, Project Manager I
(303)736-0188

Darlene.Bandy@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
10/14/2020 8:14:10 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Job ID: 410-7707-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-7707-1

Revision 1

The report being provided is a revision of the original report sent on 8/14/2020. The report (revision 1) is being revised due to: Manganese missing from dissolved metals samples.

Receipt

The samples were received on 7/15/2020 9:51 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.3° C and 0.6° C.

Receipt Exceptions

Method FIELD_FLTRD: The following sample was collected in an improper container: GW005-203 (410-7707-2). The field filtered metals were in unpreserved containers. The lab preserved the container and proceeded with the analysis.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verifications (CCV) associated with batches 26363 and 28276 recovered above the upper control limit for Ethylene Dibromide, indicating matrix effect on the CCV. Therefore, the data have been reported. The associated sample is impacted: GW005-203 (410-7707-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: TB203-27

Lab Sample ID: 410-7707-1

No Detections.

Client Sample ID: GW005-203

Lab Sample ID: 410-7707-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylbenzene	220	D	2.0	1.6	0.80	ug/L	2			8260C DOD	Total/NA
Xylenes, Total	840		12	4.0	2.8	ug/L	2			8260C DOD	Total/NA
Benzene - DL	1700	D	20	10	4.0	ug/L	20			8260C DOD	Total/NA
Toluene - DL	1800	D	20	10	4.0	ug/L	20			8260C DOD	Total/NA
Ethylene Dibromide (1C)	1.9	D Q	0.59	0.39	0.20	ug/L	20			8011	Total/NA
Bromide	3.2	D	2.5	2.0	1.3	mg/L	5			EPA 300.0 R2.1	Total/NA
Chloride	200	D	20	15	10	mg/L	50			EPA 300.0 R2.1	Total/NA
Sulfate	95	D	50	45	15	mg/L	50			EPA 300.0 R2.1	Total/NA
Calcium	160		0.20	0.15	0.096	mg/L	1			6010C	Total
Magnesium	29		0.10	0.075	0.040	mg/L	1			6010C	Total
Potassium	4.4		0.50	0.38	0.20	mg/L	1			6010C	Total
Sodium	70		1.0	0.50	0.24	mg/L	1			6010C	Total
Iron	0.17	J	0.21	0.10	0.041	mg/L	1			6010C	Dissolved
Manganese	1.6		0.010	0.0052	0.0031	mg/L	1			6010C	Dissolved
Arsenic	0.00097	J	0.0020	0.0016	0.00068	mg/L	1			6020A	Total/NA
Lead	0.00026	J	0.00050	0.00025	0.000071	mg/L	1			6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	310		8.0	6.0	8.0	mg/L	1			2320B-2011	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	310		8.0	6.0	8.0	mg/L	1			2320B-2011	Total/NA

Client Sample ID: ER203-01

Lab Sample ID: 410-7707-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	0.48		0.20	0.15	0.096	mg/L	1			6010C	Total
Potassium	0.40	J	0.50	0.38	0.20	mg/L	1			6010C	Total
Sodium	0.92	J	1.0	0.50	0.24	mg/L	1			6010C	Total
Lead	0.00072		0.00050	0.00025	0.000071	mg/L	1			6020A	Total/NA

Client Sample ID: GW012R-603

Lab Sample ID: 410-7707-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	190	J D	200	150	100	mg/L	500			EPA 300.0 R2.1	Total/NA
Sulfate	400	J D	500	450	150	mg/L	500			EPA 300.0 R2.1	Total/NA
Calcium	160		0.20	0.15	0.096	mg/L	1			6010C	Total
Magnesium	24		0.10	0.075	0.040	mg/L	1			6010C	Total
Potassium	4.6		0.50	0.38	0.20	mg/L	1			6010C	Total
Sodium	64		1.0	0.50	0.24	mg/L	1			6010C	Total
Arsenic	0.00070	J	0.0020	0.0016	0.00068	mg/L	1			6020A	Total/NA
Lead	0.0016		0.00050	0.00025	0.000071	mg/L	1			6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW012R-603 (Continued)

Lab Sample ID: 410-7707-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L	1		2320B-2011	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L	1		2320B-2011	Total/NA
Nitrate Nitrite as N	4.2		0.20	0.18	0.080	mg/L	2		353.2	Total/NA

Client Sample ID: TB203-28

Lab Sample ID: 410-7707-5

No Detections.

Client Sample ID: GW012R-203

Lab Sample ID: 410-7707-6

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	200	D	200	150	100	mg/L	500		EPA 300.0 R2.1	Total/NA
Sulfate	390	J D	500	450	150	mg/L	500		EPA 300.0 R2.1	Total/NA
Calcium	150		0.20	0.15	0.096	mg/L	1		6010C	Total/NA
Magnesium	23		0.10	0.075	0.040	mg/L	1		6010C	Total/NA
Potassium	4.6		0.50	0.38	0.20	mg/L	1		6010C	Total/NA
Sodium	63		1.0	0.50	0.24	mg/L	1		6010C	Total/NA
Lead	0.0019		0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L	1		2320B-2011	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L	1		2320B-2011	Total/NA
Nitrate Nitrite as N	3.9		0.50	0.45	0.20	mg/L	5		353.2	Total/NA

Client Sample ID: ER203-02

Lab Sample ID: 410-7707-7

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	2.5		1.0	0.50	0.20	ug/L	1		8260C DOD	Total/NA
Calcium	0.11	J	0.20	0.15	0.096	mg/L	1		6010C	Total/NA
Lead	0.000075	J	0.00050	0.00025	0.000071	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: TB203-27

Lab Sample ID: 410-7707-1

Date Collected: 07/14/20 14:11

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 10:43	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 10:43	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 10:43	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 10:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/21/20 10:43	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/21/20 10:43	1
Dibromofluoromethane (Surr)	102		80 - 119		07/21/20 10:43	1
Toluene-d8 (Surr)	101		89 - 112		07/21/20 10:43	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/24/20 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136	07/18/20 06:38	07/24/20 10:12	1
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136	07/18/20 06:38	07/24/20 10:12	1

Client Sample ID: GW005-203

Lab Sample ID: 410-7707-2

Date Collected: 07/13/20 15:25

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	220	D	2.0	1.6	0.80	ug/L		07/21/20 17:19	2
Xylenes, Total	840		12	4.0	2.8	ug/L		07/21/20 17:19	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		81 - 118		07/21/20 17:19	2
4-Bromofluorobenzene (Surr)	97		85 - 114		07/21/20 17:19	2
Dibromofluoromethane (Surr)	94		80 - 119		07/21/20 17:19	2
Toluene-d8 (Surr)	104		89 - 112		07/21/20 17:19	2

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1700	D	20	10	4.0	ug/L		07/21/20 17:41	20
Toluene	1800	D	20	10	4.0	ug/L		07/21/20 17:41	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/21/20 17:41	20
4-Bromofluorobenzene (Surr)	98		85 - 114		07/21/20 17:41	20
Dibromofluoromethane (Surr)	96		80 - 119		07/21/20 17:41	20
Toluene-d8 (Surr)	101		89 - 112		07/21/20 17:41	20

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	1.9	D Q	0.59	0.39	0.20	ug/L		07/30/20 21:10	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	156	Q	46 - 136	07/18/20 06:38	07/30/20 21:10	20
1,1,2,2-Tetrachloroethane (2C)	109		46 - 136	07/18/20 06:38	07/30/20 21:10	20

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW005-203

Lab Sample ID: 410-7707-2

Date Collected: 07/13/20 15:25

Matrix: Water

Date Received: 07/15/20 09:51

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	3.2	D	2.5	2.0	1.3	mg/L		07/16/20 11:22	5
Chloride	200	D	20	15	10	mg/L		07/16/20 11:39	50
Sulfate	95	D	50	45	15	mg/L		07/16/20 11:39	50

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	160		0.20	0.15	0.096	mg/L		07/21/20 08:52	1
Magnesium	29		0.10	0.075	0.040	mg/L		07/21/20 08:52	1
Potassium	4.4		0.50	0.38	0.20	mg/L		07/21/20 22:16	1
Sodium	70		1.0	0.50	0.24	mg/L		07/21/20 08:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.17	J	0.21	0.10	0.041	mg/L		07/22/20 16:16	1
Manganese	1.6		0.010	0.0052	0.0031	mg/L		07/22/20 16:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00097	J	0.0020	0.0016	0.00068	mg/L		07/28/20 15:03	1
Lead	0.00026	J	0.00050	0.00025	0.000071	mg/L		07/28/20 15:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	310		8.0	6.0	8.0	mg/L		07/16/20 01:46	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 01:46	1
Total Alkalinity as CaCO ₃ to pH 4.5	310		8.0	6.0	8.0	mg/L		07/16/20 01:46	1
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 12:34	1

Client Sample ID: ER203-01

Lab Sample ID: 410-7707-3

Date Collected: 07/13/20 09:21

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U M	1.0	0.50	0.20	ug/L		07/21/20 13:39	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 13:39	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 13:39	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/21/20 13:39	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/21/20 13:39	1
Dibromofluoromethane (Surr)	101		80 - 119		07/21/20 13:39	1
Toluene-d8 (Surr)	101		89 - 112		07/21/20 13:39	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/24/20 10:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	72		46 - 136	07/18/20 06:38	07/24/20 10:46	1
1,1,2,2-Tetrachloroethane (2C)	72		46 - 136	07/18/20 06:38	07/24/20 10:46	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: ER203-01

Lab Sample ID: 410-7707-3

Date Collected: 07/13/20 09:21

Matrix: Water

Date Received: 07/15/20 09:51

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.48		0.20	0.15	0.096	mg/L		07/21/20 08:55	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/21/20 08:55	1
Potassium	0.40	J	0.50	0.38	0.20	mg/L		07/21/20 22:19	1
Sodium	0.92	J	1.0	0.50	0.24	mg/L		07/21/20 08:55	1
Iron	0.10	U	0.20	0.10	0.040	mg/L		07/21/20 08:55	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		07/21/20 08:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/28/20 15:01	1
Lead	0.00072		0.00050	0.00025	0.000071	mg/L		07/28/20 15:01	1

Client Sample ID: GW012R-603

Lab Sample ID: 410-7707-4

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 14:01	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 14:01	1
Toluene	0.50	U M	1.0	0.50	0.20	ug/L		07/21/20 14:01	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/21/20 14:01	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/21/20 14:01	1
Dibromofluoromethane (Surr)	101		80 - 119		07/21/20 14:01	1
Toluene-d8 (Surr)	101		89 - 112		07/21/20 14:01	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (2C)	0.019	U	0.029	0.019	0.0096	ug/L		07/24/20 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	85		46 - 136	07/18/20 06:38	07/24/20 11:03	1
1,1,2,2-Tetrachloroethane (2C)	74		46 - 136	07/18/20 06:38	07/24/20 11:03	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/16/20 15:04	5
Chloride	190	J D	200	150	100	mg/L		07/16/20 15:21	500
Sulfate	400	J D	500	450	150	mg/L		07/16/20 15:21	500

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	160		0.20	0.15	0.096	mg/L		07/21/20 08:58	1
Magnesium	24		0.10	0.075	0.040	mg/L		07/21/20 08:58	1
Potassium	4.6		0.50	0.38	0.20	mg/L		07/21/20 22:22	1
Sodium	64		1.0	0.50	0.24	mg/L		07/21/20 08:58	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW012R-603

Lab Sample ID: 410-7707-4

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/22/20 16:20	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/22/20 16:20	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.00070	J	0.0020	0.0016	0.00068	mg/L		07/28/20 14:59	1
Lead	0.0016		0.00050	0.00025	0.000071	mg/L		07/28/20 14:59	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	110		8.0	6.0	8.0	mg/L		07/16/20 02:00	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 02:00	1
Total Alkalinity as CaCO ₃ to pH 4.5	110		8.0	6.0	8.0	mg/L		07/16/20 02:00	1
Nitrate Nitrite as N	4.2		0.20	0.18	0.080	mg/L		07/27/20 07:53	2

Client Sample ID: TB203-28

Lab Sample ID: 410-7707-5

Date Collected: 07/14/20 14:11

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 11:05	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 11:05	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 11:05	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 11:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/21/20 11:05	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/21/20 11:05	1
Dibromofluoromethane (Surr)	102		80 - 119		07/21/20 11:05	1
Toluene-d8 (Surr)	101		89 - 112		07/21/20 11:05	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/24/20 11:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	72		46 - 136	07/18/20 06:38	07/24/20 11:20	1
1,1,2,2-Tetrachloroethane (2C)	73		46 - 136	07/18/20 06:38	07/24/20 11:20	1

Client Sample ID: GW012R-203

Lab Sample ID: 410-7707-6

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 11:26	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 11:26	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 11:26	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 11:26	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW012R-203

Lab Sample ID: 410-7707-6

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/21/20 11:26	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/21/20 11:26	1
Dibromofluoromethane (Surr)	102		80 - 119		07/21/20 11:26	1
Toluene-d8 (Surr)	101		89 - 112		07/21/20 11:26	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		07/29/20 01:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136	07/18/20 06:38	07/29/20 01:54	1
1,1,2,2-Tetrachloroethane (2C)	60		46 - 136	07/18/20 06:38	07/29/20 01:54	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.0	U	2.5	2.0	1.3	mg/L		07/16/20 14:30	5
Chloride	200	D	200	150	100	mg/L		07/16/20 14:47	500
Sulfate	390	J D	500	450	150	mg/L		07/16/20 14:47	500

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	150		0.20	0.15	0.096	mg/L		07/21/20 09:01	1
Magnesium	23		0.10	0.075	0.040	mg/L		07/21/20 09:01	1
Potassium	4.6		0.50	0.38	0.20	mg/L		07/21/20 22:25	1
Sodium	63		1.0	0.50	0.24	mg/L		07/21/20 09:01	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/23/20 19:39	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/23/20 19:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/28/20 14:37	1
Lead	0.0019		0.00050	0.00025	0.000071	mg/L		07/28/20 14:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	110		8.0	6.0	8.0	mg/L		07/16/20 01:53	1
Carbonate Alkalinity as CaCO3	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 01:53	1
Total Alkalinity as CaCO3 to pH 4.5	110		8.0	6.0	8.0	mg/L		07/16/20 01:53	1
Nitrate Nitrite as N	3.9		0.50	0.45	0.20	mg/L		07/27/20 07:54	5

Client Sample ID: ER203-02

Lab Sample ID: 410-7707-7

Date Collected: 07/14/20 10:11

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 14:23	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 14:23	1
Toluene	2.5		1.0	0.50	0.20	ug/L		07/21/20 14:23	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: ER203-02

Lab Sample ID: 410-7707-7

Date Collected: 07/14/20 10:11

Matrix: Water

Date Received: 07/15/20 09:51

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/21/20 14:23	1
4-Bromofluorobenzene (Surr)	96		85 - 114		07/21/20 14:23	1
Dibromofluoromethane (Surr)	102 M		80 - 119		07/21/20 14:23	1
Toluene-d8 (Surr)	102		89 - 112		07/21/20 14:23	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		07/24/20 13:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	68		46 - 136	07/18/20 06:38	07/24/20 13:01	1
1,1,2,2-Tetrachloroethane (2C)	67		46 - 136	07/18/20 06:38	07/24/20 13:01	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.11	J	0.20	0.15	0.096	mg/L		07/21/20 09:04	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/21/20 09:04	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/21/20 22:28	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/21/20 09:04	1
Iron	0.10	U	0.20	0.10	0.040	mg/L		07/21/20 09:04	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		07/21/20 09:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/28/20 14:48	1
Lead	0.000075	J	0.00050	0.00025	0.000071	mg/L		07/28/20 14:48	1

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Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-7707-1	TB203-27	101	93	102	101
410-7707-2	GW005-203	96	97	94	104
410-7707-2 - DL	GW005-203	100	98	96	101
410-7707-3	ER203-01	99	94	101	101
410-7707-4	GW012R-603	100	94	101	101
410-7707-5	TB203-28	99	94	102	101
410-7707-6	GW012R-203	98	94	102	101
410-7707-6 MS	GW012R-203	98	99	98	102
410-7707-6 MSD	GW012R-203	97	99	98	102
410-7707-7	ER203-02	100	96	102 M	102
LCS 410-24558/5	Lab Control Sample	97	98	96	102
MB 410-24558/7	Method Blank	98	94	99	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-7707-1	TB203-27	60	61
410-7707-2	GW005-203	156 Q	109
410-7707-3	ER203-01	72	72
410-7707-4	GW012R-603	85	74
410-7707-5	TB203-28	72	73
410-7707-6	GW012R-203	73	60
410-7707-6 MS	GW012R-203	82	64
410-7707-6 MSD	GW012R-203	78	63
410-7707-7	ER203-02	68	67
LCS 410-23886/2-A	Lab Control Sample	60	59
LCSD 410-23886/3-A	Lab Control Sample Dup	51	55
MB 410-23886/1-A	Method Blank	56	56

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-24558/7

Matrix: Water

Analysis Batch: 24558

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 09:36	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/21/20 09:36	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/21/20 09:36	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/21/20 09:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/21/20 09:36	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/21/20 09:36	1
Dibromofluoromethane (Surr)	99		80 - 119		07/21/20 09:36	1
Toluene-d8 (Surr)	100		89 - 112		07/21/20 09:36	1

Lab Sample ID: LCS 410-24558/5

Matrix: Water

Analysis Batch: 24558

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.1		ug/L		96	42 - 138
Ethylbenzene	20.0	20.4		ug/L		102	79 - 121
Toluene	20.0	20.0		ug/L		100	80 - 121
Xylenes, Total	60.0	61.9		ug/L		103	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	96		80 - 119
Toluene-d8 (Surr)	102		89 - 112

Lab Sample ID: 410-7707-6 MS

Matrix: Water

Analysis Batch: 24558

Client Sample ID: GW012R-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.50	U	20.0	20.8		ug/L		104	42 - 138
Ethylbenzene	0.80	U	20.0	21.8		ug/L		109	79 - 121
Toluene	0.50	U	20.0	21.1		ug/L		106	80 - 121
Xylenes, Total	2.0	U	60.0	65.7		ug/L		110	79 - 121

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	102		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-7707-6 MSD

Matrix: Water

Analysis Batch: 24558

Client Sample ID: GW012R-203

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.50	U	20.0	19.2		ug/L		96	42 - 138	8	20
Ethylbenzene	0.80	U	20.0	20.4		ug/L		102	79 - 121	7	20
Toluene	0.50	U	20.0	19.5		ug/L		97	80 - 121	8	20
Xylenes, Total	2.0	U	60.0	61.0		ug/L		102	79 - 121	7	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	97		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	102		89 - 112

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-23886/1-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23886

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		07/22/20 21:05	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136	07/18/20 06:38	07/22/20 21:05	1
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136	07/18/20 06:38	07/22/20 21:05	1

Lab Sample ID: LCS 410-23886/2-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.125		ug/L		98	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136

Lab Sample ID: LCSD 410-23886/3-A

Matrix: Water

Analysis Batch: 25287

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.114		ug/L		89	60 - 140	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-7707-6 MS

Matrix: Water

Analysis Batch: 27290

Client Sample ID: GW012R-203

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ethylene Dibromide (1C)	0.019	U M	0.123	0.149	M	ug/L		121	60 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	82		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136						

Lab Sample ID: 410-7707-6 MSD

Matrix: Water

Analysis Batch: 27290

Client Sample ID: GW012R-203

Prep Type: Total/NA

Prep Batch: 23886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ethylene Dibromide (1C)	0.019	U M	0.123	0.148		ug/L		121	60 - 140	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	78		46 - 136								
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136								

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-23094/4

Matrix: Water

Analysis Batch: 23094

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.25	mg/L		07/16/20 06:45	1
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/16/20 06:45	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/16/20 06:45	1

Lab Sample ID: LCS 410-23094/3

Matrix: Water

Analysis Batch: 23094

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	7.50	7.39		mg/L		99	90 - 110
Chloride	3.00	2.90		mg/L		97	90 - 110
Sulfate	7.50	7.31		mg/L		97	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-23026/1-A

Matrix: Water

Analysis Batch: 25269

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23026

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/22/20 15:15	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/22/20 15:15	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-23026/2-A
Matrix: Water
Analysis Batch: 25269

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.437		mg/L		109	87 - 115
Manganese	0.0200	0.0216		mg/L		108	90 - 114

Lab Sample ID: MB 410-23031/1-A
Matrix: Water
Analysis Batch: 25801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23031

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/23/20 19:32	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/23/20 19:32	1

Lab Sample ID: LCS 410-23031/2-A
Matrix: Water
Analysis Batch: 25801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.411		mg/L		102	87 - 115
Manganese	0.0200	0.0210		mg/L		105	90 - 114

Lab Sample ID: MB 410-23013/1-A
Matrix: Water
Analysis Batch: 24937

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 23013

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		07/21/20 21:20	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		07/21/20 21:20	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		07/21/20 21:20	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		07/21/20 21:20	1
Iron	0.10	U	0.20	0.10	0.040	mg/L		07/21/20 21:20	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		07/21/20 21:20	1

Lab Sample ID: LCS 410-23013/2-A
Matrix: Water
Analysis Batch: 24937

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 23013

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.404		mg/L		101	87 - 113
Magnesium	0.200	0.204		mg/L		102	85 - 113
Potassium	5.60	5.53		mg/L		99	86 - 114
Sodium	2.00	1.99		mg/L		100	87 - 115
Iron	0.402	0.404		mg/L		100	87 - 115
Manganese	0.0200	0.0199		mg/L		100	90 - 114

Lab Sample ID: 410-7707-6 MS
Matrix: Water
Analysis Batch: 25801

Client Sample ID: GW012R-203
Prep Type: Dissolved
Prep Batch: 23031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U	0.402	0.443		mg/L		110	87 - 115
Manganese	0.0052	U	0.0200	0.0217		mg/L		109	90 - 114

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 6010C - Metals (ICP)

Lab Sample ID: 410-7707-6 MSD
Matrix: Water
Analysis Batch: 25801

Client Sample ID: GW012R-203
Prep Type: Dissolved
Prep Batch: 23031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U	0.402	0.424		mg/L		105	87 - 115	4	20
Manganese	0.0052	U	0.0200	0.0213		mg/L		107	90 - 114	2	20

Lab Sample ID: 410-7707-6 DU
Matrix: Water
Analysis Batch: 25801

Client Sample ID: GW012R-203
Prep Type: Dissolved
Prep Batch: 23031

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U	0.10	U	mg/L				NC	20
Manganese	0.0052	U	0.0052	U	mg/L				NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-23015/1-A
Matrix: Water
Analysis Batch: 27455

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23015

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		07/28/20 14:33	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		07/28/20 14:33	1

Lab Sample ID: LCS 410-23015/2-A
Matrix: Water
Analysis Batch: 27455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0102		mg/L		103	84 - 116
Lead	0.00492	0.00514		mg/L		105	88 - 115

Lab Sample ID: 410-7707-6 MS
Matrix: Water
Analysis Batch: 27455

Client Sample ID: GW012R-203
Prep Type: Total/NA
Prep Batch: 23015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0016	U	0.00989	0.0109		mg/L		110	84 - 116
Lead	0.0019		0.00492	0.00743		mg/L		113	88 - 118

Lab Sample ID: 410-7707-6 MSD
Matrix: Water
Analysis Batch: 27455

Client Sample ID: GW012R-203
Prep Type: Total/NA
Prep Batch: 23015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0016	U	0.00989	0.0110		mg/L		111	84 - 116	1	20
Lead	0.0019		0.00492	0.00706		mg/L		105	88 - 118	5	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-7707-6 DU

Matrix: Water

Analysis Batch: 27455

Client Sample ID: GW012R-203

Prep Type: Total/NA

Prep Batch: 23015

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.0016	U	0.0016	U	mg/L		NC	20
Lead	0.0019		0.00195		mg/L		4	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-23322/30

Matrix: Water

Analysis Batch: 23322

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 00:53	1
Carbonate Alkalinity as CaCO ₃	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 00:53	1
Total Alkalinity as CaCO ₃ to pH 4.5	6.0	U	8.0	6.0	8.0	mg/L		07/16/20 00:53	1

Lab Sample ID: LCS 410-23322/31

Matrix: Water

Analysis Batch: 23322

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO ₃ to pH 4.5	189	166		mg/L		88	82 - 106

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-26352/123

Matrix: Water

Analysis Batch: 26352

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/25/20 11:57	1

Lab Sample ID: LCS 410-26352/124

Matrix: Water

Analysis Batch: 26352

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.54		mg/L		101	90 - 110

Lab Sample ID: MB 410-26748/20

Matrix: Water

Analysis Batch: 26748

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		07/27/20 07:23	1

Lab Sample ID: LCS 410-26748/21

Matrix: Water

Analysis Batch: 26748

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.61		mg/L		104	90 - 110

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

GC/MS VOA

Analysis Batch: 24558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-1	TB203-27	Total/NA	Water	8260C DOD	
410-7707-2	GW005-203	Total/NA	Water	8260C DOD	
410-7707-2 - DL	GW005-203	Total/NA	Water	8260C DOD	
410-7707-3	ER203-01	Total/NA	Water	8260C DOD	
410-7707-4	GW012R-603	Total/NA	Water	8260C DOD	
410-7707-5	TB203-28	Total/NA	Water	8260C DOD	
410-7707-6	GW012R-203	Total/NA	Water	8260C DOD	
410-7707-7	ER203-02	Total/NA	Water	8260C DOD	
MB 410-24558/7	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-24558/5	Lab Control Sample	Total/NA	Water	8260C DOD	
410-7707-6 MS	GW012R-203	Total/NA	Water	8260C DOD	
410-7707-6 MSD	GW012R-203	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 23886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-1	TB203-27	Total/NA	Water	8011	
410-7707-2	GW005-203	Total/NA	Water	8011	
410-7707-3	ER203-01	Total/NA	Water	8011	
410-7707-4	GW012R-603	Total/NA	Water	8011	
410-7707-5	TB203-28	Total/NA	Water	8011	
410-7707-6	GW012R-203	Total/NA	Water	8011	
410-7707-7	ER203-02	Total/NA	Water	8011	
MB 410-23886/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-23886/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-23886/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-7707-6 MS	GW012R-203	Total/NA	Water	8011	
410-7707-6 MSD	GW012R-203	Total/NA	Water	8011	

Analysis Batch: 25287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-23886/1-A	Method Blank	Total/NA	Water	8011	23886
LCS 410-23886/2-A	Lab Control Sample	Total/NA	Water	8011	23886
LCSD 410-23886/3-A	Lab Control Sample Dup	Total/NA	Water	8011	23886

Analysis Batch: 25771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-1	TB203-27	Total/NA	Water	8011	23886
410-7707-3	ER203-01	Total/NA	Water	8011	23886
410-7707-4	GW012R-603	Total/NA	Water	8011	23886
410-7707-5	TB203-28	Total/NA	Water	8011	23886
410-7707-7	ER203-02	Total/NA	Water	8011	23886

Analysis Batch: 27290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-6	GW012R-203	Total/NA	Water	8011	23886
410-7707-6 MS	GW012R-203	Total/NA	Water	8011	23886
410-7707-6 MSD	GW012R-203	Total/NA	Water	8011	23886

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

GC Semi VOA

Analysis Batch: 28276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	8011	23886

HPLC/IC

Analysis Batch: 23094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	EPA 300.0 R2.1	
410-7707-2	GW005-203	Total/NA	Water	EPA 300.0 R2.1	
410-7707-4	GW012R-603	Total/NA	Water	EPA 300.0 R2.1	
410-7707-4	GW012R-603	Total/NA	Water	EPA 300.0 R2.1	
410-7707-6	GW012R-203	Total/NA	Water	EPA 300.0 R2.1	
410-7707-6	GW012R-203	Total/NA	Water	EPA 300.0 R2.1	
MB 410-23094/4	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-23094/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 23013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total Recoverable	Water	3005A	
410-7707-3	ER203-01	Total Recoverable	Water	3005A	
410-7707-4	GW012R-603	Total Recoverable	Water	3005A	
410-7707-6	GW012R-203	Total Recoverable	Water	3005A	
410-7707-7	ER203-02	Total Recoverable	Water	3005A	
MB 410-23013/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-23013/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 23015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	3020A	
410-7707-3	ER203-01	Total/NA	Water	3020A	
410-7707-4	GW012R-603	Total/NA	Water	3020A	
410-7707-6	GW012R-203	Total/NA	Water	3020A	
410-7707-7	ER203-02	Total/NA	Water	3020A	
MB 410-23015/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-23015/2-A	Lab Control Sample	Total/NA	Water	3020A	
410-7707-6 MS	GW012R-203	Total/NA	Water	3020A	
410-7707-6 MSD	GW012R-203	Total/NA	Water	3020A	
410-7707-6 DU	GW012R-203	Total/NA	Water	3020A	

Prep Batch: 23026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Dissolved	Water	Non-Digest Prep	
410-7707-4	GW012R-603	Dissolved	Water	Non-Digest Prep	
MB 410-23026/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-23026/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 23031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-6	GW012R-203	Dissolved	Water	Non-Digest Prep	
MB 410-23031/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-23031/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Metals (Continued)

Prep Batch: 23031 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-6 MS	GW012R-203	Dissolved	Water	Non-Digest Prep	
410-7707-6 MSD	GW012R-203	Dissolved	Water	Non-Digest Prep	
410-7707-6 DU	GW012R-203	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 24660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total Recoverable	Water	6010C	23013
410-7707-3	ER203-01	Total Recoverable	Water	6010C	23013
410-7707-4	GW012R-603	Total Recoverable	Water	6010C	23013
410-7707-6	GW012R-203	Total Recoverable	Water	6010C	23013
410-7707-7	ER203-02	Total Recoverable	Water	6010C	23013

Analysis Batch: 24937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total Recoverable	Water	6010C	23013
410-7707-3	ER203-01	Total Recoverable	Water	6010C	23013
410-7707-4	GW012R-603	Total Recoverable	Water	6010C	23013
410-7707-6	GW012R-203	Total Recoverable	Water	6010C	23013
410-7707-7	ER203-02	Total Recoverable	Water	6010C	23013
MB 410-23013/1-A	Method Blank	Total Recoverable	Water	6010C	23013
LCS 410-23013/2-A	Lab Control Sample	Total Recoverable	Water	6010C	23013

Analysis Batch: 25269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Dissolved	Water	6010C	23026
410-7707-4	GW012R-603	Dissolved	Water	6010C	23026
MB 410-23026/1-A	Method Blank	Total/NA	Water	6010C	23026
LCS 410-23026/2-A	Lab Control Sample	Total/NA	Water	6010C	23026

Analysis Batch: 25801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-6	GW012R-203	Dissolved	Water	6010C	23031
MB 410-23031/1-A	Method Blank	Total/NA	Water	6010C	23031
LCS 410-23031/2-A	Lab Control Sample	Total/NA	Water	6010C	23031
410-7707-6 MS	GW012R-203	Dissolved	Water	6010C	23031
410-7707-6 MSD	GW012R-203	Dissolved	Water	6010C	23031
410-7707-6 DU	GW012R-203	Dissolved	Water	6010C	23031

Analysis Batch: 27455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	6020A	23015
410-7707-3	ER203-01	Total/NA	Water	6020A	23015
410-7707-4	GW012R-603	Total/NA	Water	6020A	23015
410-7707-6	GW012R-203	Total/NA	Water	6020A	23015
410-7707-7	ER203-02	Total/NA	Water	6020A	23015
MB 410-23015/1-A	Method Blank	Total/NA	Water	6020A	23015
LCS 410-23015/2-A	Lab Control Sample	Total/NA	Water	6020A	23015
410-7707-6 MS	GW012R-203	Total/NA	Water	6020A	23015
410-7707-6 MSD	GW012R-203	Total/NA	Water	6020A	23015
410-7707-6 DU	GW012R-203	Total/NA	Water	6020A	23015

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

General Chemistry

Analysis Batch: 23322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	2320B-2011	
410-7707-4	GW012R-603	Total/NA	Water	2320B-2011	
410-7707-6	GW012R-203	Total/NA	Water	2320B-2011	
MB 410-23322/30	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-23322/31	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 26352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-2	GW005-203	Total/NA	Water	353.2	
MB 410-26352/123	Method Blank	Total/NA	Water	353.2	
LCS 410-26352/124	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 26748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-7707-4	GW012R-603	Total/NA	Water	353.2	
410-7707-6	GW012R-203	Total/NA	Water	353.2	
MB 410-26748/20	Method Blank	Total/NA	Water	353.2	
LCS 410-26748/21	Lab Control Sample	Total/NA	Water	353.2	

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: TB203-27

Lab Sample ID: 410-7707-1

Date Collected: 07/14/20 14:11

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 10:43	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 10:12	AC3T	ELLE

Client Sample ID: GW005-203

Lab Sample ID: 410-7707-2

Date Collected: 07/13/20 15:25

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		2	24558	07/21/20 17:19	TQ4J	ELLE
Total/NA	Analysis	8260C DOD	DL	20	24558	07/21/20 17:41	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		20	28276	07/30/20 21:10	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	23094	07/16/20 11:22	GJ35	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		50	23094	07/16/20 11:39	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			23026	07/16/20 03:47	UJL8	ELLE
Dissolved	Analysis	6010C		1	25269	07/22/20 16:16	UCIG	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24937	07/21/20 22:16	LR7D	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24660	07/21/20 08:52	ULJC	ELLE
Total/NA	Prep	3020A			23015	07/16/20 02:25	UJL8	ELLE
Total/NA	Analysis	6020A		1	27455	07/28/20 15:03	V5SW	ELLE
Total/NA	Analysis	2320B-2011		1	23322	07/16/20 01:46	JB	ELLE
Total/NA	Analysis	353.2		1	26352	07/25/20 12:34	P684	ELLE

Client Sample ID: ER203-01

Lab Sample ID: 410-7707-3

Date Collected: 07/13/20 09:21

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 13:39	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 10:46	AC3T	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24937	07/21/20 22:19	LR7D	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24660	07/21/20 08:55	ULJC	ELLE
Total/NA	Prep	3020A			23015	07/16/20 02:25	UJL8	ELLE
Total/NA	Analysis	6020A		1	27455	07/28/20 15:01	V5SW	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW012R-603

Lab Sample ID: 410-7707-4

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 14:01	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 11:03	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	23094	07/16/20 15:04	GJ35	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		500	23094	07/16/20 15:21	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			23026	07/16/20 03:47	UJL8	ELLE
Dissolved	Analysis	6010C		1	25269	07/22/20 16:20	UCIG	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24937	07/21/20 22:22	LR7D	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24660	07/21/20 08:58	ULJC	ELLE
Total/NA	Prep	3020A			23015	07/16/20 02:25	UJL8	ELLE
Total/NA	Analysis	6020A		1	27455	07/28/20 14:59	V5SW	ELLE
Total/NA	Analysis	2320B-2011		1	23322	07/16/20 02:00	JB	ELLE
Total/NA	Analysis	353.2		2	26748	07/27/20 07:53	P684	ELLE

Client Sample ID: TB203-28

Lab Sample ID: 410-7707-5

Date Collected: 07/14/20 14:11

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 11:05	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 11:20	AC3T	ELLE

Client Sample ID: GW012R-203

Lab Sample ID: 410-7707-6

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 11:26	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	27290	07/29/20 01:54	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	23094	07/16/20 14:30	GJ35	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		500	23094	07/16/20 14:47	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			23031	07/16/20 04:32	UJL8	ELLE
Dissolved	Analysis	6010C		1	25801	07/23/20 19:39	UCIG	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24937	07/21/20 22:25	LR7D	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24660	07/21/20 09:01	ULJC	ELLE
Total/NA	Prep	3020A			23015	07/16/20 02:25	UJL8	ELLE
Total/NA	Analysis	6020A		1	27455	07/28/20 14:37	V5SW	ELLE
Total/NA	Analysis	2320B-2011		1	23322	07/16/20 01:53	JB	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Client Sample ID: GW012R-203

Lab Sample ID: 410-7707-6

Date Collected: 07/14/20 12:40

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		5	26748	07/27/20 07:54	P684	ELLE

Client Sample ID: ER203-02

Lab Sample ID: 410-7707-7

Date Collected: 07/14/20 10:11

Matrix: Water

Date Received: 07/15/20 09:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	24558	07/21/20 14:23	TQ4J	ELLE
Total/NA	Prep	8011			23886	07/18/20 06:38	UKQ8	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 13:01	AC3T	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24937	07/21/20 22:28	LR7D	ELLE
Total Recoverable	Prep	3005A			23013	07/16/20 02:15	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	24660	07/21/20 09:04	ULJC	ELLE
Total/NA	Prep	3020A			23015	07/16/20 02:25	UJL8	ELLE
Total/NA	Analysis	6020A		1	27455	07/28/20 14:48	V5SW	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-7707-1

Project/Site: Kirtland AFB Bulk Fuels Facility

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
2320B-2011	Alkalinity, Total	SM	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-7707-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-7707-1	TB203-27	Water	07/14/20 14:11	07/15/20 09:51	
410-7707-2	GW005-203	Water	07/13/20 15:25	07/15/20 09:51	
410-7707-3	ER203-01	Water	07/13/20 09:21	07/15/20 09:51	
410-7707-4	GW012R-603	Water	07/14/20 12:40	07/15/20 09:51	
410-7707-5	TB203-28	Water	07/14/20 14:11	07/15/20 09:51	
410-7707-6	GW012R-203	Water	07/14/20 12:40	07/15/20 09:51	
410-7707-7	ER203-02	Water	07/14/20 10:11	07/15/20 09:51	

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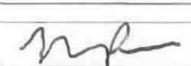
Eurofins Lancaster Laboratories Env, LLC



410-7707 Chain of Custody

EA		225 400 Hum Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				COC-TB203-27			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				YEAR: 2020				QUARTER: 3			
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	COMMENTS		
1	TB203-27	7-14-2020	1411	4	-	2	-	2							
2															
3															
4															
5															
Associated with: CW005-203 ER203-01 GU012R-603															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0168											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-14-2020		1700		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							

QPM

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				COC-005-203					
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				YEAR: 2020		QUARTER: 3 (Jul-Sep)					
ANALYSIS REQUIRED (Specify number of bottles)																	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs	(B260C) BTEX	(B260C) BTEX	EDB	Total (As, Pb, Cd, Cr, Ni, Mn)	(B011)	Dissolved Fe, Mn (B20A/B010C)	Chloride, bromide, sulfate (B010C)	Nitrate-Nitrite (3532)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RISK-175)	Methane (RISK-175)	COMMENTS
1	GW005-203	7-13-2020	1525	10	-	3	-	2	1	1*	1	1	1	1			
2																	
3																	
4																	
5																	
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered																	
Pump SN: 1807B-902 SAMPLER(S): D. Schmeelk RELINQUISHED BY:  DATE: 7-14-2020 TIME: 1700 PRINTED NAME AND SIGNATURE: D. Schmeelk PRINTED NAME AND SIGNATURE: _____ PRINTED NAME AND SIGNATURE: _____ PRINTED NAME AND SIGNATURE: _____																	
COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0168 RECEIVED BY: _____ DATE: 7/15/20 TIME: 1037 PRINTED NAME AND SIGNATURE: Nicole Reitt 																	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-ER203-01	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3			
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A, 6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (333.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (354230B)	COMMENTS		
1	ER203-01	7-13-2020	0921	6	-	3	-	2	1						
2															
3															
4															
5															
Please add Fe and Mn to total metals analysis.															
Associated with well: KAFB-106005															
Pump Serial Number: 1807B-902															
TB203-27															
SAMPLER(S): G. Begaye				COURIER AND SHIPPING NUMBER: 5155 2830 0168											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: G. Begaye				7-14-2020		1700		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Nicole Reitt				7/15/20		1037	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@east.com EA Amanda Smith: asmith@east.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@east.com EA				COC-TB203-28			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				YEAR: 2020		QUARTER: 3					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(8260C) BTEX	(8260C) EDB	(8011) Total As Pb Cd Cr Ni Mn	(6010C) Dissolved Fe Mn	(6020A/6010C) Chloride, bromide, sulfate	(3003) Nitrate-Nitrite	(3532) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS			
1	TB203-28	7-14-2020	1411	4	- 2	- 2									
2															
3															
4															
5															
Associated with: GWD12R-203 ER203-02 Note: 1 small bubble in 1 BTEX VOA - size = 2mm 1 small bubble in 1 EDB VOA - size < 1mm															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0157											
RELINQUISHED BY:				DATE:		TIME:		RECEIVED BY:				DATE:		TIME:	
Printed Name and Signature: D. Schmeelk				7-14-2020		1700									
Printed Name and Signature:															
Printed Name and Signature:															
Printed Name and Signature:								Nicole Reith				7/15/20		1032	

QPM

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-012R-203	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)			
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (#260C)	BTEX (#260C)	BTEXN (#260C)	EDB (#011)	Total (As,Pb,Ca,K,Mg,Mn) (#020A/6010C)	Dissolved Fe, Mn (#010C)	Chloride, bromide, sulfate (#000)	Nitrate-Nitrite (#5512)	Alkalinity (Total Carbonate and Bicarbonate) (#542320B)	Carbon Dioxide (#SK-175)	Comments
1	GW012R-203	7-14-2020	1240	24	9	—	6	3	3*	1	1	1	—	—	Please see Comments for requested MS/MSD analytes
2	GW012R-603	7-14-2020	1240	10	3	—	2	1	1*	1	1	1	—	—	
3															
4															
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered Please run MS/MSD on the following analytes only: VOCs/BTEX/BTEXN, EDB, Total As and Pb, and dissolved Mn and Fe Pump SN: 1807B-752 TB203-28															
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0157											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk				7-14-2020		1700		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
								Nicole Reiff				7/15/20		1032	

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		COC-ER203-02	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3	
ANALYSIS REQUIRED (Specify number of bottles)									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDR (8011)	Total As Pb Cd Cr Ni Mn (8260C)	COMMENTS
1	ER203-02	7-14-2020	1011	6	-	3	-	2	1
2									
3									
4									
5									
Please add Fe and Mn to total metals analysis. Associated with well: KAFB-10612R Pump Serial Number: 1807B-699 752 TB203-28									
SAMPLER(S): G. Begaye D. Schmeelk				COURIER AND SHIPPING NUMBER: 8155 2830 0157					
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:	
Printed Name and Signature: Dylan Schmeelk				7-14-2020		1700		Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
Printed Name and Signature:								Printed Name and Signature:	
								Nicole Reiff NR 7/15/20 1032	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-7707-1

Login Number: 7707**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Hollinger, Zane T**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-8076-1
Client Project/Site: Kirtland AFB

For:
EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
8/17/2020 8:14:41 AM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

LINKS

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results through
TotalAccess

Have a Question?



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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Laboratory Job ID: 410-8076-1

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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
8/17/2020 8:14:41 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Job ID: 410-8076-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-8076-1

Receipt

The samples were received on 7/17/2020 10:27 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.1° C, 1.1° C and 1.6° C.

Receipt Exceptions

One or more containers for the following sample(s) was received broken or leaking: GW004-203; (1) HCl vial

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 410-25380 and analytical batch 410-25771 recovered outside control limits for the following analytes: Ethylene Dibromide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8011: The continuing calibration verifications (CCV) associated with batches 27781 and 28276 recovered above the upper control limit for Ethylene Dibromide, indicating matrix effects on the CCV. Therefore, the data have been reported. The associated sample is impacted: TB203-31 (410-8076-12).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW004-203

Lab Sample ID: 410-8076-1

☐ No Detections.

Client Sample ID: GW099-203

Lab Sample ID: 410-8076-2

☐ No Detections.

Client Sample ID: GW100-203

Lab Sample ID: 410-8076-3

☐ No Detections.

Client Sample ID: TB203-30

Lab Sample ID: 410-8076-4

☐ No Detections.

Client Sample ID: GW003-203

Lab Sample ID: 410-8076-5

☐ No Detections.

Client Sample ID: GW101-203

Lab Sample ID: 410-8076-6

☐ No Detections.

Client Sample ID: GW102-203

Lab Sample ID: 410-8076-7

☐ No Detections.

Client Sample ID: TB203-29

Lab Sample ID: 410-8076-8

☐ No Detections.

Client Sample ID: GW013-203

Lab Sample ID: 410-8076-9

☐ No Detections.

Client Sample ID: GW097-203

Lab Sample ID: 410-8076-10

☐ No Detections.

Client Sample ID: GW098-203

Lab Sample ID: 410-8076-11

☐ No Detections.

Client Sample ID: TB203-31

Lab Sample ID: 410-8076-12

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.023	J Q	0.029	0.019	0.0095	ug/L	1		8011	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW004-203

Lab Sample ID: 410-8076-1

Date Collected: 07/16/20 09:43

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/30/20 04:22	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/30/20 04:22	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/30/20 04:22	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/30/20 04:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/30/20 04:22	1
4-Bromofluorobenzene (Surr)	92		85 - 114		07/30/20 04:22	1
Dibromofluoromethane (Surr)	104		80 - 119		07/30/20 04:22	1
Toluene-d8 (Surr)	98		89 - 112		07/30/20 04:22	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.0099	ug/L		07/31/20 03:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	69		46 - 136	07/29/20 01:41	07/31/20 03:25	1
1,1,2,2-Tetrachloroethane (2C)	64		46 - 136	07/29/20 01:41	07/31/20 03:25	1

Client Sample ID: GW099-203

Lab Sample ID: 410-8076-2

Date Collected: 07/16/20 13:11

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:12	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 16:12	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:12	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/29/20 16:12	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/29/20 16:12	1
Dibromofluoromethane (Surr)	100		80 - 119		07/29/20 16:12	1
Toluene-d8 (Surr)	99		89 - 112		07/29/20 16:12	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/31/20 03:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	59		46 - 136	07/29/20 01:41	07/31/20 03:59	1
1,1,2,2-Tetrachloroethane (2C)	57		46 - 136	07/29/20 01:41	07/31/20 03:59	1

Client Sample ID: GW100-203

Lab Sample ID: 410-8076-3

Date Collected: 07/16/20 11:19

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:34	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 16:34	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW100-203

Lab Sample ID: 410-8076-3

Date Collected: 07/16/20 11:19

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:34	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118					07/29/20 16:34	1
4-Bromofluorobenzene (Surr)	93		85 - 114					07/29/20 16:34	1
Dibromofluoromethane (Surr)	102		80 - 119					07/29/20 16:34	1
Toluene-d8 (Surr)	98		89 - 112					07/29/20 16:34	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 04:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	61		46 - 136				07/29/20 01:41	07/31/20 04:33	1
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136				07/29/20 01:41	07/31/20 04:33	1

Client Sample ID: TB203-30

Lab Sample ID: 410-8076-4

Date Collected: 07/16/20 15:00

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 12:32	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 12:32	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 12:32	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 12:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118					07/29/20 12:32	1
4-Bromofluorobenzene (Surr)	94		85 - 114					07/29/20 12:32	1
Dibromofluoromethane (Surr)	100		80 - 119					07/29/20 12:32	1
Toluene-d8 (Surr)	99		89 - 112					07/29/20 12:32	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	61		46 - 136				07/29/20 01:41	07/31/20 05:07	1
1,1,2,2-Tetrachloroethane (2C)	60		46 - 136				07/29/20 01:41	07/31/20 05:07	1

Client Sample ID: GW003-203

Lab Sample ID: 410-8076-5

Date Collected: 07/15/20 10:56

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:06	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 12:06	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:06	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 12:06	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW003-203

Lab Sample ID: 410-8076-5

Date Collected: 07/15/20 10:56

Matrix: Water

Date Received: 07/17/20 10:27

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/28/20 12:06	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/28/20 12:06	1
Dibromofluoromethane (Surr)	101		80 - 119		07/28/20 12:06	1
Toluene-d8 (Surr)	99		89 - 112		07/28/20 12:06	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 05:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	64		46 - 136	07/29/20 01:41	07/31/20 05:41	1
1,1,2,2-Tetrachloroethane (2C)	62		46 - 136	07/29/20 01:41	07/31/20 05:41	1

Client Sample ID: GW101-203

Lab Sample ID: 410-8076-6

Date Collected: 07/15/20 07:41

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:28	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 12:28	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:28	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 12:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/28/20 12:28	1
4-Bromofluorobenzene (Surr)	92		85 - 114		07/28/20 12:28	1
Dibromofluoromethane (Surr)	102		80 - 119		07/28/20 12:28	1
Toluene-d8 (Surr)	98		89 - 112		07/28/20 12:28	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/31/20 06:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	67		46 - 136	07/29/20 01:41	07/31/20 06:49	1
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136	07/29/20 01:41	07/31/20 06:49	1

Client Sample ID: GW102-203

Lab Sample ID: 410-8076-7

Date Collected: 07/15/20 09:21

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:50	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 12:50	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 12:50	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 12:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/28/20 12:50	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/28/20 12:50	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW102-203

Lab Sample ID: 410-8076-7

Date Collected: 07/15/20 09:21

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		80 - 119		07/28/20 12:50	1
Toluene-d8 (Surr)	99		89 - 112		07/28/20 12:50	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		07/31/20 07:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	60		46 - 136	07/29/20 01:41	07/31/20 07:23	1
1,1,2,2-Tetrachloroethane (2C)	58		46 - 136	07/29/20 01:41	07/31/20 07:23	1

Client Sample ID: TB203-29

Lab Sample ID: 410-8076-8

Date Collected: 07/16/20 15:00

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/30/20 01:04	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/30/20 01:04	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/30/20 01:04	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/30/20 01:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/30/20 01:04	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/30/20 01:04	1
Dibromofluoromethane (Surr)	103		80 - 119		07/30/20 01:04	1
Toluene-d8 (Surr)	98		89 - 112		07/30/20 01:04	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q M	0.029	0.019	0.0096	ug/L		07/24/20 04:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	49		46 - 136	07/23/20 00:16	07/24/20 04:36	1
1,1,2,2-Tetrachloroethane (2C)	50		46 - 136	07/23/20 00:16	07/24/20 04:36	1

Client Sample ID: GW013-203

Lab Sample ID: 410-8076-9

Date Collected: 07/15/20 13:13

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 13:13	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 13:13	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 13:13	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/28/20 13:13	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/28/20 13:13	1
Dibromofluoromethane (Surr)	103		80 - 119		07/28/20 13:13	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW013-203

Date Collected: 07/15/20 13:13

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-9

Matrix: Water

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		89 - 112		07/28/20 13:13	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0096	ug/L		07/24/20 05:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	46		46 - 136	07/23/20 00:16	07/24/20 05:43	1
1,1,2,2-Tetrachloroethane (2C)	47		46 - 136	07/23/20 00:16	07/24/20 05:43	1

Client Sample ID: GW097-203

Date Collected: 07/16/20 08:02

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-10

Matrix: Water

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:56	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 16:56	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 16:56	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		07/29/20 16:56	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/29/20 16:56	1
Dibromofluoromethane (Surr)	102		80 - 119		07/29/20 16:56	1
Toluene-d8 (Surr)	99		89 - 112		07/29/20 16:56	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		08/04/20 00:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	49		46 - 136	07/30/20 17:59	08/04/20 00:31	1
1,1,2,2-Tetrachloroethane (2C)	52		46 - 136	07/30/20 17:59	08/04/20 00:31	1

Client Sample ID: GW098-203

Date Collected: 07/15/20 14:51

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-11

Matrix: Water

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 13:35	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 13:35	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 13:35	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/28/20 13:35	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/28/20 13:35	1
Dibromofluoromethane (Surr)	103		80 - 119		07/28/20 13:35	1
Toluene-d8 (Surr)	97		89 - 112		07/28/20 13:35	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW098-203

Lab Sample ID: 410-8076-11

Date Collected: 07/15/20 14:51

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 07:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	70		46 - 136	07/29/20 01:41	07/31/20 07:58	1
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136	07/29/20 01:41	07/31/20 07:58	1

Client Sample ID: TB203-31

Lab Sample ID: 410-8076-12

Date Collected: 07/16/20 15:00

Matrix: Water

Date Received: 07/17/20 10:27

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 13:16	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 13:16	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 13:16	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 13:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/29/20 13:16	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/29/20 13:16	1
Dibromofluoromethane (Surr)	100		80 - 119		07/29/20 13:16	1
Toluene-d8 (Surr)	99		89 - 112		07/29/20 13:16	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.023	J Q	0.029	0.019	0.0095	ug/L		07/30/20 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	89		46 - 136	07/25/20 07:30	07/30/20 21:27	1
1,1,2,2-Tetrachloroethane (2C)	95		46 - 136	07/25/20 07:30	07/30/20 21:27	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-8076-1	GW004-203	101	92	104	98
410-8076-2	GW099-203	98	93	100	99
410-8076-3	GW100-203	100	93	102	98
410-8076-4	TB203-30	101	94	100	99
410-8076-5	GW003-203	100	93	101	99
410-8076-6	GW101-203	98	92	102	98
410-8076-7	GW102-203	102	93	102	99
410-8076-8	TB203-29	100	93	103	98
410-8076-9	GW013-203	100	93	103	98
410-8076-10	GW097-203	100	94	102	99
410-8076-11	GW098-203	101	93	103	97
410-8076-12	TB203-31	98	94	100	99
LCS 410-27046/4	Lab Control Sample	98	97	100	101
LCS 410-27449/5	Lab Control Sample	100	97	97	102
LCS 410-27755/5	Lab Control Sample	98	98	100	101
LCSD 410-27046/5	Lab Control Sample Dup	99	97	99 M	101
LCSD 410-27449/6	Lab Control Sample Dup	97	97	98	102
LCSD 410-27755/6	Lab Control Sample Dup	99	98	100	100
MB 410-27046/7	Method Blank	98	93	102	101
MB 410-27449/10	Method Blank	101	94	101	100
MB 410-27755/9	Method Blank	99	93	102	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-8076-1	GW004-203	69	64
410-8076-2	GW099-203	59	57
410-8076-3	GW100-203	61	59
410-8076-4	TB203-30	61	60
410-8076-5	GW003-203	64	62
410-8076-6	GW101-203	67	61
410-8076-7	GW102-203	60	58
410-8076-8	TB203-29	49	50
410-8076-9	GW013-203	46	47
410-8076-10	GW097-203	49	52
410-8076-11	GW098-203	70	63
410-8076-12	TB203-31	89	95
LCS 410-25380/2-A	Lab Control Sample	58	57
LCS 410-26268/2-A	Lab Control Sample	74	71
LCS 410-27361/2-A	Lab Control Sample	58	55
LCS 410-28230/2-A	Lab Control Sample	49	51

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Surrogate Summary

Client: EA Engineering, Science, and Technology

Job ID: 410-8076-1

Project/Site: Kirtland AFB

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)
Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1	1122TCA2
		(46-136)	(46-136)
Lab Sample ID	Client Sample ID		
LCSD 410-25380/3-A	Lab Control Sample Dup	58	56
LCSD 410-26268/3-A	Lab Control Sample Dup	78	74
LCSD 410-27361/3-A	Lab Control Sample Dup	59	56
LCSD 410-28230/3-A	Lab Control Sample Dup	49	52
MB 410-25380/1-A	Method Blank	55	53
MB 410-26268/1-A	Method Blank	70	71
MB 410-27361/1-A	Method Blank	54	51
MB 410-28230/1-A	Method Blank	49	49
Surrogate Legend			
1122TCA = 1,1,2,2-Tetrachloroethane			

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-27046/7

Matrix: Water

Analysis Batch: 27046

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 11:28	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/28/20 11:28	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/28/20 11:28	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/28/20 11:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		07/28/20 11:28	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/28/20 11:28	1
Dibromofluoromethane (Surr)	102		80 - 119		07/28/20 11:28	1
Toluene-d8 (Surr)	101		89 - 112		07/28/20 11:28	1

Lab Sample ID: LCS 410-27046/4

Matrix: Water

Analysis Batch: 27046

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	18.7		ug/L		94	42 - 138
Ethylbenzene	20.0	19.6		ug/L		98	79 - 121
Toluene	20.0	18.9		ug/L		94	80 - 121
Xylenes, Total	60.0	60.5		ug/L		101	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: LCSD 410-27046/5

Matrix: Water

Analysis Batch: 27046

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.6		ug/L		98	42 - 138	5	20
Ethylbenzene	20.0	20.7		ug/L		103	79 - 121	5	20
Toluene	20.0	19.7		ug/L		98	80 - 121	4	20
Xylenes, Total	60.0	63.3		ug/L		106	79 - 121	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	99	M	80 - 119
Toluene-d8 (Surr)	101		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-27449/10

Matrix: Water

Analysis Batch: 27449

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 11:37	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 11:37	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 11:37	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 11:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/29/20 11:37	1
4-Bromofluorobenzene (Surr)	94		85 - 114		07/29/20 11:37	1
Dibromofluoromethane (Surr)	101		80 - 119		07/29/20 11:37	1
Toluene-d8 (Surr)	100		89 - 112		07/29/20 11:37	1

Lab Sample ID: LCS 410-27449/5

Matrix: Water

Analysis Batch: 27449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.2		ug/L		96	42 - 138
Ethylbenzene	20.0	20.6		ug/L		103	79 - 121
Toluene	20.0	19.9		ug/L		99	80 - 121
Xylenes, Total	60.0	63.5		ug/L		106	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	102		89 - 112

Lab Sample ID: LCSD 410-27449/6

Matrix: Water

Analysis Batch: 27449

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.0		ug/L		95	42 - 138	1	20
Ethylbenzene	20.0	20.9		ug/L		104	79 - 121	1	20
Toluene	20.0	19.9		ug/L		99	80 - 121	0	20
Xylenes, Total	60.0	63.5		ug/L		106	79 - 121	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	102		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-27755/9

Matrix: Water

Analysis Batch: 27755

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 23:35	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/29/20 23:35	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/29/20 23:35	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/29/20 23:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/29/20 23:35	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/29/20 23:35	1
Dibromofluoromethane (Surr)	102		80 - 119		07/29/20 23:35	1
Toluene-d8 (Surr)	99		89 - 112		07/29/20 23:35	1

Lab Sample ID: LCS 410-27755/5

Matrix: Water

Analysis Batch: 27755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	18.9		ug/L		94	42 - 138
Ethylbenzene	20.0	20.0		ug/L		100	79 - 121
Toluene	20.0	19.0		ug/L		95	80 - 121
Xylenes, Total	60.0	62.0		ug/L		103	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: LCSD 410-27755/6

Matrix: Water

Analysis Batch: 27755

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.1		ug/L		96	42 - 138	1	20
Ethylbenzene	20.0	20.1		ug/L		100	79 - 121	0	20
Toluene	20.0	19.3		ug/L		96	80 - 121	1	20
Xylenes, Total	60.0	62.2		ug/L		104	79 - 121	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	100		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-25380/1-A
Matrix: Water
Analysis Batch: 25771

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25380

Analysis Date: 2017										Prep Date: 2008									
Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
	Result	Qualifier								Result	Qualifier								
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		07/23/20 22:25	1										
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac									
1,1,2,2-Tetrachloroethane (1C)	55		46 - 136					07/23/20 00:16	07/23/20 22:25	1									
1,1,2,2-Tetrachloroethane (2C)	53		46 - 136					07/23/20 00:16	07/23/20 22:25	1									

Lab Sample ID: LCS 410-25380/2-A
Matrix: Water
Analysis Batch: 25771

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25380

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.196	Q	ug/L		153	60 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,1,2,2-Tetrachloroethane (1C)	58		46 - 136				
1,1,2,2-Tetrachloroethane (2C)	57		46 - 136				

Lab Sample ID: LCSD 410-25380/3-A
Matrix: Water
Analysis Batch: 25771

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25380

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.218	Q	ug/L		170	60 - 140	11	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	58		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136						

Lab Sample ID: MB 410-26268/1-A
Matrix: Water
Analysis Batch: 27290

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26268

Print Date: 2/2/20										
Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
	Result	Qualifier								
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L	-	07/28/20 22:49	1	
Print Date: 2/2/20										
Surrogate	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier								
1,1,2,2-Tetrachloroethane (1C)	70		46 - 136					07/25/20 07:30	07/28/20 22:49	1
1,1,2,2-Tetrachloroethane (2C)	71		46 - 136					07/25/20 07:30	07/28/20 22:49	1

Lab Sample ID: LCS 410-26268/2-A
Matrix: Water
Analysis Batch: 27290

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.128		ug/L		100	60 - 140

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-26268/2-A
Matrix: Water
Analysis Batch: 27290

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26268

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	74		46 - 136
1,1,2,2-Tetrachloroethane (2C)	71		46 - 136

Lab Sample ID: LCSD 410-26268/3-A
Matrix: Water
Analysis Batch: 27290

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 26268

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.130		ug/L	-	102	60 - 140	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	78		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	74		46 - 136						

Lab Sample ID: MB 410-27361/1-A
Matrix: Water
Analysis Batch: 28585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 27361

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L	-	07/30/20 22:53	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,1,2,2-Tetrachloroethane (1C)	54		46 - 136	07/29/20 01:41	07/30/20 22:53	1			
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136	07/29/20 01:41	07/30/20 22:53	1			

Lab Sample ID: LCS 410-27361/2-A
Matrix: Water
Analysis Batch: 28585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 27361

Analysis Date: 10/20/2023				Exp Date: 11/30/2023					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)			0.128	0.163		ug/L	-	127	60 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	58		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136						

Lab Sample ID: LCSD 410-27361/3-A
Matrix: Water
Analysis Batch: 28585

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 27361

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.163		ug/L	-	127	60 - 140	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	59		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136						

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: MB 410-28230/1-A

Matrix: Water

Analysis Batch: 29152

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 28230

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L	-	08/03/20 19:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	49		46 - 136	07/30/20 17:59	08/03/20 19:42	1
1,1,2,2-Tetrachloroethane (2C)	49		46 - 136	07/30/20 17:59	08/03/20 19:42	1

Lab Sample ID: LCS 410-28230/2-A

Matrix: Water

Analysis Batch: 29152

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 28230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.170		ug/L	-	132	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	49		46 - 136
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136

Lab Sample ID: LCSD 410-28230/3-A

Matrix: Water

Analysis Batch: 29152

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 28230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.168		ug/L	-	131	60 - 140	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	49		46 - 136
1,1,2,2-Tetrachloroethane (2C)	52		46 - 136

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

GC/MS VOA

Analysis Batch: 27046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-5	GW003-203	Total/NA	Water	8260C DOD	
410-8076-6	GW101-203	Total/NA	Water	8260C DOD	
410-8076-7	GW102-203	Total/NA	Water	8260C DOD	
410-8076-9	GW013-203	Total/NA	Water	8260C DOD	
410-8076-11	GW098-203	Total/NA	Water	8260C DOD	
MB 410-27046/7	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-27046/4	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-27046/5	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

Analysis Batch: 27449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-2	GW099-203	Total/NA	Water	8260C DOD	
410-8076-3	GW100-203	Total/NA	Water	8260C DOD	
410-8076-4	TB203-30	Total/NA	Water	8260C DOD	
410-8076-10	GW097-203	Total/NA	Water	8260C DOD	
410-8076-12	TB203-31	Total/NA	Water	8260C DOD	
MB 410-27449/10	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-27449/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-27449/6	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

Analysis Batch: 27755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-1	GW004-203	Total/NA	Water	8260C DOD	
410-8076-8	TB203-29	Total/NA	Water	8260C DOD	
MB 410-27755/9	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-27755/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-27755/6	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 25380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-8	TB203-29	Total/NA	Water	8011	
410-8076-9	GW013-203	Total/NA	Water	8011	
MB 410-25380/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-25380/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-25380/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 25771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-8	TB203-29	Total/NA	Water	8011	25380
410-8076-9	GW013-203	Total/NA	Water	8011	25380
MB 410-25380/1-A	Method Blank	Total/NA	Water	8011	25380
LCS 410-25380/2-A	Lab Control Sample	Total/NA	Water	8011	25380
LCSD 410-25380/3-A	Lab Control Sample Dup	Total/NA	Water	8011	25380

Prep Batch: 26268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-12	TB203-31	Total/NA	Water	8011	
MB 410-26268/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-26268/2-A	Lab Control Sample	Total/NA	Water	8011	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

GC Semi VOA (Continued)

Prep Batch: 26268 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 410-26268/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 27290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-26268/1-A	Method Blank	Total/NA	Water	8011	26268
LCS 410-26268/2-A	Lab Control Sample	Total/NA	Water	8011	26268
LCSD 410-26268/3-A	Lab Control Sample Dup	Total/NA	Water	8011	26268

Prep Batch: 27361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-1	GW004-203	Total/NA	Water	8011	
410-8076-2	GW099-203	Total/NA	Water	8011	
410-8076-3	GW100-203	Total/NA	Water	8011	
410-8076-4	TB203-30	Total/NA	Water	8011	
410-8076-5	GW003-203	Total/NA	Water	8011	
410-8076-6	GW101-203	Total/NA	Water	8011	
410-8076-7	GW102-203	Total/NA	Water	8011	
410-8076-11	GW098-203	Total/NA	Water	8011	
MB 410-27361/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-27361/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-27361/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Prep Batch: 28230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-10	GW097-203	Total/NA	Water	8011	
MB 410-28230/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-28230/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-28230/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 28276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-12	TB203-31	Total/NA	Water	8011	26268

Analysis Batch: 28585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-1	GW004-203	Total/NA	Water	8011	27361
410-8076-2	GW099-203	Total/NA	Water	8011	27361
410-8076-3	GW100-203	Total/NA	Water	8011	27361
410-8076-4	TB203-30	Total/NA	Water	8011	27361
410-8076-5	GW003-203	Total/NA	Water	8011	27361
410-8076-6	GW101-203	Total/NA	Water	8011	27361
410-8076-7	GW102-203	Total/NA	Water	8011	27361
410-8076-11	GW098-203	Total/NA	Water	8011	27361
MB 410-27361/1-A	Method Blank	Total/NA	Water	8011	27361
LCS 410-27361/2-A	Lab Control Sample	Total/NA	Water	8011	27361
LCSD 410-27361/3-A	Lab Control Sample Dup	Total/NA	Water	8011	27361

Analysis Batch: 29152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8076-10	GW097-203	Total/NA	Water	8011	28230
MB 410-28230/1-A	Method Blank	Total/NA	Water	8011	28230

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

GC Semi VOA (Continued)

Analysis Batch: 29152 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-28230/2-A	Lab Control Sample	Total/NA	Water	8011	28230
LCSD 410-28230/3-A	Lab Control Sample Dup	Total/NA	Water	8011	28230

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Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW004-203

Date Collected: 07/16/20 09:43

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27755	07/30/20 04:22	TQ4J	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 03:25	AC3T	ELLE

Client Sample ID: GW099-203

Date Collected: 07/16/20 13:11

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27449	07/29/20 16:12	USEJ	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 03:59	AC3T	ELLE

Client Sample ID: GW100-203

Date Collected: 07/16/20 11:19

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27449	07/29/20 16:34	USEJ	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 04:33	AC3T	ELLE

Client Sample ID: TB203-30

Date Collected: 07/16/20 15:00

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27449	07/29/20 12:32	USEJ	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 05:07	AC3T	ELLE

Client Sample ID: GW003-203

Date Collected: 07/15/20 10:56

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27046	07/28/20 12:06	ULCP	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 05:41	AC3T	ELLE

Client Sample ID: GW101-203

Date Collected: 07/15/20 07:41

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27046	07/28/20 12:28	ULCP	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW101-203

Date Collected: 07/15/20 07:41

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 06:49	AC3T	ELLE

Client Sample ID: GW102-203

Date Collected: 07/15/20 09:21

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27046	07/28/20 12:50	ULCP	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 07:23	AC3T	ELLE

Client Sample ID: TB203-29

Date Collected: 07/16/20 15:00

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27755	07/30/20 01:04	TQ4J	ELLE
Total/NA	Prep	8011			25380	07/23/20 00:16	K2IL	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 04:36	AC3T	ELLE

Client Sample ID: GW013-203

Date Collected: 07/15/20 13:13

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27046	07/28/20 13:13	ULCP	ELLE
Total/NA	Prep	8011			25380	07/23/20 00:16	K2IL	ELLE
Total/NA	Analysis	8011		1	25771	07/24/20 05:43	AC3T	ELLE

Client Sample ID: GW097-203

Date Collected: 07/16/20 08:02

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27449	07/29/20 16:56	USEJ	ELLE
Total/NA	Prep	8011			28230	07/30/20 17:59	K2IL	ELLE
Total/NA	Analysis	8011		1	29152	08/04/20 00:31	AC3T	ELLE

Client Sample ID: GW098-203

Date Collected: 07/15/20 14:51

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27046	07/28/20 13:35	ULCP	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Client Sample ID: GW098-203

Date Collected: 07/15/20 14:51

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 07:58	AC3T	ELLE

Client Sample ID: TB203-31

Date Collected: 07/16/20 15:00

Date Received: 07/17/20 10:27

Lab Sample ID: 410-8076-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	27449	07/29/20 13:16	USEJ	ELLE
Total/NA	Prep	8011			26268	07/25/20 07:30	UKQ8	ELLE
Total/NA	Analysis	8011		1	28276	07/30/20 21:27	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-8076-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-8076-1	GW004-203	Water	07/16/20 09:43	07/17/20 10:27	
410-8076-2	GW099-203	Water	07/16/20 13:11	07/17/20 10:27	
410-8076-3	GW100-203	Water	07/16/20 11:19	07/17/20 10:27	
410-8076-4	TB203-30	Water	07/16/20 15:00	07/17/20 10:27	
410-8076-5	GW003-203	Water	07/15/20 10:56	07/17/20 10:27	
410-8076-6	GW101-203	Water	07/15/20 07:41	07/17/20 10:27	
410-8076-7	GW102-203	Water	07/15/20 09:21	07/17/20 10:27	
410-8076-8	TB203-29	Water	07/16/20 15:00	07/17/20 10:27	
410-8076-9	GW013-203	Water	07/15/20 13:13	07/17/20 10:27	
410-8076-10	GW097-203	Water	07/16/20 08:02	07/17/20 10:27	
410-8076-11	GW098-203	Water	07/15/20 14:51	07/17/20 10:27	
410-8076-12	TB203-31	Water	07/16/20 15:00	07/17/20 10:27	

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Eurofins Lancaster Laboratories Env, LLC



410-8076 Chain of Custody

CHAIN-OF-CUSTODY RECORD										COC NUMBER											
225 Schling Circle Suite 400, Hunt Valley, MD Tel No: (410) 594-7000 Fax No: (410) 771-1625										COC-004-203											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020		QUARTER: 3 (Jul-Sep)											
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																	
ANALYSIS REQUIRED (Specify number of bottles)																					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(BTEXN)	EDB	(BTEXN)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Mineral-Nitrite	(353.2)	Alkalinity/Alkalinity	(Total, Carbonate, and Bicarbonate)	Carbon Dioxide	(RSK-175)	Methane	(RSK-175)	Comments	
1	GW004-203	7-16-2020	0943	5	-	3	-	2													
2																					
3																					
4																					
5																					
6																					
COMMENTS:																					
Pump SN: 1807B-752												TB203- 30									
SAMPLER(S): D. Schmeelk				COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0032																	
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME							
Printed Name and Signature: D. Schmeelk				7-16-2020		1730		Printed Name and Signature: Wesley Miller				7/17/2020		1027							
Printed Name and Signature:								Printed Name and Signature:													
Printed Name and Signature:								Printed Name and Signature:													
Printed Name and Signature:								Printed Name and Signature:													

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-099-203		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)						
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS		
				Total Number of Bottles	VOCs	BTEX	BTEXN	EDB	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	Alkalinity (Total, Carbonate, and Bicarbonate)		Carbon Dioxide	
1	GW099-203	7-16-2020	1311	5	—	3	—	2								
2																
3																
4																
5																
6																
COMMENTS:																
Pump SN: 1807B-752 SAMPLER(S): D. Schmeckl RELINQUISHED BY: D. Schmeckl <i>[Signature]</i> DATE: 7-16-2020 TIME: 1730 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032 RECEIVED BY: Wesley Miller <i>[Signature]</i> DATE: 7/17/2020 TIME: 1027																

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-100-203				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 (Jul-Sep)						
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258										
				ANALYSIS REQUIRED (Specify number of bottles)														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(0260C) ED8	(0260C) BTEXN	(0260C) BTEX	(0260C) VOCs	Total (As Pb, Cd, Cu, Ni, Mn, Mg)	(6010C) Dissolved Fe, Mn	Chloride, bromide, sulfate	(300.0) Nitrate-Nitrite	(333.2) Alkalinity (Total, Carbonate, and Bicarbonate)	(3M2320B) Carbon Dioxide	(RSK-175) Methane	(RSK-175) Carbon Dioxide	COMMENTS	
1	GW100-203	7-16-2020	1119	5	-	3	-	2										
2																		
3																		
4																		
5																		
6																		
COMMENTS:																		
Pump SN: 1807B-752 SAMPLER(S): D. Schmedelk RELINQUISHED BY: D. Schmedelk DATE: 7-16-2020 TIME: 1730 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032 TB203- 30 RECEIVED BY: Wesley Miller DATE: 7/16/20 TIME: 1027																		

CPM

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER														
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		COC-TB203-30														
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020		QUARTER: 3														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)																		
				Total Number of Bottles	VOCs	BTEX	(B200C)	BTEXN	(B260C)	EDB	(B011)	Total As, Pb, Cd, K, Na, Mg	Disolved Fe, Mn	(B020A/B010C)	Chloride, Bromide, Sulfate	(300 g)	Nitrate-Nitrite	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	(SM2320B)	COMMENTS	
1	TB203-30	7-16-2020	1500	4	-	2	-	2														
2																						
3																						
4																						
5																						
Associated with: GW004-203 GW099-203 GW100-203																						
SAMPLER(S): G. Begay				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0032																		
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME								
Printed Name and Signature: G. Begay				7-16-2020		1730		Printed Name and Signature: Wesley Miller				7/17/20		1627								
Printed Name and Signature:								Printed Name and Signature:														
Printed Name and Signature:								Printed Name and Signature:														

EA		225 Schling Circle Suite 400 Hunt Valley MD. Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-003-203										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020												
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS										
				Total Number of Bottles	VOCs	BTEX	(B260C)	BTEXN	(B260C)	EDR	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate		Nitrate-Nitrite	(300.0)	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	(SM2320B)	Carbon Dioxide	(RSK-175)	Methane	(RSK-175)	
1	GW003-203	7-15-2020	1056	5	-	3	-	2																
2																								
3																								
4																								
5																								
6																								
COMMENTS:																								
Pump SN: 1807B-752														TB203- 29										
SAMPLER(S): D. Schueck				RELINQUISHED BY:				DATE				TIME				COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0021								
Printed Name and Signature: D. Schueck				Printed Name and Signature: [Signature]				DATE: 7-16-2020				TIME: 1730				Printed Name and Signature: [Signature]								
Printed Name and Signature: [Signature]				Printed Name and Signature: [Signature]				DATE: [Blank]				TIME: [Blank]				Printed Name and Signature: [Signature]								
Printed Name and Signature: [Signature]				Printed Name and Signature: [Signature]				DATE: [Blank]				TIME: [Blank]				Printed Name and Signature: [Signature]								
Printed Name and Signature: [Signature]				Printed Name and Signature: [Signature]				DATE: [Blank]				TIME: [Blank]				Printed Name and Signature: [Signature]								
Printed Name and Signature: [Signature]				Printed Name and Signature: [Signature]				DATE: [Blank]				TIME: [Blank]				Printed Name and Signature: [Signature]								

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-101-203							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)							
				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	ED8 (8260C)	Total (As, Pb, Cd, K, Na, Mg) (8011)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (3000)	Nitrate-Nitrite (3332)	Alkalinity (Total, Carbonate, and Bicarbonate) (SM2320B)	Carbon Dioxide (RSK-175)	Methane (RSK-175)	(RSK-175)
1	GW101-203	7-15-2020	0741	5	-	3	-	2							
2															
3															
4															
5															
6															
COMMENTS:															
Pump SN: 1807B-752 D. Schmeelk RELINQUISHED BY: D. Schmeelk DATE: 7-16-2020 TIME: 1730 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021 RECEIVED BY: Wesley Miller 7/17/2020 1026 TB203- 29															

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-102-203									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020											
PROJECT SITE AND PHASE: ST106/SS111				Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)											
ANALYSIS REQUIRED (Specify number of bottles)																							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(B260C)	BTEXN	EDB	(B011)	Total (As, Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite	(353.2)	Alkalinity (Total, Carbonate, and Bicarbonate)	(SM2320B)	Carbon Dioxide	(NSK-175)	Methane	(NSK-175)	COMMENTS	
1	GW102-203	7-15-2020	0921	5	-	3	-	-	2														
2																							
3																							
4																							
5																							
6																							
COMMENTS:																							
Pump SN: 1807B-752 SAMPLER(S): D. Schneelk RELINQUISHED BY: D. Schneelk [Signature] 7-16-2020 1730 DATE: 7-16-2020 TIME: 1730 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021 RECEIVED BY: [Signature] 7/16/2020 1026																							

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD				COC NUMBER							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		COC-TB203-29							
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: 3							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)											
				Total Number of Bottles	VOCs (3200C)	BTEX (3200C)	BTEXN (3200C)	EDB (3200C)	Total As Pb Cd Cr Ni Hg (3200A6010C)	Disolved Fe, Mn (3200C)	Chloride, Bromide, Sulfate (3200 I)	Nitrate-Nitrite (3200 I)	Alkalinity (Total Carbonate and Bicarbonate) (353 2)	Alkalinity (SM2220B)	COMMENTS
1	TB203-29	7-16-2020	1500	4	-	2	-	2							
2															
3															
4															
5															
Associated with: GW003-203 GW101-203 GW102-203															
SAMPLER(S): G. Begaye				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0021											
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME				
Printed Name and Signature: G. Begaye				7-16-2020	1730	Printed Name and Signature: Wesley Miller				7/17/20	1026				
Printed Name and Signature:						Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature:									

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-013-203		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020		
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 (Jul-Sep)		
ANALYSIS REQUIRED (Specify number of bottles)										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	EDB	Dissolved Fe, Mn	Chloride, bromide, sulfate	Comments
1	GW013-203	7-15-2020	1313	5	-	3	-	2		
2										
3										
4										
5										
6										
COMMENTS:										
Pump SN: 1807B-752 SAMPLER(S): D. Schuelek RELINQUISHED BY: <i>[Signature]</i> DATE: 7-16-2020 TIME: 1730 PRINTED NAME AND SIGNATURE: D. Schuelek COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043 RECEIVED BY: <i>[Signature]</i> DATE: 7/16/2020 TIME: 1645 PRINTED NAME AND SIGNATURE: Wesley Miller										

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-097-203							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020									
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3 (Jul-Sep)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	(B260C)	(B260C)	EDB	(B011)	Total (As, Pb, Cd, Ni, Mn)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Mine	Alkalinity	(Total, Carbonate, and Bicarbonate)	Carbon Dioxide	(SM2320B)	Alkalinity	(Total, Carbonate, and Bicarbonate)	Comments
1	GW097-203	7-16-2020	0802	5	-	3	-	2													
2																					
3																					
4																					
5																					
6																					
COMMENTS:																					
Pump SN: 1807B-752 D. Schuelek RELINQUISHED BY: D. Schuelek DATE: 7-16-2020 TIME: 1730 COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0043 RECEIVED BY: Wesley Miller DATE: 7/16/2020 TIME: 1725																					

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-098-203		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020
PROJECT SITE AND PHASE: ST106/SS111		Lab PO Number: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: 3 (Jul-Sep)		

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs	BTEX	(BTEX)	(BTEX)	EDB	Total (As Pb, Cd, K, Na, Mg)	Dissolved Fe, Mn	Chloride, bromide, sulfate	Nitrate-Nitrite		Alkalinity (Total, Carbonate, and Bicarbonate)	Carbon Dioxide	
1	GW098-203	7-15-2020	1451	5	-	3	-	2									
2																	
3																	
4																	
5																	
6																	

COMMENTS:

Pump SN: 1807B-752

SAMPLER(S): D. Schmeelk

RELINQUISHED BY: D. Schmeelk DATE: 7-16-2020 TIME: 1730

COURIER AND SHIPPING NUMBER: FedEx 8/55 2830 0043

RECEIVED BY: W. Miller DATE: 7/17/2020 TIME: 1025

TB203- 31

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-8076-1

Login Number: 8076**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers recd broken. Sufficient sample in remaining containers for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-9143-1
Client Project/Site: Kirtland AFB

For:
EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

8/25/2020 2:36:29 PM

Jennifer Pursel, Operations Support Specialist
(717)556-7262

jenniferpursel@eurofinsus.com

Designee for

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Laboratory Job ID: 410-9143-1

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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Jennifer Pursel
Operations Support Specialist
8/25/2020 2:36:29 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Job ID: 410-9143-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-9143-1

Receipt

The samples were received on 7/30/2020 10:59 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.1° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Client Sample ID: SWB203-01

Lab Sample ID: 410-9143-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	0.079	J	0.10	0.075	0.040	mg/L	1		6010C	Total
										Recoverable
Sodium	0.32	J	1.0	0.50	0.24	mg/L	1		6010C	Total
										Recoverable

Client Sample ID: SWB203-02

Lab Sample ID: 410-9143-2

No Detections.

Client Sample ID: TB203-34

Lab Sample ID: 410-9143-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Client Sample ID: SWB203-01

Lab Sample ID: 410-9143-1

Date Collected: 07/29/20 16:00

Matrix: Water

Date Received: 07/30/20 10:59

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 19:34	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/11/20 19:34	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 19:34	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/11/20 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		81 - 118		08/11/20 19:34	1
4-Bromofluorobenzene (Surr)	88		85 - 114		08/11/20 19:34	1
Dibromofluoromethane (Surr)	103		80 - 119		08/11/20 19:34	1
Toluene-d8 (Surr)	98		89 - 112		08/11/20 19:34	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		08/04/20 04:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136	08/02/20 08:12	08/04/20 04:29	1
1,1,2,2-Tetrachloroethane (2C)	50		46 - 136	08/02/20 08:12	08/04/20 04:29	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		08/05/20 22:38	1
Magnesium	0.079	J	0.10	0.075	0.040	mg/L		08/05/20 22:38	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		08/05/20 22:38	1
Sodium	0.32	J	1.0	0.50	0.24	mg/L		08/05/20 22:38	1
Iron	0.10	U	0.20	0.10	0.040	mg/L		08/05/20 22:38	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		08/05/20 22:38	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/13/20 19:47	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		08/13/20 19:47	1

Client Sample ID: SWB203-02

Lab Sample ID: 410-9143-2

Date Collected: 07/29/20 16:05

Matrix: Water

Date Received: 07/30/20 10:59

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 19:56	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/11/20 19:56	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 19:56	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/11/20 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		08/11/20 19:56	1
4-Bromofluorobenzene (Surr)	88		85 - 114		08/11/20 19:56	1
Dibromofluoromethane (Surr)	104		80 - 119		08/11/20 19:56	1
Toluene-d8 (Surr)	99		89 - 112		08/11/20 19:56	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Client Sample ID: SWB203-02

Lab Sample ID: 410-9143-2

Date Collected: 07/29/20 16:05

Matrix: Water

Date Received: 07/30/20 10:59

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		08/04/20 04:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	48		46 - 136	08/02/20 08:12	08/04/20 04:46	1
1,1,2,2-Tetrachloroethane (2C)	46		46 - 136	08/02/20 08:12	08/04/20 04:46	1

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		08/05/20 22:42	1
Magnesium	0.075	U	0.10	0.075	0.040	mg/L		08/05/20 22:42	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		08/05/20 22:42	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		08/05/20 22:42	1
Iron	0.10	U	0.20	0.10	0.040	mg/L		08/05/20 22:42	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		08/05/20 22:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/13/20 19:45	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		08/13/20 19:45	1

Client Sample ID: TB203-34

Lab Sample ID: 410-9143-3

Date Collected: 07/29/20 16:30

Matrix: Water

Date Received: 07/30/20 10:59

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 15:55	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/11/20 15:55	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 15:55	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/11/20 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		81 - 118		08/11/20 15:55	1
4-Bromofluorobenzene (Surr)	89		85 - 114		08/11/20 15:55	1
Dibromofluoromethane (Surr)	103		80 - 119		08/11/20 15:55	1
Toluene-d8 (Surr)	99		89 - 112		08/11/20 15:55	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0097	ug/L		08/04/20 05:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	46		46 - 136	08/02/20 08:12	08/04/20 05:04	1
1,1,2,2-Tetrachloroethane (2C)	46		46 - 136	08/02/20 08:12	08/04/20 05:04	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-9143-1	SWB203-01	104	88	103	98
410-9143-2	SWB203-02	102	88	104	99
410-9143-3	TB203-34	103	89	103	99
LCS 410-31714/6	Lab Control Sample	100	99	99	100
LCSD 410-31714/8	Lab Control Sample Dup	99	99	99	100
MB 410-31714/12	Method Blank	102	91	102	98
Surrogate Legend					
DCA = 1,2-Dichloroethane-d4 (Surr)					
BFB = 4-Bromofluorobenzene (Surr)					
DBFM = Dibromofluoromethane (Surr)					
TOL = Toluene-d8 (Surr)					

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-9143-1	SWB203-01	51	50
410-9143-2	SWB203-02	48	46
410-9143-3	TB203-34	46	46
LCS 410-28738/2-A	Lab Control Sample	50	43 Q
LCSD 410-28738/3-A	Lab Control Sample Dup	51	49
MB 410-28738/1-A	Method Blank	46	44 Q
Surrogate Legend			
1122TCA = 1,1,2,2-Tetrachloroethane			

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-31714/12

Matrix: Water

Analysis Batch: 31714

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 13:28	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/11/20 13:28	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/11/20 13:28	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/11/20 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		08/11/20 13:28	1
4-Bromofluorobenzene (Surr)	91		85 - 114		08/11/20 13:28	1
Dibromofluoromethane (Surr)	102		80 - 119		08/11/20 13:28	1
Toluene-d8 (Surr)	98		89 - 112		08/11/20 13:28	1

Lab Sample ID: LCS 410-31714/6

Matrix: Water

Analysis Batch: 31714

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.8		ug/L		99	42 - 138
Ethylbenzene	20.0	19.1		ug/L		96	79 - 121
Toluene	20.0	19.6		ug/L		98	80 - 121
Xylenes, Total	60.0	57.3		ug/L		96	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	100		89 - 112

Lab Sample ID: LCSD 410-31714/8

Matrix: Water

Analysis Batch: 31714

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.7		ug/L		104	42 - 138	5	20
Ethylbenzene	20.0	19.9		ug/L		100	79 - 121	4	20
Toluene	20.0	20.5		ug/L		103	80 - 121	4	20
Xylenes, Total	60.0	59.3		ug/L		99	79 - 121	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	100		89 - 112

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-28738/1-A
Matrix: Water
Analysis Batch: 29152

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28738

Analyte	MB	MB	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac					
	Result	Qualifier												
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		08/03/20 20:33	1					
Surrogate	MB	MB	Limits					Prepared	Analyzed	Dil Fac				
	%Recovery	Qualifier												
	1,1,2,2-Tetrachloroethane (1C)	46									46 - 136	08/02/20 08:12	08/03/20 20:33	1
	1,1,2,2-Tetrachloroethane (2C)	44 Q									46 - 136	08/02/20 08:12	08/03/20 20:33	1

Lab Sample ID: LCS 410-28738/2-A
Matrix: Water
Analysis Batch: 29152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28738

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.148		ug/L		116	60 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,1,2,2-Tetrachloroethane (1C)	50		46 - 136				
1,1,2,2-Tetrachloroethane (2C)	43	Q	46 - 136				

Lab Sample ID: LCSD 410-28738/3-A
Matrix: Water
Analysis Batch: 29152

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28738

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.148		ug/L		116	60 - 140	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	49		46 - 136						

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-28459/1-A
Matrix: Water
Analysis Batch: 30147

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 28459

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	0.15	U	0.20	0.15	0.096	mg/L		08/05/20 21:52	1
Magnesium	0.0413	J	0.10	0.075	0.040	mg/L		08/05/20 21:52	1
Potassium	0.38	U	0.50	0.38	0.20	mg/L		08/05/20 21:52	1
Sodium	0.50	U	1.0	0.50	0.24	mg/L		08/05/20 21:52	1
Iron	0.0453	J	0.20	0.10	0.040	mg/L		08/05/20 21:52	1
Manganese	0.0050	U	0.010	0.0050	0.0030	mg/L		08/05/20 21:52	1

Lab Sample ID: LCS 410-28459/2-A
Matrix: Water
Analysis Batch: 30147

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 28459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	0.400	0.442		mg/L		110	87 - 113

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-28459/2-A

Matrix: Water

Analysis Batch: 30147

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 28459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	0.200	0.224		mg/L		112	85 - 113
Potassium	5.60	6.39		mg/L		114	86 - 114
Sodium	2.00	2.18		mg/L		109	87 - 115
Iron	0.402	0.444		mg/L		110	87 - 115
Manganese	0.0200	0.0218		mg/L		109	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-28801/1-A

Matrix: Water

Analysis Batch: 33198

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 28801

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.0016	U	0.0020	0.0016	0.00068	mg/L		08/13/20 18:51	1
Lead	0.00025	U	0.00050	0.00025	0.000071	mg/L		08/13/20 18:51	1

Lab Sample ID: LCS 410-28801/2-A

Matrix: Water

Analysis Batch: 33198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 28801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00989	0.0105		mg/L		106	84 - 116
Lead	0.00492	0.00509		mg/L		103	88 - 115

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

GC/MS VOA

Analysis Batch: 31714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total/NA	Water	8260C DOD	
410-9143-2	SWB203-02	Total/NA	Water	8260C DOD	
410-9143-3	TB203-34	Total/NA	Water	8260C DOD	
MB 410-31714/12	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-31714/6	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-31714/8	Lab Control Sample Dup	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 28738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total/NA	Water	8011	
410-9143-2	SWB203-02	Total/NA	Water	8011	
410-9143-3	TB203-34	Total/NA	Water	8011	
MB 410-28738/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-28738/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-28738/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 29152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total/NA	Water	8011	28738
410-9143-2	SWB203-02	Total/NA	Water	8011	28738
410-9143-3	TB203-34	Total/NA	Water	8011	28738
MB 410-28738/1-A	Method Blank	Total/NA	Water	8011	28738
LCS 410-28738/2-A	Lab Control Sample	Total/NA	Water	8011	28738
LCSD 410-28738/3-A	Lab Control Sample Dup	Total/NA	Water	8011	28738

Metals

Prep Batch: 28459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total Recoverable	Water	3005A	
410-9143-2	SWB203-02	Total Recoverable	Water	3005A	
MB 410-28459/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-28459/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 28801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total/NA	Water	3020A	
410-9143-2	SWB203-02	Total/NA	Water	3020A	
MB 410-28801/1-A	Method Blank	Total/NA	Water	3020A	
LCS 410-28801/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 30147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total Recoverable	Water	6010C	28459
410-9143-2	SWB203-02	Total Recoverable	Water	6010C	28459
MB 410-28459/1-A	Method Blank	Total Recoverable	Water	6010C	28459
LCS 410-28459/2-A	Lab Control Sample	Total Recoverable	Water	6010C	28459

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Metals

Analysis Batch: 33198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9143-1	SWB203-01	Total/NA	Water	6020A	28801
410-9143-2	SWB203-02	Total/NA	Water	6020A	28801
MB 410-28801/1-A	Method Blank	Total/NA	Water	6020A	28801
LCS 410-28801/2-A	Lab Control Sample	Total/NA	Water	6020A	28801

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Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Client Sample ID: SWB203-01

Lab Sample ID: 410-9143-1

Date Collected: 07/29/20 16:00

Matrix: Water

Date Received: 07/30/20 10:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	31714	08/11/20 19:34	CHT8	ELLE
Total/NA	Prep	8011			28738	08/02/20 08:12	UKQ8	ELLE
Total/NA	Analysis	8011		1	29152	08/04/20 04:29	AC3T	ELLE
Total Recoverable	Prep	3005A			28459	07/31/20 09:55	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	30147	08/05/20 22:38	UCIG	ELLE
Total/NA	Prep	3020A			28801	08/03/20 02:58	UJL8	ELLE
Total/NA	Analysis	6020A		1	33198	08/13/20 19:47	V5SW	ELLE

Client Sample ID: SWB203-02

Lab Sample ID: 410-9143-2

Date Collected: 07/29/20 16:05

Matrix: Water

Date Received: 07/30/20 10:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	31714	08/11/20 19:56	CHT8	ELLE
Total/NA	Prep	8011			28738	08/02/20 08:12	UKQ8	ELLE
Total/NA	Analysis	8011		1	29152	08/04/20 04:46	AC3T	ELLE
Total Recoverable	Prep	3005A			28459	07/31/20 09:55	UJL8	ELLE
Total Recoverable	Analysis	6010C		1	30147	08/05/20 22:42	UCIG	ELLE
Total/NA	Prep	3020A			28801	08/03/20 02:58	UJL8	ELLE
Total/NA	Analysis	6020A		1	33198	08/13/20 19:45	V5SW	ELLE

Client Sample ID: TB203-34

Lab Sample ID: 410-9143-3

Date Collected: 07/29/20 16:30

Matrix: Water

Date Received: 07/30/20 10:59

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	31714	08/11/20 15:55	CHT8	ELLE
Total/NA	Prep	8011			28738	08/02/20 08:12	UKQ8	ELLE
Total/NA	Analysis	8011		1	29152	08/04/20 05:04	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3020A	Preparation, Total Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-9143-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-9143-1	SWB203-01	Water	07/29/20 16:00	07/30/20 10:59	
410-9143-2	SWB203-02	Water	07/29/20 16:05	07/30/20 10:59	
410-9143-3	TB203-34	Water	07/29/20 16:30	07/30/20 10:59	

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Eurofins Lancaster Laboratories Env, LLC



410-9143 Chain of Custody

EA		225 Schilling Circle Suite 400 Hunt Valley, MD Tel No. (410) 584-7000 Fax No. (410) 711-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				COC-SWB203-01			
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				YEAR: 2020			
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (9200C)	BTEX (9200C)	BTEXN (9200C)	EDB (9011)	Total As Pb Cd Cr Ni Hg (9200A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Alkalinity, and Boronates (SM2320B)	COMMENTS	
1	SWB203-01	7-29-2020	1600	6	3	1	2	1							
2															
3															
4															
5															
Please add Fe and Mn to total metals analysis.															
Associated with: ESS lab grade water															
TB203-34															
SAMPLER(S): D. Schweelk				COURIER AND SHIPPING NUMBER: 8155 2830 0076											
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME				
Printed Name and Signature: D. Schweelk				7-19-2020	1800	Printed Name and Signature: Wesley Miller				7/15/2020	1459				
Printed Name and Signature:						Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature:									

TMR

KAM

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-SWB203-02	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: 3					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS	
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, Cu, Ni, Mn (8210C)	Dissolved Fe, Mn (8220A/8010C)	Chloride, bromide, sulfate (8010C)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (353.2)		
1	SWB203-02	7-29-2020	1605	6	-	3	-	2	1						
2															
3															
4															
5															
Please add Fe and Mn to total metals analysis.															
Associated with: ESS lab grade water Crystal Springs DI water TB203-34															
SAMPLER(S): D. Schmeelk		RELINQUISHED BY: D. Schmeelk				DATE: 7-29-2020				TIME: 1800				COURIER AND SHIPPING NUMBER: 8155 2830 0076	
Printed Name and Signature:		Printed Name and Signature:				DATE:				TIME:				RECEIVED BY:	
Printed Name and Signature:		Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:	
Printed Name and Signature:		Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:	
Printed Name and Signature:		Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:	
Printed Name and Signature:		Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:	

THUR

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-TB203-34	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3			
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS	
				Total Number of Bottles	VOCs (2280C)	BTEX (2280C)	BTEXN (2280C)	EDB (8011)	Dissolved Pb, Mn (6020A, 6010C)	Chloride, bromide, sulfate (300 0)	Nitrate-Nitrite (353 2)	Alkalinity (Total, Carbonate, and Bicarbonate) (352 2)			
1	TB203-34	7-29-2020	1630	4	-	2	-	2							
2															
3															
4															
5															
Associated with: SWB203-01 SWB203-02															
SAMPLER(S): D. Schuelek				COURIER AND SHIPPING NUMBER: FedEx 8155 2830 0076											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schuelek				7-29-2020		1800		Printed Name and Signature: Wesley Miller				7/30/20		1059	
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							

TMM2

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-9143-1

Login Number: 9143**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Rivera, Tatiana**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	

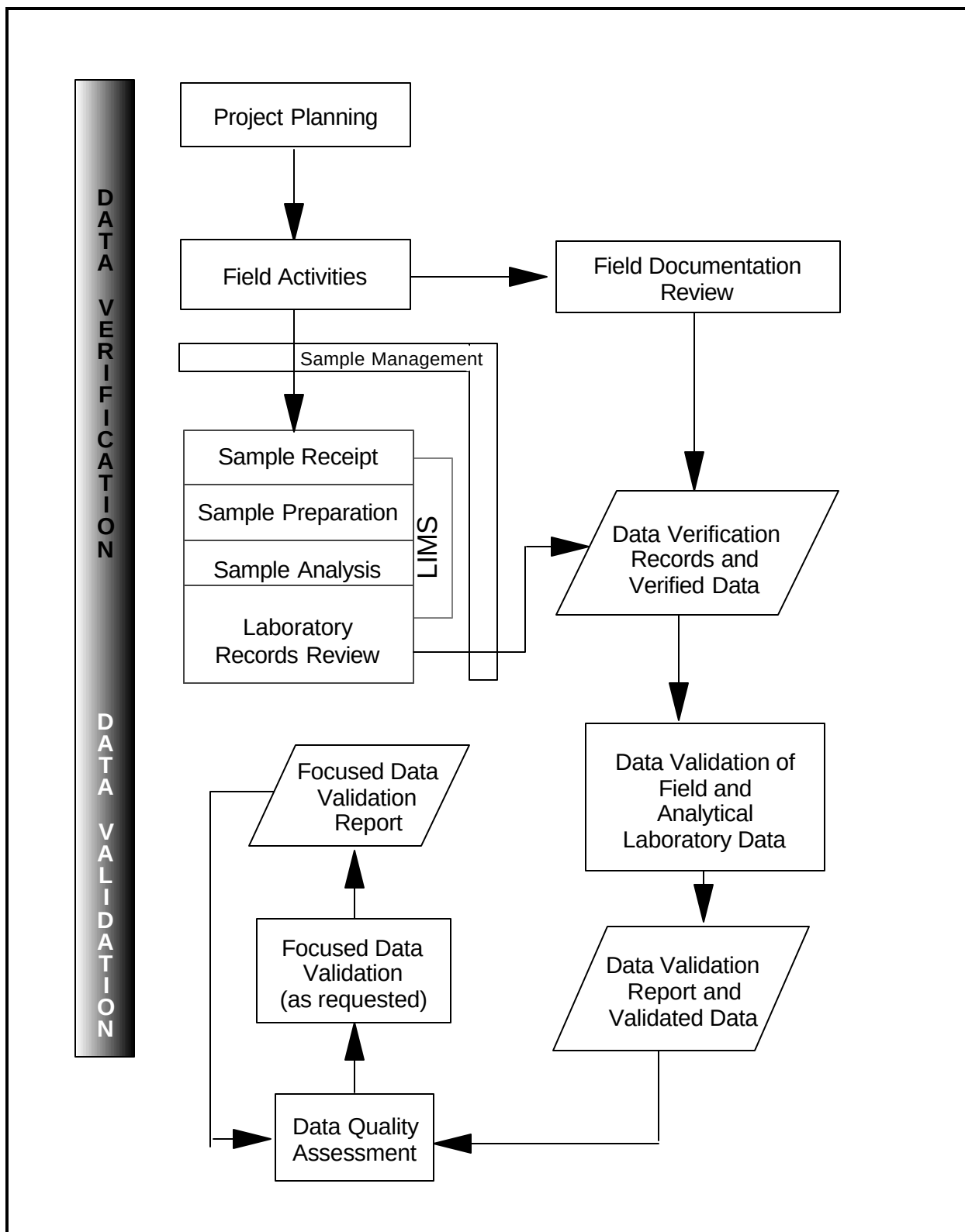


Figure 2. Data Verification and Data Validation Components in the Project Life Cycle

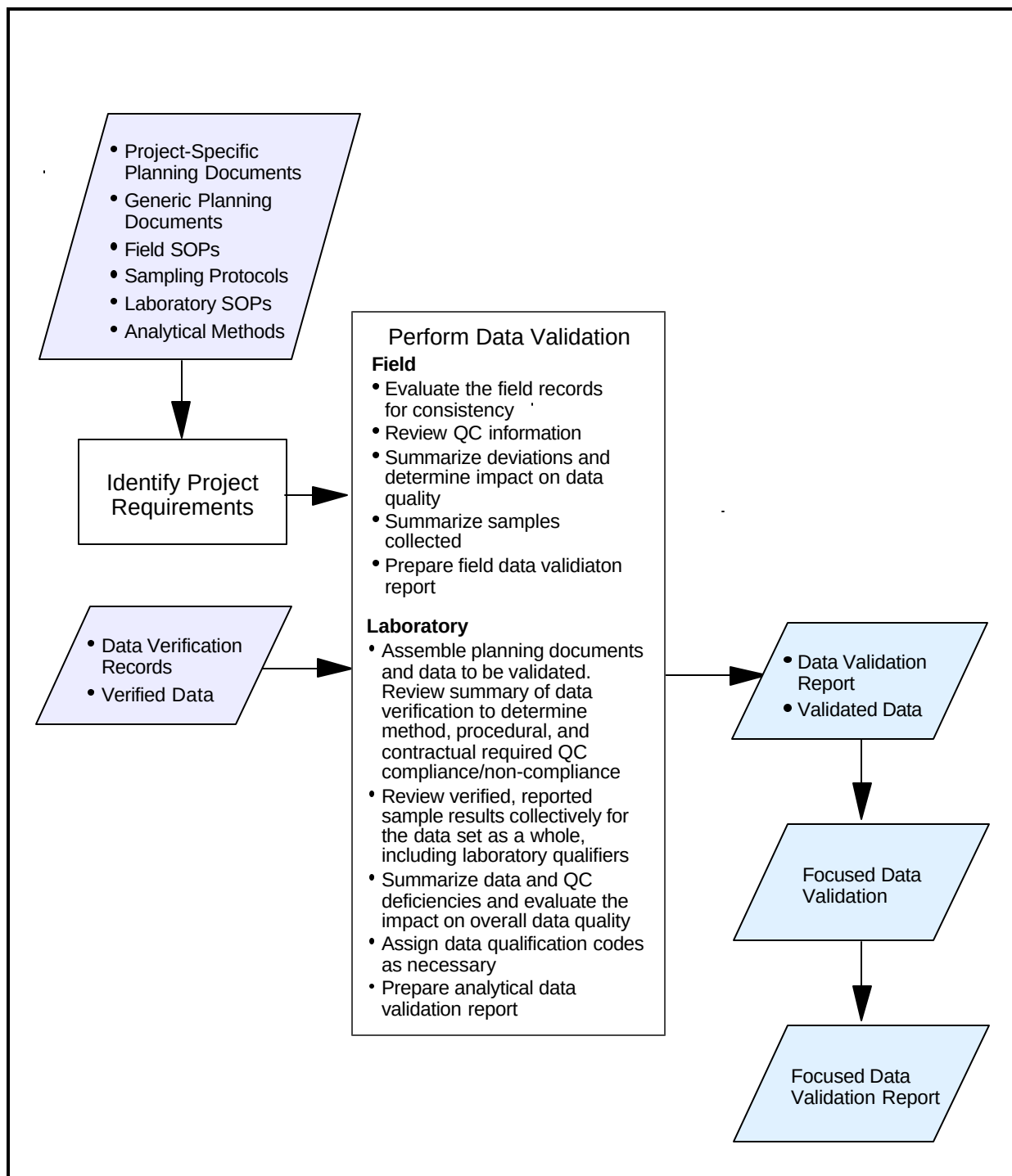


Figure 4. Data Validation Process

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

62735DM02

~~62599DM01~~

ROLE: Drinking Water Sampling

DATE: 7/07/2020

WEATHER: Partly cloudy, upper 70s

1. ONSITE PERSONNEL (including subcontractors and government employees)					
Name		Organization			
Ginny Bracht		EA - Site Manager/Supervisor			
Pete Ferraro		EA - Site Health and Safety Office			
Amanda Smith		EA			

2. OPERATING EQUIPMENT					
Team #1		Team #2		Spare	
YSI Professional Plus 18L100378 WH0003	☒	YSI Professional Plus 15K101396 WH0001	☐	YSI Professional Plus 15L100541 WH0002	☐
MiniRAE 3000 592-915778 WH0005	☐	MiniRAE 3000 592-915790 WH0004	☐	MiniRAE 3000 592-915579 WH0006	☐
Geotech Turbidimeter 18081855	☐	Hach 2100Q 15100C044633 WH0009	☐	Hach 2100Q 15100C045025 WH0007	☒
Solinst Water Level Meter 253056	☐	Solinst Water Level Meter 253053 WH0012	☐	Geotech Interface Probe 0001	☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, conversations with the public and governmental employees, and problems encountered and remedies applied)	
1035	Duplicate Sample at ST106-VA-2

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)	
0905	Leave office trailer
0907	Arrive at KAFB-016
0912	Sample collected at KAFB-016
0921	Leave well KAFB-016

Reviewed by:

DQCR Page 1 of 2

Reviewed date:

7/7/2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 7/7/2020

4. WORK PERFORMED (Continued)

[illegible]

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Name Amanda Smriti

Signature

EA Engineering, Science and Technology Inc., PBC

Reviewed by: [Signature]

DQCR Page 2 of 2

Reviewed date: 7/7/2020

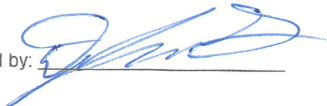
Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01 L 273SDM02
Daily Quality Control Report – Non-Construction

ROLE: Drinking Water Sampling

DATE: 8/14/2020

WEATHER: Partly cloudy, warm

1. ONSITE PERSONNEL (including subcontractors and government employees)		
Name	Organization	
G. Bracht	EA - Site Manager/Supervisor	
P. Ferari	EA - Site Health and Safety Office	
G. Begaye	EA	
GB 8/14/2020		
2. OPERATING EQUIPMENT		
Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☒	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☒	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐
3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, conversations with the public and governmental employees, and problems encountered and remedies applied)		
0928 MS/MSD at KAFB-003		
GB 8/14/2020		
4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)		
0900 Arrive at KAFB-016		
0904 Sample KAFB-016		
0920 Arrive at KAFB-003		
0928 Sample at KAFB-003		

Reviewed by: 

DQCR Page 1 of 2

Reviewed date: 9-1-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

DATE: 8/4/2020

4. WORK PERFORMED (Continued)	
0953	Arrive at KAFB-015
1000	Sample KAFB-015
1012	Arrive at VA-2
1035	Sample VA-2
1042	Leave VA-2, return to field trailer for shipping
GB 2/4/2020	

5. CONTRACTOR'S VERIFICATION: I certify that to the best of my knowledge the above report is complete and correct. All equipment used, and work performed during this reporting period is in compliance with the contract plans and specifications noted above.

Name GINNY BRACKET


Signature

EA Engineering, Science and Technology Inc., PBC

Reviewed by: _____

DQCR Page 2 of 2

Initials: _____

Reviewed date: 9-1-2020

Kirtland AFB Bulk Fuels Facility GWTS Expansion/Monitoring -- 62599DM01
Daily Quality Control Report – Non-Construction

ROLE: Samplers, Team #1

DATE: 9-1-2020

WEATHER:

1. ONSITE PERSONNEL (including subcontractors and government employees)	
Name	Organization
Bernard Bockisch	EA - Site Manager/Supervisor
Peter Ferrari	EA - Site Health and Safety Office
Dylan Schmeelk	EA-Sampler
Amy Rosebrough	EA-Sampler

2. OPERATING EQUIPMENT		
Team #1	Team #2	Spare
YSI Professional Plus 18L100378 WH0003 ☒	YSI Professional Plus 15K101396 WH0001 ☐	YSI Professional Plus 15L100541 WH0002 ☐
MiniRAE 3000 592-915778 WH0005 ☐	MiniRAE 3000 592-915790 WH0004 ☐	MiniRAE 3000 592-915579 WH0006 ☐
Geotech Turbidimeter 18081855 ☐	Hach 2100Q 15100C044633 WH0009 ☒	Hach 2100Q 15100C045025 WH0007 ☐
Solinst Water Level Meter 253056 ☐	Solinst Water Level Meter 253053 WH0012 ☐	Geotech Interface Probe 0001 ☐

3. DAILY SUMMARY (include QC samples collected, deviations from planning documents, conversations with the public and governmental employees, and problems encountered and remedies applied)

0856	Leave trailer for KAFB-016
0858	Arrive at KAFB-016.
0929	Leave KAFB-016 for KAFB-015.
	Arrive at KAFB-015
	Sampled KAFB-016, KAFB-015, KAFB-003, and ST106-VA-2

4. WORK PERFORMED (Indicate location, time, and description of work performed by prime and/or subcontractors)	
0856	Leave trailer for KAFB-016
0858	Arrive at KAFB-016
0929	Leave KAFB-016 For KAFB-015
0931	Arrive at KAFB-015.

Reviewed by: at-BT

DQCR Page 1 of 2

Reviewed date: 9/1/2020



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - July
Well ID: KAFB-003

Project: Kirtland AFB BFF ST-106/SS-111

Well ID:

Purge Information and Field Parameter

Date: 7/7/2020

Sample Team: G. Bracht, A. Smith

Sample Team Signature

Purge Start Time: 0800 7/6/2020

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0953	0.64	21.9	45.0	3.91	611	7.86	257.5

Sample Time: 0953 Sample Date: 7/7/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? Amount Size 6mm

Sampled by: G. Bracht

Sample ID:	GWK003-2031	Duplicate Sample ID (if applicable):	GWK003-6031
COC:	COC-K003-2031		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments: well turned on 7/6/2020, purged over 24 hours per Kirtland AFB water plant.

Reviewed by:

Review Date:

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - July

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-015

Purge Information and Field Parameter

Date: 7/7/2020

Sample Team: G. Bracht, A. Smith

Sample Team Signature: [Signature]

Purge Start Time: 0815

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0928	0.32	27.0	5.7	0.45	703	7.86	257.2

Sample Time: 0928 Sample Date: 7/7/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? Amount Size 6mm

Sampled by: G. Bracht

Sample ID:	GWK015-2031	Duplicate Sample ID (if applicable):	GWK015-6031
COC:	COC-K015-2031		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by: [Signature]

Review Date: 7/7/2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - July

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-016

Purge Information and Field Parameter

Date: 07/07/2020

Sample Team: A Smith, G. Bracht

Sample Team Signature

Purge Start Time: 0820

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0912	0.37	26.1	5.5	0.45	804	6.8	7.9

Sample Time: 0912 Sample Date: 7/7/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? Amount Size 6mm

Sampled by: Ginny Bracht

Sample ID:	GWK016-2031	Duplicate Sample ID (if applicable):	GWK016-6031
COC:	COC-K016-2031		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by:

Review Date:

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - July

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: ST106-VA-2

Purge Information and Field Parameter

Date: 7/7/2020

Sample Team: G. Bracht, A. Smith

Sample Team Signature

Purge Start Time: 1018

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
1035	0.72	22.5	24.0	2.06	631	7.84	267.6

Sample Time: 1035 Sample Date: 7/7/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? Amount Size 6mm

Sampled by: G. Bracht

Sample ID:	GWVA2-2031	Duplicate Sample ID (if applicable):	GWVA2-6031
COC:	COC-VA2-2031		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by:

Review Date: 7/7/2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - August

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-003

Purge Information and Field Parameter

Date: 08-04-2020

Sample Team: G. Bracht, G. Begaye

Sample Team Signature

Purge Start Time: 0700 8/3/2020*

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0928	0.58	21.2	47.0	4.10	387.5	7.72	609.7

Sample Time: 0928

Sample Date: 08-04-2020

 Bubbles in the vials?: ☐ Yes ☒ No Where? — Amount — Size —
 6mm

Sampled by: G. Bracht

Sample ID: GWK003-2032

Duplicate Sample ID
(if applicable):

GWK003-6032

COC: COC-K003-2032

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

 Comments: *Per Kirtland water plan, well has been running for over
 24 hrs.

Reviewed by:

Review Date:

9-1-2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - August

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-015

Purge Information and Field Parameter

Date: 08-04-2020

Sample Team: G. Bracht, G. Begay

Sample Team Signature

Purge Start Time: 0920

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
1000	0.41	27.6	10.4	0.82	432.3	7.86	481.3

Sample Time: 1000 Sample Date: 08-04-2020

 Bubbles in the vials?: ☐ Yes ☒ No Where? — Amount — Size —
 6mm

Sampled by: G. Bracht

Sample ID:	GWK015-2032	Duplicate Sample ID (if applicable):	GWK015-6032
COC:	COC-K015-2032		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by:

Review Date:

9-1-2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - August

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-016

Purge Information and Field Parameter

Date: 08-04-2020

Sample Team: G-Bracht, G-Begaye

Sample Team Signature

Purge Start Time: 0835

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0904	0.67	26.6	6.6	0.53	579	6.08	653.2

Sample Time: 0904 Sample Date: 08-04-2020

Bubbles in the vials?: ☐ Yes ☒ No Where? _____ Amount _____ Size _____

6mm

Sampled by: G-Bracht

Sample ID:	GWK016-2032	Duplicate Sample ID (if applicable):	GWK016-6032
COC:	COC-K016-2032		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments: _____

Reviewed by: _____

Review Date: 9-1-2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - August

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: ST106-VA-2

Purge Information and Field Parameter

Date: 08-04-2020

Sample Team: G. Bracht, G. Begaye

Sample Team Signature

Purge Start Time: ^{GB} 1030 1013

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
1035	0.23	22.9	16.0	1.33	360.5	7.80	451.1

Sample Time: 1035 Sample Date: 08-04-2020

Bubbles in the vials?: ☐ Yes ☒ No Where? — Amount — Size — 6mm

Sampled by: GBracht

Sample ID: GWVA2-2032

Duplicate Sample ID (if applicable):

GWVA2-6032

COC: COC-VA2-2032

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by:

Review Date:

9-1-2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - September

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-003

Purge Information and Field Parameter

Date: 9/1/2020

Sample Team: Dylan S., Amy R.

Sample Team Signature: *[Signature]*

Purge Start Time: 24 hours

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
1010	0.24	21.3	38.1	3.37	444.2	7.75	201.0

Sample Time: 1010 Sample Date: 9/1/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? _____ Amount _____ Size _____
6mm

Sampled by: Dylan S.

Sample ID:	GWK003-2033	Duplicate Sample ID (if applicable):	GWK003-6033
COC:	COC-K003-2033		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments: Per Kirtland AFB water plant, KAFB-003 has been running for at least 24 hrs.

Reviewed by: *[Signature]*

Review Date: 9/1/2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - September

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-015

Purge Information and Field Parameter

Date: 9/1/2020

Sample Team: DS + AR

Sample Team Signature

Amy Rosebraugh

Purge Start Time: 0845

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0938	0.24	26.2	7.0 6.5 AR	0.50	507	7.86	199.4

Sample Time: 0940 Sample Date: 9/1/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? _____ Amount _____ Size _____

6mm

Sampled by: Dylan S.

Sample ID:	GWK015-2033	Duplicate Sample ID (if applicable):	GWK015-6033
COC:	COC-K015-2033		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments: _____

Reviewed by:

aj. Bunt

Review Date:

9/1/2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020

Quarter: 3 - September

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: KAFB-016

Purge Information and Field Parameter

Date: 9-1-2020

Sample Team: DS + AR

Sample Team Signature:

Purge Start Time: 0830

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
0909	0.19	25.0	14.3	1.11	514	7.63	224.7

Sample Time: 0915 Sample Date: 9/1/2020

Bubbles in the vials?: ☐ Yes ☒ No Where? Amount Size 6mm

Sampled by: DS

Sample ID: GWK016-2033

Duplicate Sample ID (if applicable):

GWK016-6033

COC: COC-K016-2033

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments:

Reviewed by:

Review Date: 9/1/2020

Page 1 of 1



Drinking Water Supply Sampling Log

Year: 2020
Quarter: 3 - September

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: ST106-VA-2

Purge Information and Field Parameter

Date: 9/1/2020

Sample Team: Dylan S., Amy R.

Sample Team Signature:

Purge Start Time: 1100

Time	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
1118	0.24	21.1	17.8	1.55	426.9	7.69	243.6

Sample Time: 1120 Sample Date: 9-1-2020

Bubbles in the vials?: ☐ Yes ☒ No Where? _____ Amount _____ Size _____
6mm

Sampled by: D. Schmeelk

Sample ID:	GWVA2-2033	Duplicate Sample ID (if applicable):	GWVA2-6033
COC:	COC-VA2-2033		

Contact Information

For wells KAFB-003, KAFB-015, and KAFB-016: Call Mark Dalzell at 505-228-8595

For well ST106-VA-2: Call Tim Melody 505-991-3876

Comments: _____

Reviewed by:

Review Date: 9/1/2020

Page 1 of 1

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K003-2031			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858						QUARTER: 3 - July			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	(EPA Method 524.2) BTEX	(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDB	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	Dissolved Fe, Mn	(6010C) Chloride, bromide, sulfate	(300.0A) Nitrate-Nitrite	(353.2) Nitrate-Nitrite		(4500 S2CF) Sulfide	(4500NH3BC) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)
1	GWK003-2031	7/7/2020	0953	6	-	3	-	3									
2																	
3																	
4																	
5																	
6																	
														TB2031- 02			
SAMPLER(S): Ginny Bracht				COURIER AND SHIPPING NUMBER: FedEx 1891 4168 5164													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: Ginny Bracht								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K015-2031			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858								QUARTER: 3 - July	
ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	EDB (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500NH3BC)	Sulfide (4500 S2CF)	COMMENTS
1	GWK015-2031	7/7/2020	0928	6	-	3	-	3							
2															
3															
4															
5															
6															
														TB2031-01	
SAMPLER(S): Ginny Bracht				COURIER AND SHIPPING NUMBER: FedEx 1891 4168 5175											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: Ginny Bracht				7/7/2020		1400		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-K016-2031											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA											
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858													
		ANALYSIS REQUIRED (Specify number of bottles)															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(EPA Method 524.2) BTEX	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDB	(EPA Method 504.1) Total (As, Pb, Cd, Ni, Mn)	(6010C) Dissolved Fe, Mn	Chloride, bromide, sulfate	(300.0A) Nitrate-Nitrite	(353.2)	(4500 SCF) Sulfide	(4500NH3)C Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	COMMENTS
1	GWK016-2031	7/7/2020	0912	6	-	3	-	3									
2																	
3																	
4																	
5																	
6																	
SAMPLER(S): <i>Guiny Bracht</i>										COURIER AND SHIPPING NUMBER: FedEx <i>1891 4168 5164</i>							
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME						
Printed Name and Signature:						7/7/2020		1400		Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							

TB2031- 02

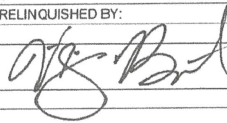
EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				COC-VA2-2031				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858										
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(EPA Method 524.2) BTEX *	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDR	Total (As, Pb, Ca, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	(Total, Carbonate, and Bicarbonate) Alkalinity (2320B)	Ammonia Nitrogen (4500NH3BC)	Sulfide (4500 S2CF)	COMMENTS
1	GWVA2-2031	7/7/2020	1035	6	-	3	-	3								* Please also report results for PCE, TCE, and VC
2	GWVA2-6031	7/7/2020	1035	6	-	3	-	3								
3																
4																
5																
6																
SAMPLER(S): Ginny Bracht				COURIER AND SHIPPING NUMBER: FedEx 1891 4168 5175												
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME					
Printed Name and Signature: Ginny Bracht				7/7/2020	1400	Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										

CHAIN-OF-CUSTODY RECORD												COC NUMBER					
 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 594-7000 Fax No: (410) 771-1625												COC-TB2031-01					
												YEAR: 2020					
OBJECT NAME: Kirtland AFB Bulk Fuels Facility				PROJECT NUMBER: 62735DM02				LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: 3 - July			
PROJECT SITE AND PHASE: T106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs (EPA Method 824.2)	BTEX (EPA Method 824.2)	BTEXN (EPA Method 824.2)	EDG (EPA Method 504.1)	Total (As Pb, Ca, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)		Ammonia Nitrogen (4500NH3B/C)	Sulfide (4500 S2CF)	
1	TB2031-01	07/07/2020	0800	4	-	2	-	2									
2																	
3																	
4																	
5																	
6																	

Associated with:
 GWVAZ-2031
 GWVAZ-6031
 GWK015-2031

SAMPLER(S): Amanda M. Smith		COURIER AND SHIPPING NUMBER: FedEx 189141685175	
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Printed Name and Signature: GINNY BRACHT	7/7/2020	1400	Printed Name and Signature:
Printed Name and Signature:			Printed Name and Signature:
Printed Name and Signature:			Printed Name and Signature:

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-TB2031-02				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 - July				
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858								
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	EDB (EPA Method 504.1)	EDB (EPA Method 524.2)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	(Total) Alkalinity and Bicarbonate (2320B)	Ammonia Nitrogen (4500NH3/C)	Sulfide (4500 S2CF)	COMMENTS
1	TB2031-02	07/07/2020	0800	4	-	2	-	2								
2																
3																
4																
5																
6																
Associated with: GWK 003-2031 GWK 016-2031																
SAMPLER(S): <i>Amanda M. Smith</i>				COURIER AND SHIPPING NUMBER: <i>FedEx 1891 4168 5164</i>												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K003-2032					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 - August					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858									
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(EPA Method 524.2) BTEX	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDB	Total (As, Pb, Cd, Ni, Mn)	(6020A/6010C) Dissolved Fe, Mn	Chloride, bromide, sulfate (6010C)	Nitrate-Nitrite (353.2)	(600.0A) Nitrate-Nitrite	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(4500-NH3C) Ammonia Nitrogen	(4500-SiO3) Silicate	COMMENTS
1	GWK003-2032	08-04-2020	0928	18	-	9	-	9									Additional volume provided for MS/MSD
2																	
3																	
4																	
5																	
6																	
SAMPLER(S): G. Bracht										COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8090							
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME						
Printed Name and Signature:						Printed Name and Signature:											
GINNY BRACHT 				8/4/2020 1400													
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-K015-2032											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA											
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858		YEAR: 2020 QUARTER: 3 - August											
ITEM		SAMPLE IDENTIFIER		DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS							
						Total Number of Bottles	VOCs	(EPA Method 524.2) BTEX	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDB	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500-NH3C)	Sulfide (4500-SCC)
1	GWK015-2032	08-04-2020	1000	6	-	3	-	3									
2																	
3																	
4																	
5																	
6																	
SAMPLER(S): G. Bracht																	
RELINQUISHED BY: G. Bracht																	
DATE: 8/4/2020 TIME: 1400																	
COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8105																	
RECEIVED BY:																	
DATE: TIME:																	
PRINTED NAME AND SIGNATURE:																	
PRINTED NAME AND SIGNATURE:																	
PRINTED NAME AND SIGNATURE:																	
PRINTED NAME AND SIGNATURE:																	

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-K016-2032									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA									
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16055		LAB CONTACT: 1 (912) 354-7858		YEAR: 2020 QUARTER: 3 - August									
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	(EPA Method 524.2) BTEX	(EPA Method 524.2) EDB	(EPA Method 504.1) Total (As Pb, Ca, K, Na, Mg)	(6020A/6010C) Dissolved Fe, Mn	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500N-3B/C)	(4500 S2C/F) Sulfide	COMMENTS
1	GWK016-2032	08-04-2020	0904	6	-	3	-	3							
2															
3															
4															
5															
6															
SAMPLER(S): G. Bracht															
RELINQUISHED BY: G. Bracht															
DATE: 8/4/2020 TIME: 1400															
PRINTED NAME AND SIGNATURE: G. Bracht															
COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8090															
RECEIVED BY:															
DATE: TIME:															
PRINTED NAME AND SIGNATURE:															
PRINTED NAME AND SIGNATURE:															
PRINTED NAME AND SIGNATURE:															
PRINTED NAME AND SIGNATURE:															

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-VA2-2032					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 - August					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS	
				Total Number of Bottles	VOCS (EPA Method 824.2)	BTEX (EPA Method 824.2)	EDB (EPA Method 824.2)	EDB (EPA Method 504.1)	Total (As, Pb, Ca, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (450NH3B/C)	Sulfide (4500 S2CF)		
1	GWVA2-2032	08-04-2020	1035	6	-	3	-	3									*Please also report results for PCE, TCE, and VC
2																	
3																	
4																	
5																	
6																	
SAMPLER(S): G. Bracht								COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8105									
RELINQUISHED BY:								RECEIVED BY:									
DATE				TIME				DATE				TIME					
Printed Name and Signature: Ginny Bracht				8/4/2020 1400				Printed Name and Signature:				DATE					
Printed Name and Signature:				DATE				Printed Name and Signature:				DATE					
Printed Name and Signature:				DATE				Printed Name and Signature:				DATE					
Printed Name and Signature:				DATE				Printed Name and Signature:				DATE					

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB2032-01	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858		YEAR: 2020 QUARTER: 3 - August	

ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	BTEXN (EPA Method 524.2)	EDS (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)		Ammonia Nitrogen (4500NH3BC)	Sulfide (4500 S2CF)	
1	TB2032- 01	8/4/2020	0800	4	-	2	-	2									
2																	
3																	
4																	
5																	
6																	

Associated with:
 GWVA 2-2032
 GWK 015-2032

SAMPLER(S): G. Bracht			COURIER AND SHIPPING NUMBER: FedEx B47 4015 8105		
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
Printed Name and Signature: Gwynne Bracht		8/4/2020	1400	Printed Name and Signature:	
Printed Name and Signature:				Printed Name and Signature:	
Printed Name and Signature:				Printed Name and Signature:	
Printed Name and Signature:				Printed Name and Signature:	

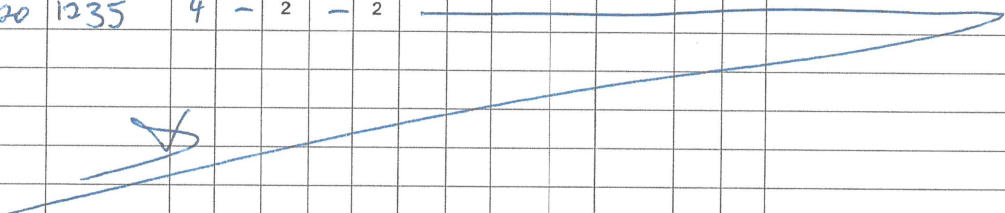
 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER										
						COC-TB2032-02										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA										
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858												
		ANALYSIS REQUIRED (Specify number of bottles)														
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(EPA Method 524.2) VOCs	(EPA Method 524.2) BTEX	(EPA Method 524.2) BTEXN	(EPA Method 504.1) EDB	Total (As, Pb, Cd, Ni, Mn) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500-NH3C)	Sulfide (4500 S2CF)	COMMENTS
1	TB2032-02	8/14/2020	0800	4	-	2	-	2								
2																
3																
4																
5																
6																
Associated with: GWK003-2032 GWK016-2032																
SAMPLER(S): G. Bracht								COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8090								
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME					
Printed Name and Signature:						Printed Name and Signature:										
GINNY BRACHT				8/14/2020	1400											
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										

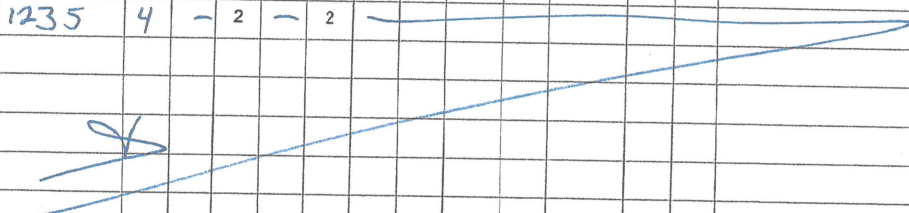
 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K003-2033				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858				QUARTER: 3 - September				
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS		
				Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	BTEXN (EPA Method 524.2)	EDB (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)		Ammonia Nitrogen (450NH3BC)	Sulfide (4500 S2CF)
1	GWK003-2033	9/1/2020	1010	6	3	3	3									
2																
3																
4																
5																
6																OK
SAMPLER(S): <i>Dylan Schmeek</i>								COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680								
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME					
Printed Name and Signature:						Printed Name and Signature:										
<i>Amy Rosebrough</i>				9/1/2020	1500											
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K015-2033					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 - September					
PROJECT SITE AND PHASE: ST 106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858									
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	EDB (EPA Method 524.2)	BTXN (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500-NH3C)	Sulfide (4500-S2CF)	COMMENTS	
1	GWK015-2033	9/1/2020	0940	6 th	3	+	3										
2																	
3																	
4																	
5																	
6	AR																
TB2033-1																	
SAMPLER(S): <i>Pylian Schmebeck</i>				COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5679													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: <i>Amy Rosebrough</i>				9/1/2020		1500		Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									
Printed Name and Signature:								Printed Name and Signature:									

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-K016-2033									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: 3 - September									
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858															
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS							
				Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	BTEXN (EPA Method 524.2)	EDS (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)		Ammonia Nitrogen (4500-NH3BC)	Sulfide (4500-SCF)					
1	GWK016-2033	9-1-2020	0915	6	-	3	-	3													
2																					
3																					
4																					
5																					
6																					
SAMPLER(S): D. Schmeelk										COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680											
RELINQUISHED BY:										DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: D. Schmeelk, [Signature]										9-1-2020		1500									
Printed Name and Signature:																					
Printed Name and Signature:																					
Printed Name and Signature:																					

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-VA2-2033							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020							
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858				QUARTER: 3 - September							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS				
					VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	BTEXN (EPA Method 524.2)	ED8 (EPA Method 504.1)	Total (As, Pb, Cd, Cr, Ni, Mn) (6020.6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500-NH3C)		Sulfide (4500-S2CF)			
1	GWVA2-2033	9/1/2020	1120	6	-	3	-	3											
2	GWVA2-6033	9/1/2020	1120	6	-	3	-	3											
3																			
4																			
5																			
6																			
																			
SAMPLER(S): <i>Dylan Schumleek</i>				COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5679															
RELINQUISHED BY:				DATE:				TIME:				RECEIVED BY:				DATE:		TIME:	
Printed Name and Signature: <i>Amy Rosebrough</i>				DATE: <i>9/1/2020</i>				TIME: <i>1500</i>				Printed Name and Signature:				DATE:		TIME:	
Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:				DATE:		TIME:	
Printed Name and Signature:				DATE:				TIME:				Printed Name and Signature:				DATE:		TIME:	

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-TB2033. 1				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065				LAB CONTACT: 1 (912) 354-7858						QUARTER: 3 - September				
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (EPA Method 524.2)	BTEX (EPA Method 524.2)	BTEXN (EPA Method 524.2)	EDB (EPA Method 504.1)	Total (As, Pb, Cd, K, Na, Mg) (6020A, 6010C)	Disolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (353.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)	Ammonia Nitrogen (4500NH3BC)	Sulfide (4500 S2CF)	COMMENTS
1	TB2033- 1	9-1-2020	1235	4	-	2	-	2								
2																
3																
4																
5																
6																
Associated with: GWVA2-2033 GWVA2-6033 GWK015-2033																
SAMPLER(S): <u>D. Schneelk</u>								COURIER AND SHIPPING NUMBER: <u>FedEx 1347 4018 5679</u>								
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME					
Printed Name and Signature: <u>D. Schneelk</u>				9-1-2020	1500											
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-TB2033-2											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA											
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7868		YEAR: 2020 QUARTER: 3 - September											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS			
				Total Number of Bottles	VOCs (EPA Method 824.2)	BT EX (EPA Method 824.2)	BT EXN (EPA Method 824.2)	EDB (EPA Method 804.1)	Total (As Pb, Ca, K, Na, Mg) (6020A/6010C)	DISSOLVED Fe, Mn (8010C)	Chloride, bromide, sulfate (300.0A)	Nitrate-Nitrite (253.2)	Alkalinity (Total, Carbonate, and Bicarbonate) (2320B)		Ammonia Nitrogen (4500NH3/C)	Sulfide (4500 S/C)	
1	TB2033-2	9-1-2020	1235	4	-	2	-	2	-	-	-	-	-	-	-	-	
2																	
3																	
4																	
5																	
6																	
Associated with: GWK06-2033 GWK003-2033																	
SAMPLER(S): D. Schweetk				COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680													
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME			
Printed Name and Signature: D. Schweetk				9-1-2020		1500											
Printed Name and Signature:																	
Printed Name and Signature:																	
Printed Name and Signature:																	

APPENDIX H-1

Data Quality Evaluation Report – Drinking Water Supply Well Samples (July – September 2020)

LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
AFB	Air Force Base
BTEX	benzene, toluene, ethylbenzene, and xylenes
DL	detection limit
DoD	Department of Defense
EDB	ethylene dibromide
EPA	U.S. Environmental Protection Agency
ICP	inductively coupled plasma
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
Q2	third quarter of the year (July 1 – September 30)
QAPjP	Quality Assurance Project Plan
QC	quality control
RL	reporting limit
RPD	relative percent different
SDG	sample delivery group
SM	Standard Method
SW	Solid Waste
TA	Eurofins TestAmerica Laboratories, Inc.
USACE	U.S. Army Corps of Engineers
VOA	volatile organic analysis
VOC	volatile organic compound

DATA QUALITY EVALUATION REPORT – DRINKING WATER SUPPLY WELL SAMPLES (July – September 2020)

1. LABORATORY DATA QUALITY SUMMARY

This Data Quality Evaluation Report describes the findings of the data validation performed for the analysis of drinking water supply well samples collected during July–September 2020 (quarter 3 [Q3]). These data were collected in support of the Work Plan for Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling, Bulk Fuels Facility, Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base (AFB), New Mexico (Kirtland AFB, 2017). Sampling and analysis for the July–September 2020 events were conducted in accordance with the procedures and overall quality control (QC) and quality assurance protocols presented in the Work Plan and Quality Assurance Project Plan (QAPjP) for Bulk Fuels Facility Vadose Zone Treatability Studies, Solid Waste Management Unit ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2017).

Samples discussed in this report were collected on July 7, August 4, and September 1 in association with the Kirtland AFB drinking water supply wells KAFB-003, KAFB-015, and KAFB-016; and the Raymond G. Murphy Veterans Affairs Medical Center drinking water supply well ST106-VA-2. Field QC samples were collected in association with the monthly sampling events and included two field duplicates and six trip blank samples.

Drinking water samples were shipped to Eurofins TestAmerica Laboratories, Inc. (TA), Savannah, Georgia for analysis. TA Savannah maintains a current New Mexico Environment Department Drinking Water Laboratory Certification Program accreditation to perform the EPA 524.2 analysis and a Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) certification to perform the EPA 504.1 analysis required for this project. Sample analyses were performed in accordance with the U.S. Environmental Protection Agency (EPA) Methods for the Determination of Organic Compounds in Drinking Water, 1988 and Supplements.

The July–September 2020 drinking water samples were analyzed for the following parameters and methods:

- ***Benzene, toluene, ethylbenzene, and total xylenes (BTEX)***—EPA Method 524.2
- ***Ethylene dibromide (EDB)***—EPA Method 504.1.

Chemical analytical data for the Q3 2020 events were reported by TA in sample delivery groups (SDGs) 680-186052-1, 680-187144-1, and 680-188221. Appendix H-1 – Table 1 summarizes samples collected from the production wells and the associated field QC samples, collection date, laboratory SDG, and analytical parameters for the monthly events.

A third-party subcontractor (Environmental Data Services, Inc.) conducted EPA Stage 3 data validation on 100 percent (%) of the July–September 2020 sample data. Analytical data validation was performed using the quality criteria specified in the following documents, analytical guidelines, and methods:

- Work Plan and QAPP (Kirtland AFB, 2017)
- EPA Contract Laboratory Program, National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2014a)

- EPA Methods for the Determination of Organic Compounds in Drinking Water, 1988 and Supplements.

The following QC criteria were included in the EPA Stage 3 validation as applicable to the analytical method:

- Sample preservation and extraction and analysis holding times
- Laboratory method blank contamination
- Surrogate spike recoveries
- Laboratory control sample (LCS) and LCS duplicate (LCSD) recoveries
- Matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries
- Relative percent difference (RPD)
- Initial and continuing calibrations
- Inductively coupled plasma (ICP) interference check sample (metals)
- ICP serial dilution (metals)
- Second column confirmation (for EDB analysis only)
- Trip blank results
- Field duplicate sample precision.

Analytical data were reviewed to evaluate precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity as defined below:

- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.
- *Accuracy (bias)* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. A comparison was made from the recovery of target analytes from fortified samples to the acceptance criteria defined in the QAPjP (Kirtland AFB, 2017). When the acceptance criteria are not available in the QAPjP, results are compared with the laboratory in-house control limits. When these criteria are not met, the data are qualified accordingly. Bias may be indicated as high or low.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and standard analytical method protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods and comparison of sample results to historical sample data.
- *Completeness* of data is evaluated based on contractual, analytical, and technical completeness for the monthly supply well data. Technical completeness of data is used to assess overall project completeness and is expressed as a percentage of the ratio of the number of usable data results to the total number of analytical data results. Only rejected data (R-qualified) are considered not usable to achieve project objectives.
- *Sensitivity* for the BTEX and EDB is determined by the ability to achieve the established method specific reporting limits (RLs) in accordance with the method detection limit (MDL) study and includes establishing the MDL. The MDL and RL for EPA drinking water methods are similar to the DoD detection limit (DL) and limit of quantitation (LOQ), respectively. For this project, the

laboratory will report positive results to the MDL and results between the MDL and RL will be flagged with a J-qualifier and reported as estimated data. Sensitivity is evaluated based on comparison of the sample RLs to the project screening levels.

The following sections present the EPA Stage 3 data validation findings for the Q3 2020 monthly drinking water supply well data. Appendix H-1 – Table 2 presents the data qualification flags and reason codes to be applied to analytical data, if required.

1.1 DATA QUALITY FINDINGS

1.1.1 Sample Preservation and Sample Extraction and Analysis Holding Times (Reason Code HT)

The sample coolers and samples contained within the coolers were received intact at the laboratories below 6 degrees Celsius, per EPA guidelines. All samples were preserved appropriately per the requirements of EPA method guidelines, with no exceptions. Sample holding times were evaluated by comparing the (1) sample collection date to the sample extraction date, and (2) extraction date to the analysis date to determine if the method-specified holding times were exceeded. Sample extraction and analysis holding times were met for all Q3 2020 samples.

1.1.2 Laboratory Method Blanks (Reason Code MB)

The drinking water supply sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch for each analytical method. No detections of analytes were reported in method blank samples for the water supply well samples.

1.1.3 Initial and Continuing Calibration Blanks (Reason Code CB/CCB)

Initial and continuing calibration blank criteria were reviewed to ensure that the instruments were free of contamination prior to sample analysis. Calibration blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the RL or LOQ for target analytes and less than the RL or LOQ for common laboratory contaminants. Initial and continuing calibration blank data were within control criteria for the drinking water supply sample analyses.

1.1.4 Surrogate Recoveries (Reason Code SURR)

Surrogate compounds are added to field and laboratory QC samples for organic analysis to evaluate the matrix effect and method performance on an individual sample basis. All surrogate compound recoveries for the drinking water supply well sample data were within method control criteria or did not result in data qualification since results were non-detect.

1.1.5 Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries and Precision (Reason Codes LCS/RPD)

The LCS is an aliquot of an analyte-free matrix spiked with target analytes that are prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. All LCS recoveries for the drinking water supply well data were within method control limits. No sample data were qualified based on LCS recoveries.

1.1.6 Matrix Spike/Matrix Spike Duplicate Recoveries and Precision (Reason Codes MS/MSD and RPD)

The MS and MSD samples are a portion of a field sample or a standard reference material spiked with target analytes that are prepared with each analytical batch and method as appropriate. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch.

One MS/MSD was collected during the August 2020 sampling event to achieve the QAPjP requirement of one per 20 samples for the monthly monitoring program. MS/MSD recoveries were within control limits. No data were qualified based on MS/MSD recoveries for the Q3 2020 events.

1.1.7 Initial and Continuing Calibration Verification (Reason Code CCV)

Instrument calibration is performed for all analyses in accordance with method requirements. The linear analytical range is established for each method by analysis of calibration standards prepared at increasing concentrations that cover the expected sample concentration range. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or coefficient. The stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the instrument calibration range. The percent difference values between the relative response factor in the initial calibration and the relative response factor in the continuing calibration are reviewed to ensure instrument calibration criteria are within method control limits. Initial and continuing calibration verification met the method-specific control criteria for the drinking water supply well analytical data for the Q3 2020 event.

1.1.8 Sample Confirmation (Reason Code RPD)

As required by EPA analytical method guidance, sample detections for EDB require confirmation using a second column analysis. No EDB sample detections were reported for the drinking water supply well samples analyzed using EPA Method 504.1 and, therefore, second column confirmation was not evaluated for the samples.

1.1.9 Trip Blanks for Volatile Organic Compounds (Reason Code TB)

Trip blank samples were prepared by the laboratory and stored with the groundwater samples collected for volatile organic compound (VOC) analyses (BTEX and EDB). In accordance with the QAPjP requirements, trip blank samples are to be included at a rate of one per cooler when sampling groundwater samples for VOC analysis. A trip blank sample was included with each drinking water supply well sample shipment. No detections of VOCs were reported in trip blank samples. Appendix H-1 – Table 3 summarizes the results for trip blank samples associated with the drinking water supply well samples.

1.1.10 Equipment Rinse Blanks (Reason Code EB)

No equipment rinse blank samples are required to be collected in conjunction with the water supply well samples since samples are collected directly from a designated sampling port using dedicated sampling equipment.

1.1.11 Field Duplicate Samples

In accordance with the project QAPjP requirements (Kirtland AFB, 2017), field duplicate samples are collected at a frequency of one field duplicate for every 10 monthly samples collected (10%). For the Q3 2020 sampling events, one field duplicate sample was collected in association with the drinking water supply wells for the July and September events and analyzed for BTEX and EDB. The field duplicate sample frequency for the Q3 2020 sampling was 16%.

For field duplicate samples, RPD was evaluated by calculating the RPD between the parent sample and the duplicate sample. The RPD was calculated using the following equation:

$$RPD = |(S-D)/[(S+D)/2]| \times 100$$

where

S = Sample result.
D = Duplicate result.

Acceptable precision control criteria are established at less than or equal to 35% for water samples. The RPD was calculated between pairs of field duplicate samples when both results are reported at or above the RL (BTEX and EDB) or LOQ (metals and inorganics). The results for the drinking water supply well and associated field duplicate samples are provided in Appendix H-1 – Table 4. All field duplicate results are non-detect for the Q3 2020 sampling events.

1.1.12 Professional Judgement

Professional judgement may be applied by a third-party data validation subcontractor or the project chemist during the data review process to apply validation qualifiers based on site-specific and project-specific knowledge, historical data, comparability of data, and analytical expertise. There were no exceptions to the validation qualifiers as applied to the data in accordance with the project QAPjP and other guidelines used in the validation review for the Q3 2020 data.

1.2 COMPLETENESS

The following sections present a discussion of contractual, analytical, and technical completeness for the monthly drinking water supply well analytical data completeness.

1.2.1 Contractual Completeness

Contractual completeness is a quantitative determination of the number of unqualified results compared to the total number of sample results expressed as a percentage, based on data qualified for QC outliers related to analytical method performance. These include data qualified for calibration or method blank contamination, missed holding times, LCS recovery, and/or precision. The contractual completeness goal is 95% per each event. Contractual completeness was calculated as follows:

$$\text{Percent Contractual Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

For the monthly drinking water supply well sample results, the contractual completeness was 100% for all analytical methods. The 95% contractual completeness objective was achieved for all of the methods for the sampling events.

1.2.2 Analytical Completeness

Analytical completeness is a quantitative measure of the number of unqualified data results compared to the total number of results expressed as a percentage, based on the target analytes qualified for exceedances of QC requirements from calibration, LCS, MS/MSD, surrogate, method precision, and laboratory method blank contamination results. The analytical completeness goal is 90% for the project. Analytical completeness was calculated as follows:

$$\text{Percent Analytical Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100 =$$

Analytical completeness for Q3 2020 sampling events is 100%.

1.2.3 Technical Completeness

Technical completeness is a quantitative measure of the data usability based on the number of rejected data compared to the total number of sample results. The technical completeness goal for each method is equal to or greater than 95%. The technical completeness calculation considers all data that are not rejected (R-qualified) to be usable data to achieve project objectives. The technical completeness was calculated as follows:

$$\text{Percent Technical Completeness} = \frac{\text{Number of Usable Results}}{\text{Total Number of Results}} \times 100$$

The project data quality objectives were achieved for all methods and samples for the monthly drinking water supply well sampling events. The technical completeness for the Q3 2020 data is 100%. Technical completeness is provided in Appendix H-1 – Table 5.

1.2.4 Data Analysis Completeness

As a part of the data review process, chain-of-custody forms and project data deliverables are reviewed against the project requirements in the Work Plan (Kirtland AFB, 2017) to ensure compliance with the sampling plan and that analytical results were reported for all planned methods and samples. Data completeness for the monthly drinking water supply well data deliverables was determined to be 100% complete. Level 2 analytical data reports are provided in Appendix H-2. Level 4 data reports are available upon request.

1.3 REPRESENTATIVENESS AND COMPARABILITY

Monthly drinking water supply well sampling was conducted in accordance with the sampling and analysis protocols and standard operating procedures documented in the Work Plan (Kirtland AFB, 2017). Approved procedures were used to collect, preserve, document, and ship samples to TA Savannah, thus ensuring the samples collected were representative of the drinking water supply wells.

Water samples for BTEX and EDB were collected in 40-milliliter volatile organic analysis (VOA) vials preserved with ascorbic acid and hydrochloric acid (BTEX) and sodium thiosulfate (EDB), and received at TA Savannah at less than 6 degrees Celsius. Samples received in VOA vials were inspected to evaluate the presence or absence of any headspace (estimated in millimeters) and documented as sample condition on the laboratory sample receipt report. No VOA vials presented headspace greater than 6 millimeters for the monthly drinking water supply well samples.

The TA Savannah laboratory maintains current Department of Defense accreditation for EPA method 504.1, New Mexico Environment Department Drinking Water accreditation for EPA method 524.2; and adhered to the analytical methods documented in the project QAPjP to prepare and analyze samples and report the data. These certifications ensure the comparability of the analytical results between different samples and different sampling events.

EPA Stage 3 validation was performed on 100% of the analytical data to verify that the laboratory complied with the project QAPjP and method requirements. QC results that exceeded method control criteria resulted in data qualification as presented in the previous sections. Based on a review of the completed sample collection logs, chain-of-custody forms, sample receipt forms, and laboratory data packages, the analytical data reported for the monthly drinking water supply well sampling achieved the project data representativeness and comparability requirements.

1.4 SENSITIVITY

Data sensitivity for the monthly drinking water supply well analytical data was achieved by complying with the analytical method guidelines and RLs specified in the project QAPjP. The analytical methods used for supply well sample analysis achieved the EPA Maximum Contaminant Level screening value. Project screening levels are presented in the QAPjP, Attachment 1, Table 1-1a. For the monthly drinking water supply well analytical results, non-detect analytes are reported at the method RL (BTEX and EDB) and flagged “U.” Detections of target analytes below the method RL or LOQ are flagged “J” as estimated values per the project requirements.

1.5 CONCLUSIONS

The analytical data reported for the monthly drinking water supply well samples have been reviewed for precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity. No data quality criteria exceedances were noted for the Q3 2020 data. The 95% technical completeness goal was achieved for all analytical methods for the Q3 2020 sampling event. All data are usable to achieve the project data quality objectives.

REFERENCES

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- Kirtland Air Force Base. 2017. *Work Plan for Vadose Zone Coring, Vapor Monitoring, and Water Supply Sampling, Bulk Fuels Facility, Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base, Albuquerque, New Mexico*. Prepared for U.S. Army Corps of Engineers - Albuquerque District under contract W9128F-13-D-0006 DM02. December.

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Table 1
Production Well Sample Collection Summary, Q3 2020

Sample Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
KAFB-003	GWK003-2031	7/7/2020	680-186052-1	EDB, BTEX	—
KAFB-015	GWK015-2031	7/7/2020	680-186052-1	EDB, BTEX	—
KAFB-016	GWK016-2031	7/7/2020	680-186052-1	EDB, BTEX	—
ST106-VA2	GWVA2-2031	7/7/2020	680-186052-1	EDB, BTEX	—
ST106-VA2	GWVA2-6031	7/7/2020	680-186052-1	EDB, BTEX	Field Duplicate
Trip Blank	TB2031-01	7/7/2020	680-186052-1	EDB, BTEX	—
Trip Blank	TB2031-02	7/7/2020	680-186052-1	EDB, BTEX	—
KAFB-003	GWK003-2032	8/4/2020	680-187144-1	EDB, BTEX	MS/MSD
KAFB-015	GWK015-2032	8/4/2020	680-187144-1	EDB, BTEX	—
KAFB-016	GWK016-2032	8/4/2020	680-187144-1	EDB, BTEX	—
ST106-VA2	GWVA2-2032	8/4/2020	680-187144-1	EDB, BTEX	—
Trip Blank	TB2032-01	8/4/2020	680-187144-1	EDB, BTEX	—
Trip Blank	TB2032-02	8/4/2020	680-187144-1	EDB, BTEX	—
KAFB-003	GWK003-2033	9/1/2020	680-188221-1	EDB, BTEX	—
KAFB-015	GWK015-2033	9/1/2020	680-188221-1	EDB, BTEX	—
KAFB-016	GWK016-2033	9/1/2020	680-188221-1	EDB, BTEX	—
ST106-VA2	GWVA2-2033	9/1/2020	680-188221-1	EDB, BTEX	—
ST106-VA2	GWVA2-6033	9/1/2020	680-188221-1	EDB, BTEX	Field Duplicate
Trip Blank	TB2033-1	9/1/2020	680-188221-1	EDB, BTEX	—
Trip Blank	TB2033-2	9/1/2020	680-188221-1	EDB, BTEX	—

Notes:

^aAnalytical methods include: Method E524.2 for BTEX and Method E504.1 for EDB.

— = no comments

BTEX = benzene, toluene, ethylbenzene, xylenes

EDB = ethylene dibromide

ID = identification

MS = matrix spike

MSD = matrix spike duplicate

Table 2
Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Data Validation	
Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Reason Codes for Data Validation	
Reason Code	Description
CB/CCB	Calibration blank or continuing calibration blank outside of control limits
CCV	Calibration verification outside of control limits
EB	Equipment rinse blank contamination
FB	Field blank contamination
FD	Field duplicate sample results out of control criteria
HT	Holding time exceedance
ICS	Interference check sample
LCS	Laboratory control sample recovery out of control criteria
MB	Method blank contamination
MS/MSD	Matrix spike/ matrix spike duplicate recovery outside of control criteria
RPD	Relative percent difference outside of control limits
SD	Inductively Coupled Plasma serial dilution out of control criteria
SURR	Surrogate recovery outside of control limits
TB	Trip blank contamination

Table 3
Field Quality Control Sample Results, Q3 2020

Field Sample ID:			TB2031-01			TB2031-02			TB2032-01			TB2032-02			TB2033-1			TB2033-2		
Sample Date:			7/7/2020			7/7/2020			8/4/2020			8/4/2020			9/1/2020			9/1/2020		
Sample Type:			TB			TB			TB			TB			TB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ
EDB	Method EPA 504.1 (µg/L)	1,2-Dibromoethane	ND	U	0.018	ND	U	0.018	ND	U	0.018	ND	U	0.018	ND	U	0.018	ND	U	0.018
VOCs	Method EPA 524.2 (µg/L)	Benzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, Total	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5

Notes:
µg/L = microgram per liter
ID = identification
LOQ = Limit of quantitation (method reporting limit).
ND = not detected
Val Qual = validation qualifier
VOC = volatile organic compound
Qualifiers:
Val Quals based on independent data validation
U = Qualifier denotes the analyte was analyzed but not detected above the method detection limit. The value associated with the U-qualifier is the LOQ.

Table 4
Field Duplicate Sample Results, Q3 2020

		Location ID:		ST106-VA2			ST106-VA2			ST106-VA2			ST106-VA2		
		Field Sample ID:		GWVA2-2031			GWVA2-6031			GWVA2-2033			GWVA2-6033		
		Sample Date:		7/7/2020			7/7/2020			9/1/2020			9/1/2020		
		Sample Type:		REG			Field Duplicate			REG			Field Duplicate		
Parameter	Analytical Method	Analyte	EPA MCL ^a	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ	Result	Val Qual	LOQ
EDB	Method E504.1 (µg/L)	1,2-Dibromoethane	0.05	ND	U	0.018	ND	U	0.018	ND	U	0.018	ND	U	0.018
BTEX	Method E524.2 (µg/L)	Benzene	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Toluene	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	10,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5

Notes:

^a EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).

EDB = ethylene dibromide (1,2-dibromoethane)

E = U.S. Environmental Protection Agency

ID = identification

LOQ = Limit of quantitation (method reporting limit).

MCL = maximum contaminant level

ND = not detected

REG = normal field sample

Val Qual = validation qualifier

VOC = volatile organic compound

Qualifiers:

Val Quals based on independent data validation

U = Qualifier denotes the analyte was analyzed but not detected above the method detection limit. The value associated with the U-qualifier is the LOQ.

Table 5
Technical Data Completeness - Q3 2020

Analytical Parameter	Field/Field Duplicate Sample Analytes	Quality Control Sample Analytes (TB)	Qualified Analytes	Percent Technical Completeness^a
VOCs (E524.2) ^b	56	24	0	100
Ethylene dibromide (E504.1)	14	6	0	100

Notes:

^a Percent technical completeness including analytes qualified as estimated data. No data were rejected.

^b Samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes.

TB = trip blank

VOC = volatile organic compound



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**Environment Testing
America**

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-186052-1

Client Project/Site: Production/Irrigation Well, Kirtland AFB

For:

EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, Colorado 80111

Attn: Pamela J Moss

Darlene Bandy

Authorized for release by:
7/20/2020 4:07:51 PM

Darlene Bandy, Project Manager I
(303)736-0188

Darlene.Bandy@Eurofinset.com

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins TestAmerica, Savannah

Sample Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-186052-1	TB2031-02	Water	07/07/20 08:00	07/08/20 10:10	
680-186052-2	GWK003-2031	Water	07/07/20 09:53	07/08/20 10:10	
680-186052-3	GWK016-2031	Water	07/07/20 09:12	07/08/20 10:10	
680-186052-4	TB2031-01	Water	07/07/20 08:00	07/08/20 10:10	
680-186052-5	GWVA2-2031	Water	07/07/20 10:35	07/08/20 10:10	
680-186052-6	GWVA2-6031	Water	07/07/20 10:35	07/08/20 10:10	
680-186052-7	GWK015-2031	Water	07/07/20 09:28	07/08/20 10:10	

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Eurofins TestAmerica, Savannah

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Job ID: 680-186052-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE

Client: EA Engineering, Science, and Technology

Project: Production/Irrigation Well, Kirtland AFB

Report Number: 680-186052-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 7/8/2020 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.6° C and 5.7° C.

DRINKING WATER VOLATILES (GC-MS)

Samples TB2031-02 (680-186052-1), GWK003-2031 (680-186052-2), GWK016-2031 (680-186052-3), TB2031-01 (680-186052-4), GWVA2-2031 (680-186052-5), GWVA2-6031 (680-186052-6) and GWK015-2031 (680-186052-7) were analyzed for drinking water volatiles (GC-MS) in accordance with EPA Method 524.2. The samples were analyzed on 07/15/2020 and 07/16/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-626476.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EDB

Samples TB2031-02 (680-186052-1), GWK003-2031 (680-186052-2), GWK016-2031 (680-186052-3), TB2031-01 (680-186052-4), GWVA2-2031 (680-186052-5), GWVA2-6031 (680-186052-6) and GWK015-2031 (680-186052-7) were analyzed for EDB in accordance with EPA Method 504.1. The samples were prepared and analyzed on 07/14/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Client Sample ID: TB2031-02

Lab Sample ID: 680-186052-1

Date Collected: 07/07/20 08:00

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			07/15/20 17:01	1
Ethylbenzene	ND		0.50	0.099	ug/L			07/15/20 17:01	1
Toluene	ND		0.50	0.086	ug/L			07/15/20 17:01	1
Xylenes, Total	ND		0.50	0.086	ug/L			07/15/20 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	103		70 - 130		07/15/20 17:01	1
4-Bromofluorobenzene	90		70 - 130		07/15/20 17:01	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		07/14/20 16:00	07/14/20 21:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	107	p	70 - 130	07/14/20 16:00	07/14/20 21:10	1

Client Sample ID: GWK003-2031

Lab Sample ID: 680-186052-2

Date Collected: 07/07/20 09:53

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			07/15/20 17:21	1
Ethylbenzene	ND		0.50	0.099	ug/L			07/15/20 17:21	1
Toluene	ND		0.50	0.086	ug/L			07/15/20 17:21	1
Xylenes, Total	ND		0.50	0.086	ug/L			07/15/20 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130		07/15/20 17:21	1
4-Bromofluorobenzene	89		70 - 130		07/15/20 17:21	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		07/14/20 16:00	07/14/20 20:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	111		70 - 130	07/14/20 16:00	07/14/20 20:21	1

Client Sample ID: GWK016-2031

Lab Sample ID: 680-186052-3

Date Collected: 07/07/20 09:12

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			07/15/20 17:41	1
Ethylbenzene	ND		0.50	0.099	ug/L			07/15/20 17:41	1
Toluene	ND		0.50	0.086	ug/L			07/15/20 17:41	1
Xylenes, Total	ND		0.50	0.086	ug/L			07/15/20 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	104		70 - 130		07/15/20 17:41	1
4-Bromofluorobenzene	87		70 - 130		07/15/20 17:41	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Client Sample ID: GWK016-2031

Lab Sample ID: 680-186052-3

Date Collected: 07/07/20 09:12

Matrix: Water

Date Received: 07/08/20 10:10

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	07/14/20 16:00	07/14/20 20:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	108		70 - 130				07/14/20 16:00	07/14/20 20:41	1

Client Sample ID: TB2031-01

Lab Sample ID: 680-186052-4

Date Collected: 07/07/20 08:00

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		07/15/20 18:02	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		07/15/20 18:02	1
Tetrachloroethene	ND		0.50	0.18	ug/L	-		07/15/20 18:02	1
Toluene	ND		0.50	0.086	ug/L	-		07/15/20 18:02	1
Trichloroethene	ND		0.50	0.13	ug/L	-		07/15/20 18:02	1
Vinyl chloride	ND		0.50	0.16	ug/L	-		07/15/20 18:02	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		07/15/20 18:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	105		70 - 130					07/15/20 18:02	1
4-Bromofluorobenzene	88		70 - 130					07/15/20 18:02	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	07/14/20 16:00	07/14/20 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	120		70 - 130				07/14/20 16:00	07/14/20 21:20	1

Client Sample ID: GWVA2-2031

Lab Sample ID: 680-186052-5

Date Collected: 07/07/20 10:35

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		07/15/20 18:22	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		07/15/20 18:22	1
Tetrachloroethene	ND		0.50	0.18	ug/L	-		07/15/20 18:22	1
Toluene	ND		0.50	0.086	ug/L	-		07/15/20 18:22	1
Trichloroethene	ND		0.50	0.13	ug/L	-		07/15/20 18:22	1
Vinyl chloride	ND		0.50	0.16	ug/L	-		07/15/20 18:22	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		07/15/20 18:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	106		70 - 130					07/15/20 18:22	1
4-Bromofluorobenzene	85		70 - 130					07/15/20 18:22	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	07/14/20 16:00	07/14/20 21:30	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Client Sample ID: GWVA2-2031

Lab Sample ID: 680-186052-5

Date Collected: 07/07/20 10:35

Matrix: Water

Date Received: 07/08/20 10:10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	113		70 - 130	07/14/20 16:00	07/14/20 21:30	1

Client Sample ID: GWVA2-6031

Lab Sample ID: 680-186052-6

Date Collected: 07/07/20 10:35

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		07/16/20 18:22	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		07/16/20 18:22	1
Tetrachloroethene	ND		0.50	0.18	ug/L	-		07/16/20 18:22	1
Toluene	ND		0.50	0.086	ug/L	-		07/16/20 18:22	1
Trichloroethene	ND		0.50	0.13	ug/L	-		07/16/20 18:22	1
Vinyl chloride	ND		0.50	0.16	ug/L	-		07/16/20 18:22	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		07/16/20 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	102		70 - 130		07/16/20 18:22	1
4-Bromofluorobenzene	92		70 - 130		07/16/20 18:22	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	07/14/20 16:00	07/14/20 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	103		70 - 130	07/14/20 16:00	07/14/20 21:40	1

Client Sample ID: GWK015-2031

Lab Sample ID: 680-186052-7

Date Collected: 07/07/20 09:28

Matrix: Water

Date Received: 07/08/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		07/16/20 18:42	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		07/16/20 18:42	1
Toluene	ND		0.50	0.086	ug/L	-		07/16/20 18:42	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		07/16/20 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130		07/16/20 18:42	1
4-Bromofluorobenzene	89		70 - 130		07/16/20 18:42	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0024	ug/L	-	07/14/20 16:00	07/14/20 21:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	110		70 - 130	07/14/20 16:00	07/14/20 21:49	1

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-626317/10
Matrix: Water
Analysis Batch: 626317

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			07/15/20 12:17	1
Ethylbenzene	ND		0.50	0.099	ug/L			07/15/20 12:17	1
Tetrachloroethene	ND		0.50	0.18	ug/L			07/15/20 12:17	1
Toluene	ND		0.50	0.086	ug/L			07/15/20 12:17	1
Trichloroethene	ND		0.50	0.13	ug/L			07/15/20 12:17	1
Vinyl chloride	ND		0.50	0.16	ug/L			07/15/20 12:17	1
Xylenes, Total	ND		0.50	0.086	ug/L			07/15/20 12:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130		07/15/20 12:17	1
4-Bromofluorobenzene	90		70 - 130		07/15/20 12:17	1

Lab Sample ID: LCS 680-626317/4
Matrix: Water
Analysis Batch: 626317

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	20.1		ug/L		101	70 - 130
Ethylbenzene	20.0	20.0		ug/L		100	70 - 130
Tetrachloroethene	20.0	21.3		ug/L		106	70 - 130
Toluene	20.0	20.6		ug/L		103	70 - 130
Trichloroethene	20.0	20.5		ug/L		102	70 - 130
Vinyl chloride	20.0	19.9		ug/L		100	70 - 130
Xylenes, Total	40.0	39.5		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	102		70 - 130

Lab Sample ID: LCSD 680-626317/5
Matrix: Water
Analysis Batch: 626317

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.8		ug/L		99	70 - 130	2	20
Ethylbenzene	20.0	19.3		ug/L		97	70 - 130	3	20
Tetrachloroethene	20.0	21.2		ug/L		106	70 - 130	0	20
Toluene	20.0	20.1		ug/L		101	70 - 130	2	20
Trichloroethene	20.0	20.9		ug/L		104	70 - 130	2	20
Vinyl chloride	20.0	19.1		ug/L		95	70 - 130	5	20
Xylenes, Total	40.0	38.3		ug/L		96	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene	96		70 - 130

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-626476/12
Matrix: Water
Analysis Batch: 626476

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			07/16/20 12:36	1
Ethylbenzene	ND		0.50	0.099	ug/L			07/16/20 12:36	1
Tetrachloroethene	ND		0.50	0.18	ug/L			07/16/20 12:36	1
Toluene	ND		0.50	0.086	ug/L			07/16/20 12:36	1
Trichloroethene	ND		0.50	0.13	ug/L			07/16/20 12:36	1
Vinyl chloride	ND		0.50	0.16	ug/L			07/16/20 12:36	1
Xylenes, Total	ND		0.50	0.086	ug/L			07/16/20 12:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	106		70 - 130		07/16/20 12:36	1
4-Bromofluorobenzene	93		70 - 130		07/16/20 12:36	1

Lab Sample ID: LCS 680-626476/5
Matrix: Water
Analysis Batch: 626476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	20.4		ug/L		102	70 - 130
Ethylbenzene	20.0	20.7		ug/L		103	70 - 130
Tetrachloroethene	20.0	22.4		ug/L		112	70 - 130
Toluene	20.0	21.0		ug/L		105	70 - 130
Trichloroethene	20.0	21.7		ug/L		109	70 - 130
Vinyl chloride	20.0	20.1		ug/L		101	70 - 130
Xylenes, Total	40.0	40.5		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	102		70 - 130

Lab Sample ID: LCSD 680-626476/7
Matrix: Water
Analysis Batch: 626476

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	18.7		ug/L		94	70 - 130	9	20
Ethylbenzene	20.0	18.3		ug/L		91	70 - 130	12	20
Tetrachloroethene	20.0	20.2		ug/L		101	70 - 130	10	20
Toluene	20.0	19.3		ug/L		96	70 - 130	9	20
Trichloroethene	20.0	19.5		ug/L		98	70 - 130	11	20
Vinyl chloride	20.0	18.5		ug/L		92	70 - 130	8	20
Xylenes, Total	40.0	36.4		ug/L		91	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	101		70 - 130

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MB 680-626280/3-A
Matrix: Water
Analysis Batch: 626287

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 626280

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	07/14/20 16:00	07/14/20 19:42	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	104		70 - 130				07/14/20 16:00	07/14/20 19:42	1

Lab Sample ID: LCS 680-626280/4-A
Matrix: Water
Analysis Batch: 626287

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 626280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide			0.100	0.100		ug/L	-	100	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Pentachloroethane	104		70 - 130						

Lab Sample ID: LCSD 680-626280/5-A
Matrix: Water
Analysis Batch: 626287

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 626280

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide			0.100	0.0987		ug/L	-	99	70 - 130	2	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
Pentachloroethane	104		70 - 130								

Lab Sample ID: 680-186052-2 MS
Matrix: Water
Analysis Batch: 626287

Client Sample ID: GWK003-2031
Prep Type: Total/NA
Prep Batch: 626280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	ND		0.0970	0.0968		ug/L	-	100	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
Pentachloroethane	105		70 - 130						

Lab Sample ID: 680-186052-3 MS
Matrix: Water
Analysis Batch: 626287

Client Sample ID: GWK016-2031
Prep Type: Total/NA
Prep Batch: 626280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	ND		0.0978	0.0931		ug/L	-	95	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
Pentachloroethane	108		70 - 130						

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QC Sample Results

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 680-186052-3 MSD
 Matrix: Water
 Analysis Batch: 626287

Client Sample ID: GWK016-2031
 Prep Type: Total/NA
 Prep Batch: 626280

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	ND		0.0975	0.0962		ug/L	-	99	70 - 130	3	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Pentachloroethane	105		70 - 130								

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

GC/MS VOA

Analysis Batch: 626317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-186052-1	TB2031-02	Total/NA	Water	524.2	
680-186052-2	GWK003-2031	Total/NA	Water	524.2	
680-186052-3	GWK016-2031	Total/NA	Water	524.2	
680-186052-4	TB2031-01	Total/NA	Water	524.2	
680-186052-5	GWVA2-2031	Total/NA	Water	524.2	
MB 680-626317/10	Method Blank	Total/NA	Water	524.2	
LCS 680-626317/4	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-626317/5	Lab Control Sample Dup	Total/NA	Water	524.2	

Analysis Batch: 626476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-186052-6	GWVA2-6031	Total/NA	Water	524.2	
680-186052-7	GWK015-2031	Total/NA	Water	524.2	
MB 680-626476/12	Method Blank	Total/NA	Water	524.2	
LCS 680-626476/5	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-626476/7	Lab Control Sample Dup	Total/NA	Water	524.2	

GC Semi VOA

Prep Batch: 626280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-186052-1	TB2031-02	Total/NA	Water	504.1	
680-186052-2	GWK003-2031	Total/NA	Water	504.1	
680-186052-3	GWK016-2031	Total/NA	Water	504.1	
680-186052-4	TB2031-01	Total/NA	Water	504.1	
680-186052-5	GWVA2-2031	Total/NA	Water	504.1	
680-186052-6	GWVA2-6031	Total/NA	Water	504.1	
680-186052-7	GWK015-2031	Total/NA	Water	504.1	
MB 680-626280/3-A	Method Blank	Total/NA	Water	504.1	
LCS 680-626280/4-A	Lab Control Sample	Total/NA	Water	504.1	
LCSD 680-626280/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	
680-186052-2 MS	GWK003-2031	Total/NA	Water	504.1	
680-186052-3 MS	GWK016-2031	Total/NA	Water	504.1	
680-186052-3 MSD	GWK016-2031	Total/NA	Water	504.1	

Analysis Batch: 626287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-186052-1	TB2031-02	Total/NA	Water	504.1	626280
680-186052-2	GWK003-2031	Total/NA	Water	504.1	626280
680-186052-3	GWK016-2031	Total/NA	Water	504.1	626280
680-186052-4	TB2031-01	Total/NA	Water	504.1	626280
680-186052-5	GWVA2-2031	Total/NA	Water	504.1	626280
680-186052-6	GWVA2-6031	Total/NA	Water	504.1	626280
680-186052-7	GWK015-2031	Total/NA	Water	504.1	626280
MB 680-626280/3-A	Method Blank	Total/NA	Water	504.1	626280
LCS 680-626280/4-A	Lab Control Sample	Total/NA	Water	504.1	626280
LCSD 680-626280/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	626280
680-186052-2 MS	GWK003-2031	Total/NA	Water	504.1	626280
680-186052-3 MS	GWK016-2031	Total/NA	Water	504.1	626280
680-186052-3 MSD	GWK016-2031	Total/NA	Water	504.1	626280

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Client Sample ID: TB2031-02**Date Collected: 07/07/20 08:00****Date Received: 07/08/20 10:10****Lab Sample ID: 680-186052-1****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626317	07/15/20 17:01	SMP	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.5 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 21:10	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK003-2031**Date Collected: 07/07/20 09:53****Date Received: 07/08/20 10:10****Lab Sample ID: 680-186052-2****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626317	07/15/20 17:21	SMP	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.6 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 20:21	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK016-2031**Date Collected: 07/07/20 09:12****Date Received: 07/08/20 10:10****Lab Sample ID: 680-186052-3****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626317	07/15/20 17:41	SMP	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.2 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 20:41	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: TB2031-01**Date Collected: 07/07/20 08:00****Date Received: 07/08/20 10:10****Lab Sample ID: 680-186052-4****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626317	07/15/20 18:02	SMP	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.6 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 21:20	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWVA2-2031**Date Collected: 07/07/20 10:35****Date Received: 07/08/20 10:10****Lab Sample ID: 680-186052-5****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626317	07/15/20 18:22	SMP	TAL SAV
Instrument ID: CMSU										

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Client Sample ID: GWVA2-2031

Date Collected: 07/07/20 10:35

Date Received: 07/08/20 10:10

Lab Sample ID: 680-186052-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	504.1			35.5 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 21:30	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWVA2-6031

Date Collected: 07/07/20 10:35

Date Received: 07/08/20 10:10

Lab Sample ID: 680-186052-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626476	07/16/20 18:22	P1C	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.4 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 21:40	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK015-2031

Date Collected: 07/07/20 09:28

Date Received: 07/08/20 10:10

Lab Sample ID: 680-186052-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	626476	07/16/20 18:42	P1C	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.9 mL	2 mL	626280	07/14/20 16:00	DC	TAL SAV
Total/NA	Analysis	504.1		1			626287	07/14/20 21:49	DC	TAL SAV
Instrument ID: CSGX										

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins TestAmerica, Savannah

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	GA00006	06-30-21

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Eurofins TestAmerica, Savannah

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-186052-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL SAV
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW	TAL SAV
504.1	Microextraction	EPA-DW	TAL SAV

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Eurofins TestAmerica, Savannah

EA		225 Sullens Circle Suite 400 Hunt Valley MD Tel No. (410) 594-7000 Fax No. (410) 771-1625		COC NUMBER COC-TB2031-02	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility	PROJECT NUMBER: 62735DM02	LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404	FAX AND MAIL REPORTS/IEDD TO: Tara Lamond tllamond@eaest.com EA asmith@eaest.com EA FAX AND MAIL REPORTS/IEDD TO: Pam Moss: pmoss@eaest.com EA	YEAR: 2020	QUARTER: 3 - July
PROJECT SITE AND PHASE: ST106/SS111	LAB PO NUMBER: 16065	LAB CONTACT: 1 (912) 354-7858			
ANALYSIS REQUIRED (Specify number of bottles)			COMMENTS		
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED		
2	TB2031-02	07/07/2020	0800		
3					
5					
6					
				 650-186052-01 Chain of Custody	
Associated with: GWK 003-2031 GWK 016-2031 0.2/0.0					
SAMPLER(S): Amanda M. Smith		COURIER AND SHIPPING NUMBER: FedEx 1891 4116851164		RECEIVED BY:	
RELINQUISHED BY:		DATE	TIME		
Printed Name and Signature:				7.8.20 1010	
Printed Name and Signature:					
Printed Name and Signature:					

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EA		225 Sailing Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7909 Fax No: (410) 771-1625		COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		COC-K016-2031	
LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/IEDD TO: Tara Lamond: t.lamond@east.com EA Amanda Smith: asmith@east.com EA FAX AND MAIL REPORTS/IEDD TO: Pam Moss: pmoss@east.com EA		YEAR: 2020 QUARTER: 3 - July	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7858	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)	COMMENTS
1	GWK016-2031	7/7/2020	0912	(4500 S2CF) Sulfide	 680-186052-03 Chain of Custody
2				(4500NH3B/C) Ammonia Nitrogen	
3				(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	
4				(353.2) Nitrate-Nitrite	
5				(300.0A) Chloride, bromide, sulfate	
6				(6010C) Dissolved Fe, Mn	
				(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	
				(EPA Method 504.1) EDB	
				(EPA Method 524.2) BTEXN	
				(EPA Method 524.2) BTEX	
				(EPA Method 524.2) VOCs	
				Total Number of Bottles	

SAMPLER(S)	RELINQUISHED BY:	DATE	TIME	COURIER AND SHIPPING NUMBER:	RECEIVED BY:	DATE	TIME
GINNY BRACHT	GINNY BRACHT	7/7/2020	1400	FedEx 1891 4168 5164	JLB	7-8-20	1010

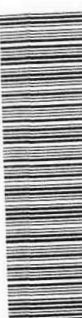
0.2/0.6 TB2031-02

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EA		225 Schilling Circle, Suite 400 Hunt Valley, MD 21084 Tel No. (410) 584-7000 Fax No. (410) 771-1625		COC NUMBER COC-TB2031-01	
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER 62735DM02		YEAR: 2020 QUARTER: 3 - July	
LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond tlamond@east.com EA Amanda Smith asmith@east.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss pmoss@east.com EA			
PROJECT SITE AND PHASE ST106/SS111		LAB PO NUMBER: 18065		LAB CONTACT: 1 (912) 354-7858	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)	
1	TB2031-01	07/17/2020	0800	4	2
2				2	
3					
4					
5					
6					
				(4500 S2CF) Sulfide (4500NH3B/C) Ammonia Nitrogen (2320B) Alkalinity (Total, Carbonate, and Bicarbonate) (353.2) Nitrate-Nitrite (300.0A) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total (As, Pb, Ca, K, Na, Mg) (EPA Method 504.1) EDB (EPA Method 524.2) BTEXN (EPA Method 524.2) BTEX (EPA Method 524.2) VOCs Total Number of Bottles	
				COMMENTS 680-186052-04 Chain of Custody	
Associated with: GWV A2-2031 GWV A2-6031 GWK 015-2031 5.3/5.7					
SAMPLER(S): Amanda M. Smith		COURIER AND SHIPPING NUMBER: FedEx 18914168 5175			
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	DATE
Ginny Bracht		7/17/2020	1400		7/28/20 1010
Printed Name and Signature:				Printed Name and Signature:	
Ginny Bracht				Printed Name and Signature:	
Printed Name and Signature:				Printed Name and Signature:	
Amanda M. Smith				Printed Name and Signature:	
7/20/2020				Printed Name and Signature:	

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EA		225 Sully Circle, Suite 400 Hunt Valley, MD 21081 Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD		COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-K015-2031	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 18065		FAX AND MAIL REPORTS/SEND TO: Tara Lamond: lamond@east.com Amelia Smith: asmith@east.com FAX AND MAIL REPORTS/SEND TO: Pam Moss: pmoss@east.com		YEAR: 2020 QUARTER: 3 - July	
LAB CONTACT: 1 (912) 354-7858							
ANALYSIS REQUIRED (Specify number of bottles)							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	COMMENTS			
1	GWK015-2031	7/7/2020	0928				
2							
3							
4							
5							
6							
				 680-186052-06 Chain of Custody			
SAMPLER(S): Ginny Bracht		RELINQUISHED BY:		COURIER AND SHIPPING NUMBER: FedEx 1891 4168 5175		TB2031-01	
Printed Name and Signature: GINNY BRACHT		DATE 7/7/2020		TIME 1400		DATE 7/8/20	
Printed Name and Signature:		DATE		TIME		DATE	
Printed Name and Signature:		DATE		TIME		DATE	
Printed Name and Signature:		DATE		TIME		DATE	
Printed Name and Signature:		DATE		TIME		DATE	

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Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 680-186052-1

Login Number: 186052

List Source: Eurofins TestAmerica, Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-187144-1

Client Project/Site: Production/Irrigation Well, Kirtland AFB
Revision: 1

For:

EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, Colorado 80111

Attn: Pamela J Moss

Darlene Bandy

Authorized for release by:
9/22/2020 4:52:55 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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results through
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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins TestAmerica, Savannah

Sample Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-187144-1	TB2032-01	Water	08/04/20 08:00	08/05/20 10:10	
680-187144-2	GWVA2-2032	Water	08/04/20 10:35	08/05/20 10:10	
680-187144-3	GWK015-2032	Water	08/04/20 10:00	08/05/20 10:10	
680-187144-4	TB2032-02	Water	08/04/20 08:00	08/05/20 10:10	
680-187144-5	GWK003-2032	Water	08/04/20 09:28	08/05/20 10:10	
680-187144-6	GWK016-2032	Water	08/04/20 09:04	08/05/20 10:10	

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Eurofins TestAmerica, Savannah

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Job ID: 680-187144-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE

Client: EA Engineering, Science, and Technology

Project: Production/Irrigation Well, Kirtland AFB

Report Number: 680-187144-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Revision 1 - 9/22/2020

Client requested revision to add narration indicating that an MS/MSD was submitted and analyzed in batch 680-629937 for drink water volatiles 524.2, instead of the standard narration that indicates no volume was available for an MS/MSD for batch 680-629716.

RECEIPT

The samples were received on 8/5/2020 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.1° C and 5.5° C.

DRINKING WATER VOLATILES (GC-MS)

Samples TB2032-01 (680-187144-1), GWVA2-2032 (680-187144-2), GWK015-2032 (680-187144-3), TB2032-02 (680-187144-4), GWK003-2032 (680-187144-5) and GWK016-2032 (680-187144-6) were analyzed for drinking water volatiles (GC-MS) in accordance with EPA Method 524.2. The samples were analyzed on 08/11/2020 and 08/12/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-629716. A duplicate LCS (LCSD) was analyzed. It is noted that an MS/MSD was submitted by the client for this SDG and analyzed in batch 680-629937.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EDB

Samples TB2032-01 (680-187144-1), GWVA2-2032 (680-187144-2), GWK015-2032 (680-187144-3), TB2032-02 (680-187144-4), GWK003-2032 (680-187144-5) and GWK016-2032 (680-187144-6) were analyzed for EDB in accordance with EPA Method 504.1. The samples were prepared and analyzed on 08/06/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Client Sample ID: TB2032-01

Lab Sample ID: 680-187144-1

Date Collected: 08/04/20 08:00

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		08/11/20 12:05	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/11/20 12:05	1
Tetrachloroethene	ND		0.50	0.18	ug/L			08/11/20 12:05	1
Toluene	ND		0.50	0.086	ug/L			08/11/20 12:05	1
Trichloroethene	ND		0.50	0.13	ug/L			08/11/20 12:05	1
Vinyl chloride	ND		0.50	0.16	ug/L			08/11/20 12:05	1
Xylenes, Total	ND		0.50	0.086	ug/L			08/11/20 12:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130		08/11/20 12:05	1
4-Bromofluorobenzene	86		70 - 130		08/11/20 12:05	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	08/06/20 13:15	08/06/20 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	121		70 - 130	08/06/20 13:15	08/06/20 20:11	1

Client Sample ID: GWVA2-2032

Lab Sample ID: 680-187144-2

Date Collected: 08/04/20 10:35

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		08/11/20 16:48	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/11/20 16:48	1
Tetrachloroethene	ND		0.50	0.18	ug/L			08/11/20 16:48	1
Toluene	ND		0.50	0.086	ug/L			08/11/20 16:48	1
Trichloroethene	ND		0.50	0.13	ug/L			08/11/20 16:48	1
Vinyl chloride	ND		0.50	0.16	ug/L			08/11/20 16:48	1
Xylenes, Total	ND		0.50	0.086	ug/L			08/11/20 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	100		70 - 130		08/11/20 16:48	1
4-Bromofluorobenzene	88		70 - 130		08/11/20 16:48	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	08/06/20 13:15	08/06/20 17:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	104		70 - 130	08/06/20 13:15	08/06/20 17:04	1

Client Sample ID: GWK015-2032

Lab Sample ID: 680-187144-3

Date Collected: 08/04/20 10:00

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		08/11/20 17:08	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/11/20 17:08	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Client Sample ID: GWK015-2032

Lab Sample ID: 680-187144-3

Date Collected: 08/04/20 10:00

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50	0.086	ug/L	-		08/11/20 17:08	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		08/11/20 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130		08/11/20 17:08	1
4-Bromofluorobenzene	88		70 - 130		08/11/20 17:08	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	08/06/20 13:15	08/06/20 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	102		70 - 130	08/06/20 13:15	08/06/20 17:54	1

Client Sample ID: TB2032-02

Lab Sample ID: 680-187144-4

Date Collected: 08/04/20 08:00

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		08/12/20 12:30	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		08/12/20 12:30	1
Toluene	ND		0.50	0.086	ug/L	-		08/12/20 12:30	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		08/12/20 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130		08/12/20 12:30	1
4-Bromofluorobenzene	91		70 - 130		08/12/20 12:30	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L	-	08/06/20 13:15	08/06/20 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	97	p	70 - 130	08/06/20 13:15	08/06/20 18:03	1

Client Sample ID: GWK003-2032

Lab Sample ID: 680-187144-5

Date Collected: 08/04/20 09:28

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L	-		08/12/20 18:15	1
Ethylbenzene	ND		0.50	0.099	ug/L	-		08/12/20 18:15	1
Toluene	ND		0.50	0.086	ug/L	-		08/12/20 18:15	1
Xylenes, Total	ND		0.50	0.086	ug/L	-		08/12/20 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	96		70 - 130		08/12/20 18:15	1
4-Bromofluorobenzene	92		70 - 130		08/12/20 18:15	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Client Sample ID: GWK003-2032

Lab Sample ID: 680-187144-5

Date Collected: 08/04/20 09:28

Matrix: Water

Date Received: 08/05/20 10:10

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		08/06/20 13:15	08/06/20 17:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	102		70 - 130				08/06/20 13:15	08/06/20 17:24	1

Client Sample ID: GWK016-2032

Lab Sample ID: 680-187144-6

Date Collected: 08/04/20 09:04

Matrix: Water

Date Received: 08/05/20 10:10

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			08/12/20 12:51	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/12/20 12:51	1
Toluene	ND		0.50	0.086	ug/L			08/12/20 12:51	1
Xylenes, Total	ND		0.50	0.086	ug/L			08/12/20 12:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130					08/12/20 12:51	1
4-Bromofluorobenzene	90		70 - 130					08/12/20 12:51	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		08/06/20 13:15	08/06/20 18:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	101		70 - 130				08/06/20 13:15	08/06/20 18:13	1

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-629716/10
Matrix: Water
Analysis Batch: 629716

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			08/11/20 11:45	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/11/20 11:45	1
Tetrachloroethene	ND		0.50	0.18	ug/L			08/11/20 11:45	1
Toluene	ND		0.50	0.086	ug/L			08/11/20 11:45	1
Trichloroethene	ND		0.50	0.13	ug/L			08/11/20 11:45	1
Vinyl chloride	ND		0.50	0.16	ug/L			08/11/20 11:45	1
Xylenes, Total	ND		0.50	0.086	ug/L			08/11/20 11:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130		08/11/20 11:45	1
4-Bromofluorobenzene	87		70 - 130		08/11/20 11:45	1

Lab Sample ID: LCS 680-629716/4
Matrix: Water
Analysis Batch: 629716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.1		ug/L		95	70 - 130
Ethylbenzene	20.0	21.3		ug/L		106	70 - 130
Tetrachloroethene	20.0	20.3		ug/L		102	70 - 130
Toluene	20.0	19.6		ug/L		98	70 - 130
Trichloroethene	20.0	18.1		ug/L		91	70 - 130
Vinyl chloride	20.0	17.7		ug/L		89	70 - 130
Xylenes, Total	40.0	41.4		ug/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene	97		70 - 130

Lab Sample ID: LCSD 680-629716/5
Matrix: Water
Analysis Batch: 629716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	20.2		ug/L		101	70 - 130	6	20
Ethylbenzene	20.0	21.7		ug/L		108	70 - 130	2	20
Tetrachloroethene	20.0	21.1		ug/L		106	70 - 130	4	20
Toluene	20.0	20.6		ug/L		103	70 - 130	5	20
Trichloroethene	20.0	18.7		ug/L		93	70 - 130	3	20
Vinyl chloride	20.0	19.2		ug/L		96	70 - 130	8	20
Xylenes, Total	40.0	42.2		ug/L		105	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	96		70 - 130

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-629937/10
Matrix: Water
Analysis Batch: 629937

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			08/12/20 12:10	1
Ethylbenzene	ND		0.50	0.099	ug/L			08/12/20 12:10	1
Toluene	ND		0.50	0.086	ug/L			08/12/20 12:10	1
Xylenes, Total	ND		0.50	0.086	ug/L			08/12/20 12:10	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	101		70 - 130					08/12/20 12:10	1
4-Bromofluorobenzene	93		70 - 130					08/12/20 12:10	1

Lab Sample ID: LCS 680-629937/4
Matrix: Water
Analysis Batch: 629937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	18.8		ug/L		94	70 - 130
Ethylbenzene	20.0	20.4		ug/L		102	70 - 130
Toluene	20.0	19.4		ug/L		97	70 - 130
Xylenes, Total	40.0	39.7		ug/L		99	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichlorobenzene-d4 (Surr)	96		70 - 130				
4-Bromofluorobenzene	101		70 - 130				

Lab Sample ID: LCSD 680-629937/5
Matrix: Water
Analysis Batch: 629937

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	21.5		ug/L		107	70 - 130	13	20
Ethylbenzene	20.0	22.9		ug/L		115	70 - 130	12	20
Toluene	20.0	21.9		ug/L		110	70 - 130	12	20
Xylenes, Total	40.0	44.6		ug/L		112	70 - 130	12	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,2-Dichlorobenzene-d4 (Surr)	97		70 - 130						
4-Bromofluorobenzene	100		70 - 130						

Lab Sample ID: 680-187144-5 MS
Matrix: Water
Analysis Batch: 629937

Client Sample ID: GWK003-2032
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		20.0	16.5		ug/L		83	70 - 130
Ethylbenzene	ND		20.0	17.8		ug/L		89	70 - 130
Toluene	ND		20.0	17.2		ug/L		86	70 - 130
Xylenes, Total	ND		40.0	34.7		ug/L		87	70 - 130

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-187144-5 MS

Matrix: Water

Analysis Batch: 629937

Client Sample ID: GWK003-2032

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene	99		70 - 130

Lab Sample ID: 680-187144-5 MSD

Matrix: Water

Analysis Batch: 629937

Client Sample ID: GWK003-2032

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		20.0	18.0		ug/L		90	70 - 130	8	20
Ethylbenzene	ND		20.0	19.4		ug/L		97	70 - 130	9	20
Toluene	ND		20.0	18.4		ug/L		92	70 - 130	7	20
Xylenes, Total	ND		40.0	37.5		ug/L		94	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene	95		70 - 130

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MB 680-629299/3-A

Matrix: Water

Analysis Batch: 629312

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 629299

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		08/06/20 13:15	08/06/20 15:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	97		70 - 130	08/06/20 13:15	08/06/20 15:55	1

Lab Sample ID: LCS 680-629299/4-A

Matrix: Water

Analysis Batch: 629312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 629299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.100	0.102		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Pentachloroethane	102		70 - 130

Lab Sample ID: LCSD 680-629299/5-A

Matrix: Water

Analysis Batch: 629312

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 629299

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	0.100	0.0918		ug/L		92	70 - 130	10	30

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCSD 680-629299/5-A

Matrix: Water

Analysis Batch: 629312

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 629299

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Pentachloroethane	93		70 - 130

Lab Sample ID: 680-187144-2 MS

Matrix: Water

Analysis Batch: 629312

Client Sample ID: GWVA2-2032

Prep Type: Total/NA

Prep Batch: 629299

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylene Dibromide	ND		0.100	0.0948		ug/L		95	70 - 130	
Surrogate	MS	MS								
%Recovery	Qualifier	Limits								
Pentachloroethane	97		70 - 130							

Lab Sample ID: 680-187144-5 MS

Matrix: Water

Analysis Batch: 629312

Client Sample ID: GWK003-2032

Prep Type: Total/NA

Prep Batch: 629299

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylene Dibromide	ND		0.0983	0.0937		ug/L		95	70 - 130	
Surrogate	MS	MS								
%Recovery	Qualifier	Limits								
Pentachloroethane	102		70 - 130							

Lab Sample ID: 680-187144-5 MSD

Matrix: Water

Analysis Batch: 629312

Client Sample ID: GWK003-2032

Prep Type: Total/NA

Prep Batch: 629299

	Sample	Sample	Spike	MSD	MSD				%Rec.	RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ethylene Dibromide	ND		0.0983	0.0931		ug/L		95	70 - 130	1	30
Surrogate	MSD	MSD									
%Recovery	Qualifier	Limits									
Pentachloroethane	100		70 - 130								

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

GC/MS VOA

Analysis Batch: 629716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-187144-1	TB2032-01	Total/NA	Water	524.2	
680-187144-2	GWVA2-2032	Total/NA	Water	524.2	
680-187144-3	GWK015-2032	Total/NA	Water	524.2	
MB 680-629716/10	Method Blank	Total/NA	Water	524.2	
LCS 680-629716/4	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-629716/5	Lab Control Sample Dup	Total/NA	Water	524.2	

Analysis Batch: 629937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-187144-4	TB2032-02	Total/NA	Water	524.2	
680-187144-5	GWK003-2032	Total/NA	Water	524.2	
680-187144-6	GWK016-2032	Total/NA	Water	524.2	
MB 680-629937/10	Method Blank	Total/NA	Water	524.2	
LCS 680-629937/4	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-629937/5	Lab Control Sample Dup	Total/NA	Water	524.2	
680-187144-5 MS	GWK003-2032	Total/NA	Water	524.2	
680-187144-5 MSD	GWK003-2032	Total/NA	Water	524.2	

GC Semi VOA

Prep Batch: 629299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-187144-1	TB2032-01	Total/NA	Water	504.1	
680-187144-2	GWVA2-2032	Total/NA	Water	504.1	
680-187144-3	GWK015-2032	Total/NA	Water	504.1	
680-187144-4	TB2032-02	Total/NA	Water	504.1	
680-187144-5	GWK003-2032	Total/NA	Water	504.1	
680-187144-6	GWK016-2032	Total/NA	Water	504.1	
MB 680-629299/3-A	Method Blank	Total/NA	Water	504.1	
LCS 680-629299/4-A	Lab Control Sample	Total/NA	Water	504.1	
LCSD 680-629299/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	
680-187144-2 MS	GWVA2-2032	Total/NA	Water	504.1	
680-187144-5 MS	GWK003-2032	Total/NA	Water	504.1	
680-187144-5 MSD	GWK003-2032	Total/NA	Water	504.1	

Analysis Batch: 629312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-187144-1	TB2032-01	Total/NA	Water	504.1	629299
680-187144-2	GWVA2-2032	Total/NA	Water	504.1	629299
680-187144-3	GWK015-2032	Total/NA	Water	504.1	629299
680-187144-4	TB2032-02	Total/NA	Water	504.1	629299
680-187144-5	GWK003-2032	Total/NA	Water	504.1	629299
680-187144-6	GWK016-2032	Total/NA	Water	504.1	629299
MB 680-629299/3-A	Method Blank	Total/NA	Water	504.1	629299
LCS 680-629299/4-A	Lab Control Sample	Total/NA	Water	504.1	629299
LCSD 680-629299/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	629299
680-187144-2 MS	GWVA2-2032	Total/NA	Water	504.1	629299
680-187144-5 MS	GWK003-2032	Total/NA	Water	504.1	629299
680-187144-5 MSD	GWK003-2032	Total/NA	Water	504.1	629299

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Client Sample ID: TB2032-01**Date Collected: 08/04/20 08:00****Date Received: 08/05/20 10:10****Lab Sample ID: 680-187144-1****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629716	08/11/20 12:05	P1C	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.7 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 20:11	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWVA2-2032**Date Collected: 08/04/20 10:35****Date Received: 08/05/20 10:10****Lab Sample ID: 680-187144-2****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629716	08/11/20 16:48	P1C	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 17:04	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK015-2032**Date Collected: 08/04/20 10:00****Date Received: 08/05/20 10:10****Lab Sample ID: 680-187144-3****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629716	08/11/20 17:08	P1C	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.4 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 17:54	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: TB2032-02**Date Collected: 08/04/20 08:00****Date Received: 08/05/20 10:10****Lab Sample ID: 680-187144-4****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629937	08/12/20 12:30	Y1S	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.4 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 18:03	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK003-2032**Date Collected: 08/04/20 09:28****Date Received: 08/05/20 10:10****Lab Sample ID: 680-187144-5****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629937	08/12/20 18:15	Y1S	TAL SAV
Instrument ID: CMSU										

Eurofins TestAmerica, Savannah

Lab Chronicle

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Client Sample ID: GWK003-2032

Lab Sample ID: 680-187144-5

Date Collected: 08/04/20 09:28

Matrix: Water

Date Received: 08/05/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	504.1			35.5 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 17:24	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK016-2032

Lab Sample ID: 680-187144-6

Date Collected: 08/04/20 09:04

Matrix: Water

Date Received: 08/05/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	629937	08/12/20 12:51	Y1S	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.5 mL	2 mL	629299	08/06/20 13:15	DC	TAL SAV
Total/NA	Analysis	504.1		1			629312	08/06/20 18:13	DC	TAL SAV
Instrument ID: CSGX										

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins TestAmerica, Savannah

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	GA00006	06-30-21

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Eurofins TestAmerica, Savannah

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-187144-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL SAV
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW	TAL SAV
504.1	Microextraction	EPA-DW	TAL SAV

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Eurofins TestAmerica, Savannah

EA		225 Scullin Circle Suite 400 Hunt Valley MD Tel No: (410) 587-7000 Fax No: (410) 777-7025		CHAIN-OF-CUSTODY RECORD		COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-TB2032-01	
PROJECT SITE AND PHASE: ST106SS111		LAB PO NUMBER: 16065		FAX AND MAIL REPORTS/IEDD TO: Tara Lamond taramond@east.com EA		YEAR: 2020	
				FAX AND MAIL REPORTS/IEDD TO: Pam Moss pmoss@east.com EA		QUARTER: 3 - August	
				LAB CONTACT: 1 (912) 354-7858			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)			
1	TB2032-01	8/4/2020	0800	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite
2				(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
3				(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles
4							4 - 2 - 2
5							
6							
 680-1871-44 Chain of Custody							
Associated with: GWVA 2-2032 GWK 015-2032							
SAMPLER(S): G. Bracht		COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8105		RECEIVED BY:		DATE	
RELINQUISHED BY:		DATE		TIME			
Printed Name and Signature: Gunn Bracht		8/4/2020 1400		Printed Name and Signature: Tara Lamond		08-05-20 1010	
Printed Name and Signature:				Printed Name and Signature:		4.7/5.1 (CF) 5.1/5.5	
Printed Name and Signature:				Printed Name and Signature:			

9/22/2020 (Rev. 1)

EA 225 Siding Circle, Suite 100 Kirtland AFB, TX 78909 Tel No: (409) 564-1000 Fax No: (409) 771-1025		PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@east.com EA Aminda Smith: asmith@east.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@east.com EA		COC NUMBER COC-K015-2032 YEAR: 2020 QUARTER: 3 - August	
PROJECT SITE AND PHASE ST106SS111		LAB PO NUMBER 16665		LAB CONTACT: 1 (912) 354-7858							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)							
1	GWK015-2032	08-01-2020	1000	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite	(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
2				(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles				
3											
4											
5											
6											
COMMENTS											
TB2032- 61											
SAMPLER(S) G. Bracht		RELINQUISHED BY: <i>G. Bracht</i>		DATE 8/14/2020		TIME 1400		COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8105		RECEIVED BY: DATE 08-05-20 1010	
Printed Name and Signature GINNY BRACHT		Printed Name and Signature <i>G. Bracht</i>		Printed Name and Signature G. Bracht		Printed Name and Signature G. Bracht		Printed Name and Signature G. Bracht		Printed Name and Signature G. Bracht	
Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature	
Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature		Printed Name and Signature	

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9/22/2020 (Rev. 1)

9/22/2020 (Rev. 1)

EA 225 Sullaby Circle Suite 100 West Park Rd Fair Hope, AL 36529 Tel: (904) 544-4000 Fax: (904) 771-1825		PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS TO: Tara Lamond: talamond@east.com EA amrth@east.com EA phoss@east.com EA		COC NUMBER: COC-K016-2032	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16665		LAB CONTACT: 1 (912) 364-7658		YEAR: 2020		QUARTER: 3 - August			
SAMPLE IDENTIFIER		DATE COLLECTED		TIME COLLECTED		ANALYSIS REQUIRED (Specify number of bottles)		COMMENTS			
ITEM								(4500 S2CF) Sulfide			
1	GWK016-2032	08-04-2020	0904			6	3	(4500NH3B/C) Ammonia Nitrogen			
2								(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)			
3								(353.2) Nitrate-Nitrite			
4								(300.0A) Chloride, bromide, sulfate			
5								(6010C) Dissolved Fe, Mn			
6								(6020A/6010C) Total (As, Pb, Cd, K, Na, Mg)			
								(EPA Method 504.1) EDB			
								(EPA Method 524.2) BTEXN			
								(EPA Method 524.2) BTEX			
								(EPA Method 524.2) VOCs			
								Total Number of Bottles			

SAMPLER(S):	RELINQUISHED BY:	DATE	TIME	DATE	TIME
G. Bracht	G. Bracht	8/4/2020	1400		
Printed Name and Signature:	Printed Name and Signature:				
Printed Name and Signature:	Printed Name and Signature:				
Printed Name and Signature:	Printed Name and Signature:				

COURIER AND SHIPPING NUMBER:	RECEIVED BY:	DATE	TIME
FedEx 1347 4015 8090			

Associated with:
GWVA 2-2032
GWK 015-2032

9/22/2020 (Rev. 1)

EA		CHAIN-OF-CUSTODY RECORD		COC NUMBER	
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER 62735DM02		COC-K015-2032	
LABORATORY NAME AND CONTACT Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS TO: Tara Landon amh@east.com EA		YEAR 2020	
LABORATORY NAME AND CONTACT 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS TO: Pam Moss pmoss@east.com EA		QUARTER 3 - August	
PROJECT SITE AND PHASE S1106SS111		LAB CONTACT: 1 (812) 354-7868			
LAB PO NUMBER 15065					
ANALYSIS REQUIRED (Specify number of bottles)		COMMENTS			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED		
1	GWK015-2032	08-01-2020	1000		
2					
3					
4					
5					
6					
		(4500 S2CF) Sulfide (4500NH3B/C) Ammonia Nitrogen (2320B) Alkalinity (Total, Carbonate, and Bicarbonate) (353.2) Nitrate-Nitrite (300.0A) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total (As, Pb, Ca, K, Na, Mg) (EPA Method 504.1) EDB (EPA Method 524.2) BTEXN (EPA Method 524.2) BTEX (EPA Method 524.2) VOCs Total Number of Bottles			
		6 - 3 - 3			
					
		680-187144-03 Chain of Custody			
SAMPLER(S) G. Bracht		TB2032- 61			
RELINQUISHED BY:		COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8105			
PRINTED NAME AND SIGNATURE: GUNNY BRACHT		RECEIVED BY:			
DATE: 8/14/2020		DATE: 08-05-20			
TIME: 1400		TIME: 1010			
PRINTED NAME AND SIGNATURE:		PRINTED NAME AND SIGNATURE:			
PRINTED NAME AND SIGNATURE:		PRINTED NAME AND SIGNATURE:			
PRINTED NAME AND SIGNATURE:		PRINTED NAME AND SIGNATURE:			

EA		225 Siding Circle Suite 400 North Valley RD Tel No: (410) 594-7000 Fax No: (410) 777-1625		CHAIN-OF-CUSTODY RECORD		COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-TB2032-02	
PROJECT SITE AND PHASE: ST106SS111		LAB PO NUMBER: 16065		FAX AND MAIL REPORTS/EDD TO: Tara Lamond talamond@east.com EA		YEAR: 2020	
		LAB CONTACT: 1 (612) 354-7858		FAX AND MAIL REPORTS/EDD TO: Pam Moss pmoss@east.com EA		QUARTER: 3 - August	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)			
1	TB2032-02	8/14/2020	0800	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite
2				(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
3				(EPA Method 524.2) BTXN	(EPA Method 524.2) BTX	(EPA Method 524.2) VOCs	Total Number of Bottles
4							
5							
6							
							
680-187144-04 Chain of Custody							
Associated with: GWL003-2032 GWL016-2032							
SAMPLER(S): 6. Bach		RELINQUISHED BY:		COURIER AND SHIPPING NUMBER:		FedEx 1347 405 8090	
Printed Name and Signature: GWM BACH		DATE: 8/14/2020		TIME: 1400		RECEIVED BY:	
Printed Name and Signature:		DATE:		TIME:		08-05-20 1010	
Printed Name and Signature:		DATE:		TIME:		4.7/5.1 (a-f) 5.1 1035.50	

EA		225 Solberg Circle, Suite 400 Kirtland AFB, TX 78210 Tel No. (409) 771-1626 Fax No. (409) 771-1626		CHAIN-OF-CUSTODY RECORD		COC NUMBER COC-K003-2032	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 627350M02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Lamond tlamond@east.com EA	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16065		FAX AND MAIL REPORTS/EDD TO: Pam Moss pmoss@east.com EA		YEAR: 2020	
		LAB CONTACT: 1 (912) 354-7858		QUARTER: 3 - August			
ANALYSIS REQUIRED (Specify number of bottles)		COMMENTS					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite
1	GWK003-2032	03-04-2020	0923	(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
2				(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles
3							
4							
5							
6							
				Additional volume provided for MS/MSD			
				 680-187144-05 Chain of Custody			
SAMPLER(S): G. Bracht		RELINQUISHED BY: 		COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8090		TB2032-02	
Printed Name and Signature: GINNY BRACH		DATE 8/4/2020		TIME 1400		RECEIVED BY: 	
Printed Name and Signature:						DATE 08-05-20	
Printed Name and Signature:						TIME 1010	
Printed Name and Signature:						4.7/5.1 (CF) 5.1 (CF) 5.52	

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EA		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
225 Siding Circle Suite 400 Hunt Valley Md 20884 Tel No. (410) 581-1820 Fax No. (410) 581-1825		PROJECT NUMBER 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-K016-2032	
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT SITE AND PHASE ST106/SS111		LAB PO NUMBER: 16865		YEAR 2020	
				LAB CONTACT: 1 (912) 354-7858		QUARTER: 3 - August	
				FAX AND MAIL REPORTS/SEDD TO: Tara Lemoine: tlemoine@east.com EA			
				FAX AND MAIL REPORTS/SEDD TO: Pam Moss: pmoss@east.com EA			
ANALYSIS REQUIRED (Specify number of bottles)		COMMENTS					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite
1	GWK016-2032	08-04-2020	0904	(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
2				(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles
3							
4							
5							
6							
				 680-1871 44-06 Chain of Custody			
SAMPLER(S) G. Bracht		RELINQUISHED BY: 		COURIER AND SHIPPING NUMBER: FedEx 1347 4015 8090		TB2032- 02	
Printed Name and Signature: G. Bracht		DATE 8/4/2020		TIME 1400		RECEIVED BY:	
Printed Name and Signature:						DATE	
Printed Name and Signature:						TIME	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 680-187144-1

Login Number: 187144

List Source: Eurofins TestAmerica, Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-188221-1

Client Project/Site: Production/Irrigation Well, Kirtland AFB

For:

EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, Colorado 80111

Attn: Pamela J Moss

Darlene Bandy

Authorized for release by:

9/16/2020 4:57:23 PM

Darlene Bandy, Project Manager I
(303)736-0188

Darlene.Bandy@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H4	Container indicated preservation, however measured pH was >2 at time of analysis. Analysis date was more than 7 days from sampling date, as required for samples not preserved to pH<2.

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins TestAmerica, Savannah

Sample Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-188221-1	TB2033-1	Water	09/01/20 12:35	09/02/20 10:20	
680-188221-2	GWVA2-2033	Water	09/01/20 11:20	09/02/20 10:20	
680-188221-3	GWVA2-6033	Water	09/01/20 11:20	09/02/20 10:20	
680-188221-4	GWK015-2033	Water	09/01/20 09:40	09/02/20 10:20	
680-188221-11	TB2033-2	Water	09/01/20 12:35	09/02/20 10:20	
680-188221-12	GWK003-2033	Water	09/01/20 10:10	09/02/20 10:20	
680-188221-13	GWK016-2033	Water	09/01/20 09:15	09/02/20 10:20	

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Eurofins TestAmerica, Savannah

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Job ID: 680-188221-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE

Client: EA Engineering, Science, and Technology

Project: Production/Irrigation Well, Kirtland AFB

Report Number: 680-188221-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 9/2/2020 10:20 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.2° C, 4.3° C and 4.8° C.

Receipt Exceptions

The BTEX and EDB data are reported here in SDG 680-188221-1. As instructed on the chains of custody, the chlorinated solvent data is reported separately under SDG 680-188221-2.

DRINKING WATER VOLATILES (GC-MS)

Samples TB2033-1 (680-188221-1), GWVA2-2033 (680-188221-2), GWVA2-6033 (680-188221-3), GWK015-2033 (680-188221-4), TB2033-2 (680-188221-11), GWK003-2033 (680-188221-12) and GWK016-2033 (680-188221-13) were analyzed for drinking water volatiles (GC-MS) in accordance with EPA Method 524.2. The samples were analyzed on 09/08/2020, 09/09/2020 and 09/10/2020.

The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. It was noted that the pH was equal to 2, but not less than 2. The samples were analyzed outside the 24-hour holding time specified for unpreserved samples: GWK003-2033 (680-188221-12) and GWK016-2033 (680-188221-13). PLEASE NOTE: These samples are flagged with H4 for pH >2; however, the pH was equal to 2, not >2. Due to a limitation with our LIMS, there is no flag for pH = 2.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 680-633309 and 680-633484. A duplicate LCS (LCSD) was analyzed for each batch.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EDB

Samples TB2033-1 (680-188221-1), GWVA2-2033 (680-188221-2), GWVA2-6033 (680-188221-3), GWK015-2033 (680-188221-4), TB2033-2 (680-188221-11), GWK003-2033 (680-188221-12) and GWK016-2033 (680-188221-13) were analyzed for EDB in accordance with EPA Method 504.1. The samples were prepared and analyzed on 09/09/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Client Sample ID: TB2033-1

Lab Sample ID: 680-188221-1

Date Collected: 09/01/20 12:35

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/09/20 17:29	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/09/20 17:29	1
Toluene	ND		0.50	0.086	ug/L			09/09/20 17:29	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/09/20 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	104		70 - 130		09/09/20 17:29	1
4-Bromofluorobenzene	101		70 - 130		09/09/20 17:29	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	97	p	70 - 130	09/09/20 15:28	09/09/20 20:22	1

Client Sample ID: GWVA2-2033

Lab Sample ID: 680-188221-2

Date Collected: 09/01/20 11:20

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/09/20 22:06	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/09/20 22:06	1
Toluene	ND		0.50	0.086	ug/L			09/09/20 22:06	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/09/20 22:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	105		70 - 130		09/09/20 22:06	1
4-Bromofluorobenzene	90		70 - 130		09/09/20 22:06	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 20:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	103		70 - 130	09/09/20 15:28	09/09/20 20:32	1

Client Sample ID: GWVA2-6033

Lab Sample ID: 680-188221-3

Date Collected: 09/01/20 11:20

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/09/20 22:31	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/09/20 22:31	1
Toluene	ND		0.50	0.086	ug/L			09/09/20 22:31	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/09/20 22:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	114		70 - 130		09/09/20 22:31	1
4-Bromofluorobenzene	84		70 - 130		09/09/20 22:31	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Client Sample ID: GWVA2-6033

Lab Sample ID: 680-188221-3

Date Collected: 09/01/20 11:20

Matrix: Water

Date Received: 09/02/20 10:20

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0024	ug/L		09/09/20 15:28	09/09/20 20:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	103		70 - 130				09/09/20 15:28	09/09/20 20:42	1

Client Sample ID: GWK015-2033

Lab Sample ID: 680-188221-4

Date Collected: 09/01/20 09:40

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/08/20 16:21	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/08/20 16:21	1
Toluene	ND		0.50	0.086	ug/L			09/08/20 16:21	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/08/20 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	102		70 - 130					09/08/20 16:21	1
4-Bromofluorobenzene	88		70 - 130					09/08/20 16:21	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 20:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	103		70 - 130				09/09/20 15:28	09/09/20 20:52	1

Client Sample ID: TB2033-2

Lab Sample ID: 680-188221-11

Date Collected: 09/01/20 12:35

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/09/20 18:19	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/09/20 18:19	1
Toluene	ND		0.50	0.086	ug/L			09/09/20 18:19	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/09/20 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	94		70 - 130					09/09/20 18:19	1
4-Bromofluorobenzene	101		70 - 130					09/09/20 18:19	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 21:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Pentachloroethane	104		70 - 130				09/09/20 15:28	09/09/20 21:21	1

Eurofins TestAmerica, Savannah

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Client Sample ID: GWK003-2033

Lab Sample ID: 680-188221-12

Date Collected: 09/01/20 10:10

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H4	0.50	0.082	ug/L			09/10/20 00:12	1
Ethylbenzene	ND	H4	0.50	0.099	ug/L			09/10/20 00:12	1
Toluene	ND	H4	0.50	0.086	ug/L			09/10/20 00:12	1
Xylenes, Total	ND	H4	0.50	0.086	ug/L			09/10/20 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	106		70 - 130		09/10/20 00:12	1
4-Bromofluorobenzene	98		70 - 130		09/10/20 00:12	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	92		70 - 130	09/09/20 15:28	09/09/20 21:02	1

Client Sample ID: GWK016-2033

Lab Sample ID: 680-188221-13

Date Collected: 09/01/20 09:15

Matrix: Water

Date Received: 09/02/20 10:20

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H4	0.50	0.082	ug/L			09/10/20 00:37	1
Ethylbenzene	ND	H4	0.50	0.099	ug/L			09/10/20 00:37	1
Toluene	ND	H4	0.50	0.086	ug/L			09/10/20 00:37	1
Xylenes, Total	ND	H4	0.50	0.086	ug/L			09/10/20 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	96		70 - 130		09/10/20 00:37	1
4-Bromofluorobenzene	93		70 - 130		09/10/20 00:37	1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 21:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	109		70 - 130	09/09/20 15:28	09/09/20 21:12	1

Eurofins TestAmerica, Savannah

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-633309/11
Matrix: Water
Analysis Batch: 633309

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/08/20 13:31	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/08/20 13:31	1
Toluene	ND		0.50	0.086	ug/L			09/08/20 13:31	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/08/20 13:31	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	100		70 - 130					09/08/20 13:31	1
4-Bromofluorobenzene	89		70 - 130					09/08/20 13:31	1

Lab Sample ID: LCS 680-633309/4
Matrix: Water
Analysis Batch: 633309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	18.6		ug/L		93	70 - 130
Ethylbenzene	20.0	24.2		ug/L		121	70 - 130
Toluene	20.0	20.2		ug/L		101	70 - 130
Xylenes, Total	40.0	44.5		ug/L		111	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichlorobenzene-d4 (Surr)	102		70 - 130				
4-Bromofluorobenzene	101		70 - 130				

Lab Sample ID: LCSD 680-633309/5
Matrix: Water
Analysis Batch: 633309

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19.7		ug/L		99	70 - 130	6	20
Ethylbenzene	20.0	21.7		ug/L		109	70 - 130	11	20
Toluene	20.0	20.7		ug/L		104	70 - 130	3	20
Xylenes, Total	40.0	41.3		ug/L		103	70 - 130	8	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,2-Dichlorobenzene-d4 (Surr)	100		70 - 130						
4-Bromofluorobenzene	102		70 - 130						

Lab Sample ID: MB 680-633484/11
Matrix: Water
Analysis Batch: 633484

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.082	ug/L			09/09/20 17:04	1
Ethylbenzene	ND		0.50	0.099	ug/L			09/09/20 17:04	1
Toluene	ND		0.50	0.086	ug/L			09/09/20 17:04	1
Xylenes, Total	ND		0.50	0.086	ug/L			09/09/20 17:04	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-633484/11

Matrix: Water

Analysis Batch: 633484

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene-d4 (Surr)	104		70 - 130		09/09/20 17:04	1
4-Bromofluorobenzene	102		70 - 130		09/09/20 17:04	1

Lab Sample ID: LCS 680-633484/5

Matrix: Water

Analysis Batch: 633484

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	21.9		ug/L		110	70 - 130
Ethylbenzene	20.0	22.3		ug/L		112	70 - 130
Toluene	20.0	20.2		ug/L		101	70 - 130
Xylenes, Total	40.0	46.4		ug/L		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	106		70 - 130
4-Bromofluorobenzene	100		70 - 130

Lab Sample ID: LCSD 680-633484/7

Matrix: Water

Analysis Batch: 633484

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	22.6		ug/L		113	70 - 130	3	20
Ethylbenzene	20.0	21.1		ug/L		106	70 - 130	5	20
Toluene	20.0	22.1		ug/L		110	70 - 130	9	20
Xylenes, Total	40.0	41.6		ug/L		104	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichlorobenzene-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene	97		70 - 130

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MB 680-633604/3-A

Matrix: Water

Analysis Batch: 633629

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 633604

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.018	0.0025	ug/L		09/09/20 15:28	09/09/20 17:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Pentachloroethane	96		70 - 130	09/09/20 15:28	09/09/20 17:44	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 680-633604/4-A
 Matrix: Water
 Analysis Batch: 633629

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 633604

			Spike	LCS	LCS				%Rec.
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylene Dibromide			0.100	0.0896		ug/L		90	70 - 130
LCS		LCS							
Surrogate	%Recovery	Qualifier	Limits						
Pentachloroethane	97		70 - 130						

Lab Sample ID: LCSD 680-633604/5-A
 Matrix: Water
 Analysis Batch: 633629

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 633604

Analysis Date: 06/05/20											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide			0.100	0.0885		ug/L		89	70 - 130	1	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
Pentachloroethane	93		70 - 130								

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QC Association Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

GC/MS VOA

Analysis Batch: 633309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-188221-4	GWK015-2033	Total/NA	Water	524.2	
MB 680-633309/11	Method Blank	Total/NA	Water	524.2	
LCS 680-633309/4	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-633309/5	Lab Control Sample Dup	Total/NA	Water	524.2	

Analysis Batch: 633484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-188221-1	TB2033-1	Total/NA	Water	524.2	
680-188221-2	GWVA2-2033	Total/NA	Water	524.2	
680-188221-3	GWVA2-6033	Total/NA	Water	524.2	
680-188221-11	TB2033-2	Total/NA	Water	524.2	
680-188221-12	GWK003-2033	Total/NA	Water	524.2	
680-188221-13	GWK016-2033	Total/NA	Water	524.2	
MB 680-633484/11	Method Blank	Total/NA	Water	524.2	
LCS 680-633484/5	Lab Control Sample	Total/NA	Water	524.2	
LCSD 680-633484/7	Lab Control Sample Dup	Total/NA	Water	524.2	

GC Semi VOA

Prep Batch: 633604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-188221-1	TB2033-1	Total/NA	Water	504.1	
680-188221-2	GWVA2-2033	Total/NA	Water	504.1	
680-188221-3	GWVA2-6033	Total/NA	Water	504.1	
680-188221-4	GWK015-2033	Total/NA	Water	504.1	
680-188221-11	TB2033-2	Total/NA	Water	504.1	
680-188221-12	GWK003-2033	Total/NA	Water	504.1	
680-188221-13	GWK016-2033	Total/NA	Water	504.1	
MB 680-633604/3-A	Method Blank	Total/NA	Water	504.1	
LCS 680-633604/4-A	Lab Control Sample	Total/NA	Water	504.1	
LCSD 680-633604/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	

Analysis Batch: 633629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-188221-1	TB2033-1	Total/NA	Water	504.1	633604
680-188221-2	GWVA2-2033	Total/NA	Water	504.1	633604
680-188221-3	GWVA2-6033	Total/NA	Water	504.1	633604
680-188221-4	GWK015-2033	Total/NA	Water	504.1	633604
680-188221-11	TB2033-2	Total/NA	Water	504.1	633604
680-188221-12	GWK003-2033	Total/NA	Water	504.1	633604
680-188221-13	GWK016-2033	Total/NA	Water	504.1	633604
MB 680-633604/3-A	Method Blank	Total/NA	Water	504.1	633604
LCS 680-633604/4-A	Lab Control Sample	Total/NA	Water	504.1	633604
LCSD 680-633604/5-A	Lab Control Sample Dup	Total/NA	Water	504.1	633604

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Client Sample ID: TB2033-1**Date Collected: 09/01/20 12:35****Date Received: 09/02/20 10:20****Lab Sample ID: 680-188221-1****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/09/20 17:29	Y1S	TAL SAV
Instrument ID: CMSAG										
Total/NA	Prep	504.1			35.5 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 20:22	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWVA2-2033**Date Collected: 09/01/20 11:20****Date Received: 09/02/20 10:20****Lab Sample ID: 680-188221-2****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/09/20 22:06	Y1S	TAL SAV
Instrument ID: CMSAG										
Total/NA	Prep	504.1			35 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 20:32	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWVA2-6033**Date Collected: 09/01/20 11:20****Date Received: 09/02/20 10:20****Lab Sample ID: 680-188221-3****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/09/20 22:31	Y1S	TAL SAV
Instrument ID: CMSAG										
Total/NA	Prep	504.1			35.8 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 20:42	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK015-2033**Date Collected: 09/01/20 09:40****Date Received: 09/02/20 10:20****Lab Sample ID: 680-188221-4****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633309	09/08/20 16:21	Y1S	TAL SAV
Instrument ID: CMSU										
Total/NA	Prep	504.1			35.7 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 20:52	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: TB2033-2**Date Collected: 09/01/20 12:35****Date Received: 09/02/20 10:20****Lab Sample ID: 680-188221-11****Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/09/20 18:19	Y1S	TAL SAV
Instrument ID: CMSAG										

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Client Sample ID: TB2033-2

Date Collected: 09/01/20 12:35

Date Received: 09/02/20 10:20

Lab Sample ID: 680-188221-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	504.1			35.1 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 21:21	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK003-2033

Date Collected: 09/01/20 10:10

Date Received: 09/02/20 10:20

Lab Sample ID: 680-188221-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/10/20 00:12	Y1S	TAL SAV
Instrument ID: CMSAG										
Total/NA	Prep	504.1			35.4 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 21:02	DC	TAL SAV
Instrument ID: CSGX										

Client Sample ID: GWK016-2033

Date Collected: 09/01/20 09:15

Date Received: 09/02/20 10:20

Lab Sample ID: 680-188221-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	5 mL	5 mL	633484	09/10/20 00:37	Y1S	TAL SAV
Instrument ID: CMSAG										
Total/NA	Prep	504.1			35.7 mL	2 mL	633604	09/09/20 15:28	DC	TAL SAV
Total/NA	Analysis	504.1		1			633629	09/09/20 21:12	DC	TAL SAV
Instrument ID: CSGX										

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Eurofins TestAmerica, Savannah

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	GA00006	06-30-21

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Eurofins TestAmerica, Savannah

Method Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Production/Irrigation Well, Kirtland AFB

Job ID: 680-188221-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL SAV
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW	TAL SAV
504.1	Microextraction	EPA-DW	TAL SAV

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Eurofins TestAmerica, Savannah

EA®		225 Salsburg Circle 400 North 4th St. Tulsa, OK 74103 Tel No: (419) 544-7600 Fax No: (419) 771-1625		PROJECT NUMBER: 62735DM002		PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 10005		LAB CONTACT: 1 (912) 354-7858		FAX AND MAIL REPORTS/EDD TO: Tara Lamond amrtd@east.com EA Amarda Smith: amrtd@east.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@east.com EA		COC NUMBER COC-TB2033-1 YEAR: 2020 QUARTER: 3 - September	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility				LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				CHAIN-OF-CUSTODY RECORD							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)								COMMENTS			
1	TB2033-1	9-1-2020	1235	(EPA Method 504.1) EDB	(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles	4	2	2	(353.2) Nitrate-Nitrite	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(4500NH3B/C) Ammonia Nitrogen	(4500 S2CF) Sulfide
2															
3															
4															
5															
6															

Associated with: GW VA2-2033
 GW VA2-6033
 GW K015-2033



 680-188221 Chain of Custody

SAMPLER(S)	RELINQUISHED BY:	DATE	TIME	COURIER AND SHIPPING NUMBER	RECEIVED BY:	DATE	TIME
D. Schmeelk		9-1-2020	1500	FedEx 1347 4018 5679		9-2-2020	1030
Printed Name and Signature: D. Schmeelk					Printed Name and Signature: D. Schmeelk		
Printed Name and Signature:					Printed Name and Signature:		
Printed Name and Signature:					Printed Name and Signature:		

EA		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
225 Schuler Circle, Suite 400 Hunt Valley, MD 20884 Tel No: (410) 584-7000 Fax No: (410) 771-1625		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-VA2-2033	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT SITE AND PHASE: ST-106/SS-111		FAX AND MAIL REPORTS/IED TO: Tara Lamond tlamond@east.com EA asmith@east.com EA pmoss@east.com EA		YEAR: 2020 QUARTER: 3 - September	
LAB TO NUMBER: 16055		LAB CONTACT: 1 (912) 354-7858					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)			
1	GWVA2-2033	9/1/2020	1120	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite
2	GWVA2-6033	9/1/2020	1120	(300 OA) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB
3				(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles
4							
5							
6							
COMMENTS:							
KR							
SAMPLER(S): Dylan Schmaleck				COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5679			
RELINQUISHED BY:				RECEIVED BY:			
Printed Name and Signature: Amy Rosebrough		DATE: 9/1/2020		TIME: 1500		DATE: 9-2-2020	
Printed Name and Signature:		DATE:		TIME:		DATE:	
Printed Name and Signature:		DATE:		TIME:		DATE:	

EA 255 Eshling Circle, Suite 400 Huntington, MD 20630 Tel: (410) 584-7000 Fax: (410) 771-1625		PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS/EDD TO: Tara Laverdi tlaverdi@east.com EA		FAX AND MAIL REPORTS/EDD TO: Pam Moss pmoss@east.com EA		COC NUMBER COC-K015-2033						
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16095		LAB CONTACT: 1 (912) 354-7858		YEAR 2020		QUARTER 3 - September						
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												
1	GWK015-2033	9/1/2020	0940	(4500 S2CF) Sulfide	(4500NH3B/C) Ammonia Nitrogen	(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	(353.2) Nitrate-Nitrite	(300.0A) Chloride, bromide, sulfate	(6010C) Dissolved Fe, Mn	(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	(EPA Method 504.1) EDB	(EPA Method 524.2) BTEXN	(EPA Method 524.2) BTEX	(EPA Method 524.2) VOCs	Total Number of Bottles	COMMENTS
2																
3																
4																
5																
6																

SAMPLER(S)		COURIER AND SHIPPING NUMBER:		RECEIVED BY:	
Printed Name and Signature	DATE	DATE	TIME	DATE	TIME
<i>Peter Schwabek</i>		FedEx 1347	4018	5679	
<i>Amy Roseborough</i>	9/1/2020 1500				9-25-20 1000
Printed Name and Signature		Printed Name and Signature			
Printed Name and Signature		Printed Name and Signature			

9/16/2020

Page 20 of 27

EA		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
225 Schlang Circle Suite 400 Hart Valley, MD Tel No: (410) 594-7000 Fax No: (410) 771-1625		PROJECT NUMBER 627350M02		LABORATORY NAME AND CONTACT Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-K003-2033a	
PROJECT NAME Kirtland AFB Bulk Fuels Facility		PROJECT SITE AND PHASE ST106/SS111		FAX AND MAIL REPORTS TO: Tara Lamond Amelia Smith: asmith@east.com pms@east.com		YEAR 2020	
LAB PO NUMBER 18085		LAB CONTACT 1 (912) 354-7858		FAX AND MAIL REPORTS TO: Pam Moss		QUARTER 3 - September	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)			
1	GWK003-2033a	9/1/2020	10:10	(4500 S2CF) Sulfide	Please report chlorinated solvent data on a separate SDG than EDB and BTEX data		
2				(4500NH2B/C) Ammonia Nitrogen			
3				(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)			
4				(353.2) Nitrate-Nitrite			
5				(300.0A) Chloride, bromide, sulfate			
6				(6010C) Dissolved Fe, Mn			
				(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)			
				(EPA Method 504.1) EDB			
				(EPA Method 524.2) BTEXN			
				(EPA Method 524.2) TCE, PCE, VC			
				(EPA Method 524.2) VOCs			
				Total Number of Bottles	3 - 3		
COURIER AND SHIPPING NUMBER FedEx 1347 4018 5690 TB2033- 3							
SAMPLER(S) Dylan Schwauck		DATE 9/1/2020		TIME 1500		RECEIVED BY DATE 9/2/2020	
Printed Name and Signature Amy Korbrough		DATE 9/1/2020		TIME 1500		RECEIVED BY DATE 9/2/2020	
Printed Name and Signature		DATE		TIME		RECEIVED BY DATE	
Printed Name and Signature		DATE		TIME		RECEIVED BY DATE	

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EA		225 Schilling Circle Suite 400 Hurt Valley RD Tel No: (410) 584-7000 Fax No: (410) 584-7003		COC NUMBER COC-K015-2033a	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		YEAR: 2020	
LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS TO: Tara Lamond talamond@east.com EA		QUARTER: 3 - September	
PROJECT SITE AND PHASE: ST106/SS111		FAX AND MAIL REPORTS TO: Pam Moss pmoss@east.com EA			
LAB PO NUMBER: 16065		LAB CONTACT: 1 (912) 354-7853			
CHAIN-OF-CUSTODY RECORD					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)	COMMENTS
1	GWK015-2033a	9/1/2020	0940	(4500 S2CF) Sulfide	Please report chlorinated solvent data on a separate SOG than EDB and BTEX data.
2				(4500NH3B/C) Ammonia Nitrogen	
3				(2320B) Alkalinity (Total, Carbonate, and Bicarbonate)	
4				(353.2) Nitrate-Nitrite	
5				(300.0A) Chloride, bromide, sulfate	
6				(6010C) Dissolved Fe, Mn	
				(6020A/6010C) Total (As, Pb, Ca, K, Na, Mg)	
				(EPA Method 504.1) EDB	
				(EPA Method 524.2) BTEXN	
				(EPA Method 524.2) TCE, PCE, VC	
				(EPA Method 524.2) VOCs	
				Total Number of Bottles	
COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5690 RECEIVED BY: <i>[Signature]</i> DATE: 9-2-2020 TIME: 10:50 PRINTED NAME AND SIGNATURE: Amy Rosebrough DATE: 9/2/2020 TIME: 15:00 PRINTED NAME AND SIGNATURE: <i>[Signature]</i> DATE: 9/16/2020 TIME: 15:00 PRINTED NAME AND SIGNATURE: <i>[Signature]</i>					

CHAIN-OF-CUSTODY RECORD				COC NUMBER	
 225 Schilling Circle Suite 400 Hunt Valley, MD Tel No: (410) 934-7500 Fax No: (410) 771-1253		PROJECT NAME Kirtland AFB Bulk Fuels Facility PROJECT NUMBER 62735DM02		COC-K016-2033a	
LABORATORY NAME AND CONTACT Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		FAX AND MAIL REPORTS TO: Tara Lamond tamlam@east.com EA FAX AND MAIL REPORTS TO: Pam Moss pmoss@east.com EA		YEAR: 2020 QUARTER: 3 - September	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 18065		LAB CONTACT: 1 (612) 354-7858	
ANALYSIS REQUIRED (Specify number of bottles)		COMMENTS			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED		
1	GWK016-2033a	9/1/2020	0915	3	3
2					
3					
4					
5					
6					
Please report chlorinated solvent data on a separate SDG than EDB and BTEX data.					

SAMPLER(S)		COURIER AND SHIPPING NUMBER		TB2033- 3	
<i>Dylan Schwab</i> RELINQUISHED BY:		FedEx 1347 4018 5690		RECEIVED BY:	
<i>Dave Rosebroach</i> Printed Name and Signature		9/1/2020 1500 DATE TIME		9/28/2020 1020 DATE TIME	
<i>Dylan Schwab</i> Printed Name and Signature		39/43, 28/32, 44/48 Printed Name and Signature		Printed Name and Signature	
<i>Dylan Schwab</i> Printed Name and Signature		Printed Name and Signature		Printed Name and Signature	

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EA		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 627350M02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-TB2033-2	
PROJECT SITE AND PHASE: ST-106/SS-111		LAB PO NUMBER: 16065		FAX AND MAIL REPORTS TO: Tara Lennond Amanda Smith prasi@east.com		YEAR: 2020 QUARTER: 3 - September	
LAB CONTACT: 1 (912) 354-7658							
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)			
1	TB2033-2	9-1-2020	1235	4	2	2	
2							
3							
4							
5							
6							
				COMMENTS: (4500 S2CF) Sulfide (4500NH3B/C) Ammonia Nitrogen (2320B) Alkalinity (Total, Carbonate, and Bicarbonate) (353.2) Nitrate-Nitrite (300.0A) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total (As,Pb,Ca,K,Na,Mg) (EPA Method 504.1) EOB (EPA Method 524.2) BTEXN (EPA Method 524.2) BTEX (EPA Method 524.2) VOCs Total Number of Bottles			
Associated with: GWK 06-2033 GWK 003-2033							
SAMPLER(S): D. Schweet		COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680		RECEIVED BY:		DATE: 9-2-2020	
RELINQUISHED BY:		DATE: 9-1-2020		TIME: 1500		TIME: 1020	
Printed Name and Signature: D. Schweet		Printed Name and Signature: 35/43, 28/3.2, 44/4.8		Printed Name and Signature:		Printed Name and Signature:	
Printed Name and Signature:		Printed Name and Signature:		Printed Name and Signature:		Printed Name and Signature:	

EA		CHAIN-OF-CUSTODY RECORD		COC NUMBER	
224 Salsburg Circle Suite 400 Hunt Valley, MD Tel No. (410) 544-7000 Fax No. (410) 771-1625		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404		COC-K003-2033 YEAR: 2020 QUARTER: 3 - September	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62735DM02		FAX AND MAIL REPORTS/EDD TO: Tara Lamond tlamond@east.com EA Amanda Smith asmith@east.com EA pmoss@east.com EA	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16085		LAB CONTACT: 1 (912) 354-7858	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)	
1	GWK003-2033	9/1/2020	1010	6	3
2					
3					
4					
5					
6					
				COMMENTS: (4500 S2CF) Sulfide (4500NH3B/C) Ammonia Nitrogen (2320B) Alkalinity (Total, Carbonate, and Bicarbonate) (353.2) Nitrate-Nitrite (300.0A) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total (As, Pb, Ca, K, Na, Mg) (EPA Method 504.1) EDB (EPA Method 524.2) BTEXN (EPA Method 524.2) BTEX (EPA Method 524.2) VOCs Total Number of Bottles	
				TB2033-2 COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680 RECEIVED BY:	
SAMPLER(S) <i>Dylan Schmaleck</i>		DATE	TIME	DATE	TIME
RELINQUISHED BY:					
Printed Name and Signature: <i>Amy Posebrough</i>		9/1/2020	1500	9-2-2020	1020
Printed Name and Signature:					
Printed Name and Signature:					

EA		CHAIN-OF-CUSTODY RECORD				COC NUMBER	
225 Siding Circle Suite 400 Hunt Valley, MD Tel No: (410) 584-7020 Fax No: (410) 771-1625		PROJECT NAME: Kirtland AFB Bulk Fuels Facility				COC-K016-2033	
PROJECT NUMBER: 62735DM02		LABORATORY NAME AND CONTACT: Test America Sample Receiving 5102 LaRoche Ave Savannah, GA 31404				YEAR: 2020 QUARTER: 3 - September	
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 16055				FAX AND MAIL REPORTS/EDD TO: Tara Lamond tlamond@east.com EA ASmith@east.com EA pmoss@east.com EA	
LAB CONTACT: 1 (912) 354-7658		ANALYSIS REQUIRED (Specify number of bottles)					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	COMMENTS			
1	GWK016-2033	9-1-2020	0915				
2							
3							
4							
5							
6							
(4500 S2CF) Sulfide (4500NH3B/C) Ammonia Nitrogen (2320B) Alkalinity (Total, Carbonate, and Bicarbonate) (353 2) Nitrate-Nitrite (300 DA) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total (As, Pb, Cd, Cu, K, Na, Mg) (EPA Method 504.1) EDB (EPA Method 524.2) BTEXN (EPA Method 524.2) BTEX (EPA Method 524.2) VOCs Total Number of Bottles							
TB2033-2							
SAMPLER(S): D. Schmeelk		COURIER AND SHIPPING NUMBER: FedEx 1347 4018 5680		RECEIVED BY:			
RELINQUISHED BY:		DATE: 9-1-2020		TIME: 1500		DATE: 9-2-2020	
D. Schmeelk, [Signature]		9-1-2020 1500		39/4.3, 28/32, 44/48		9-2-2020 1020	
D. Schmeelk, [Signature]							
[Signature]							

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 680-188221-1

Login Number: 188221

List Source: Eurofins TestAmerica, Savannah

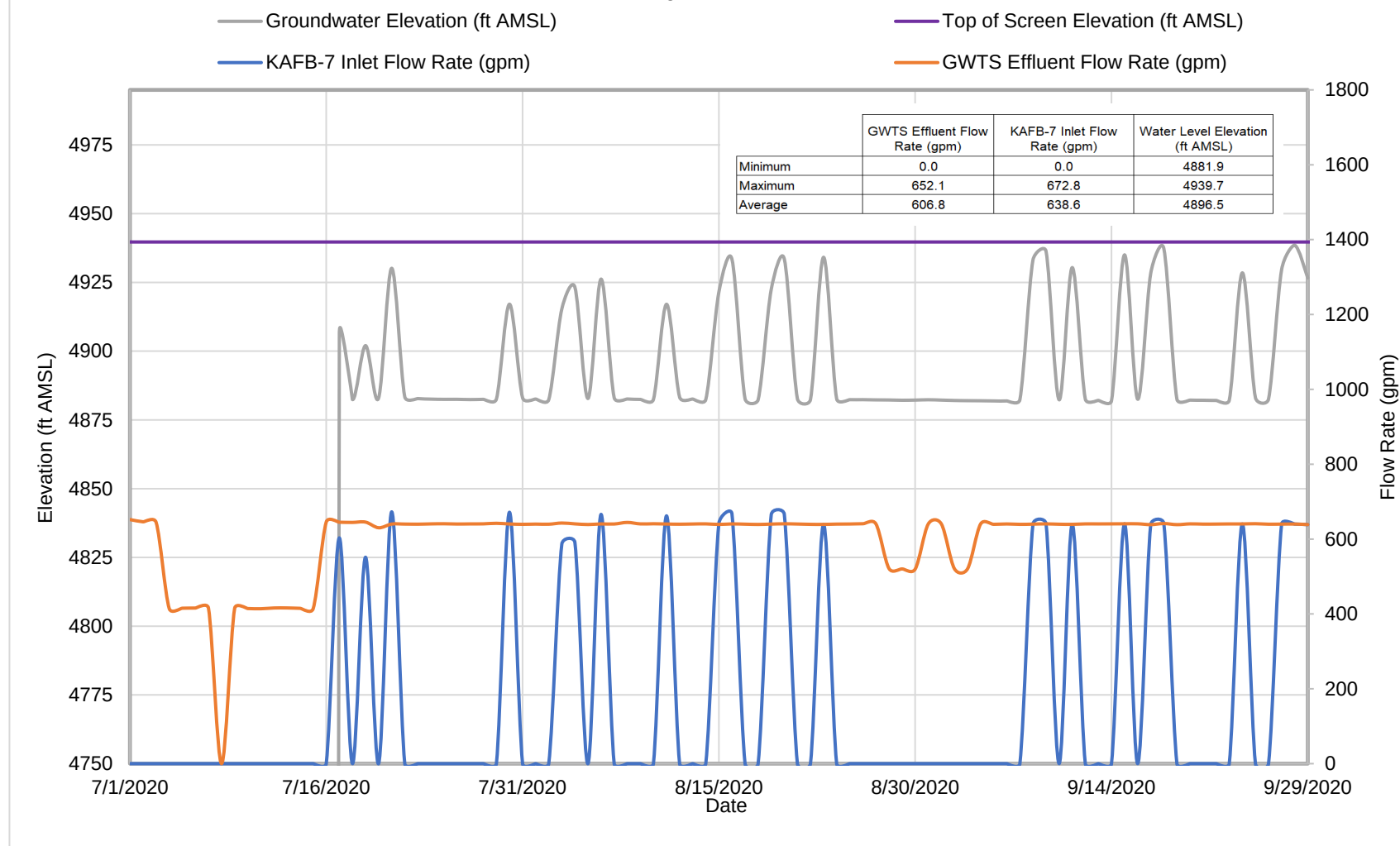
List Number: 1

Creator: Mookan, Darmal

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Q3 2020 WELL PERFORMANCE FIGURES

Figure I-1-1
Well KAFB-7

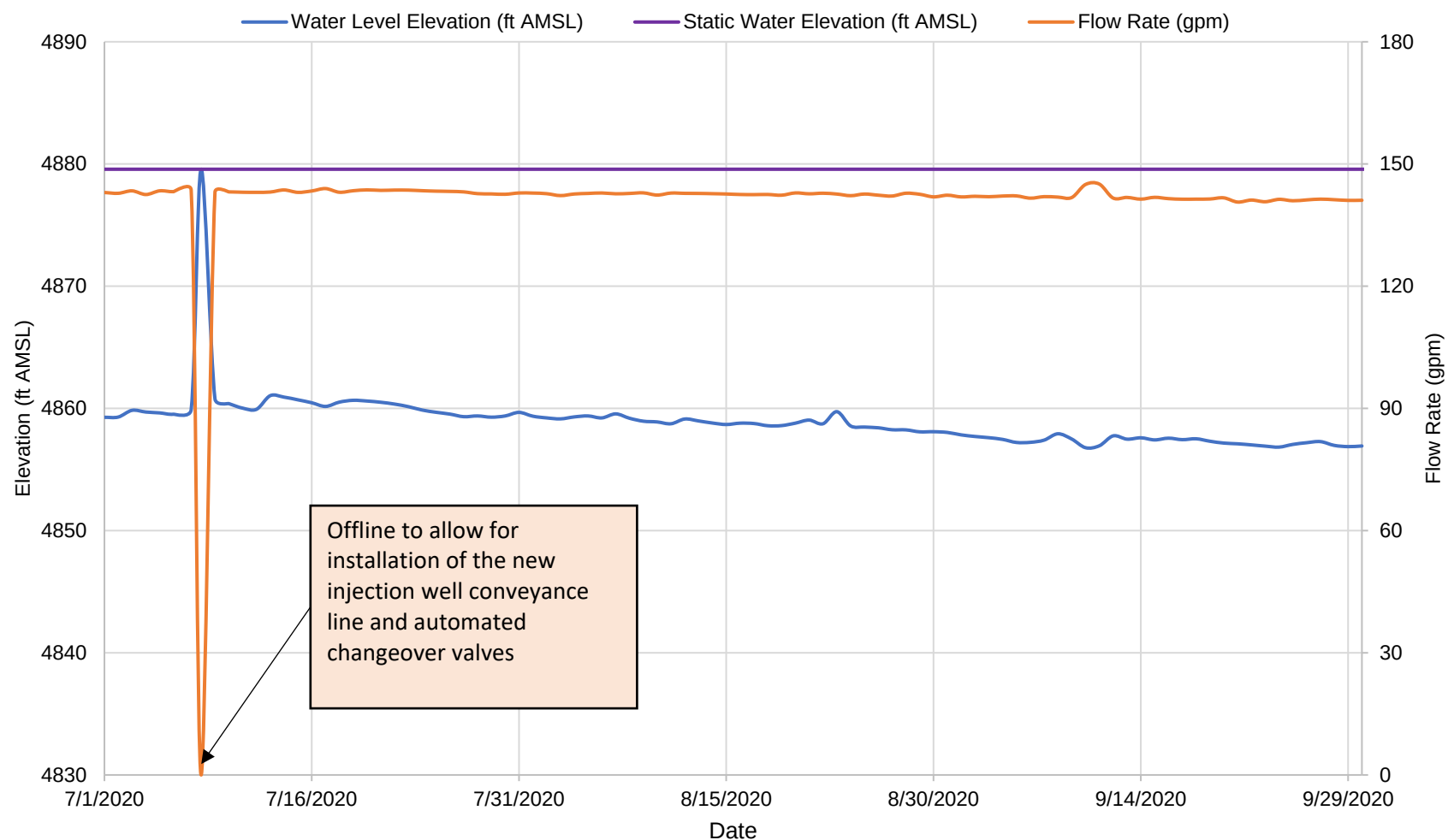


AMSL = above mean sea level

ft = foot/feet

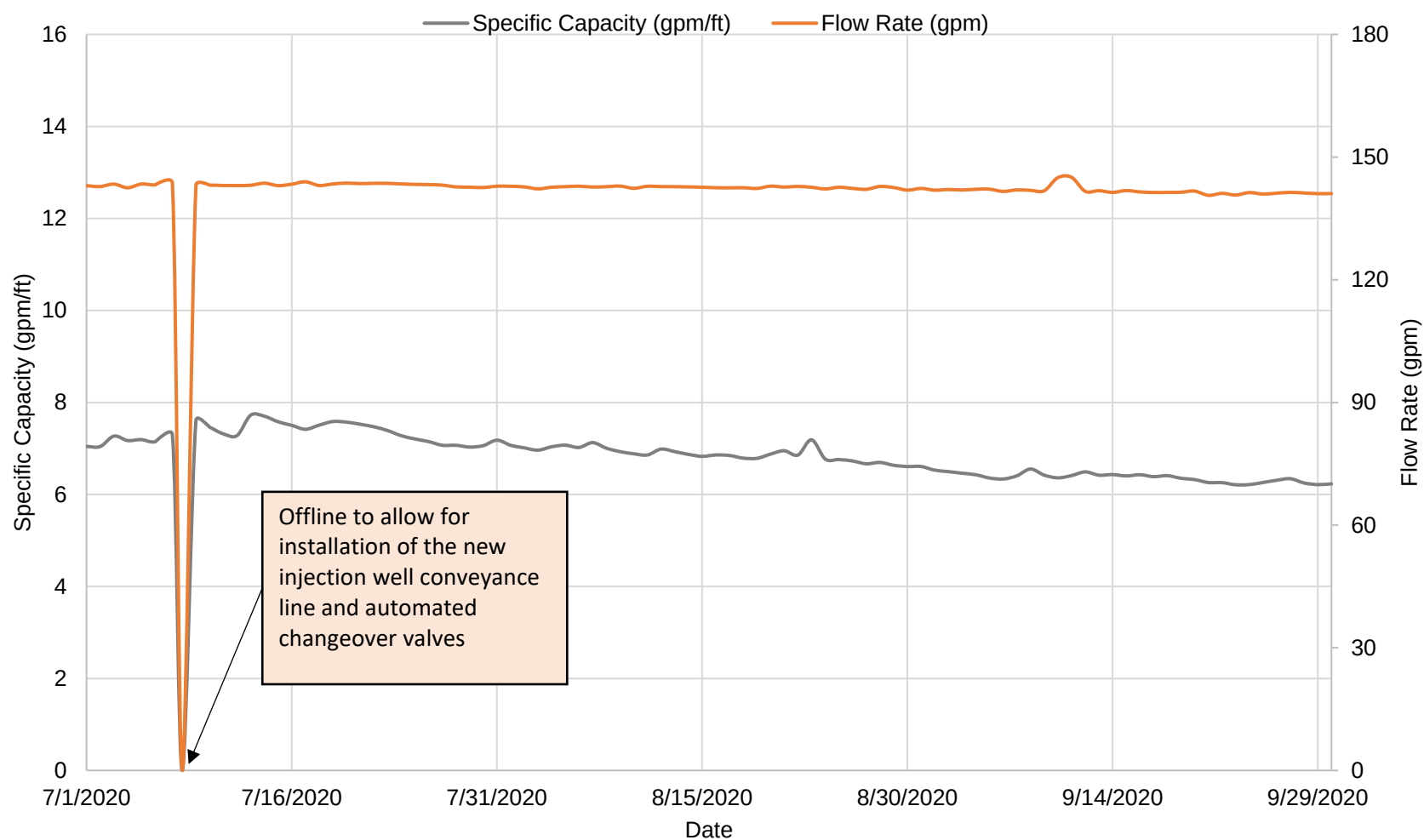
gpm = gallons per minute

Figure I-1-2
KAFB-106228



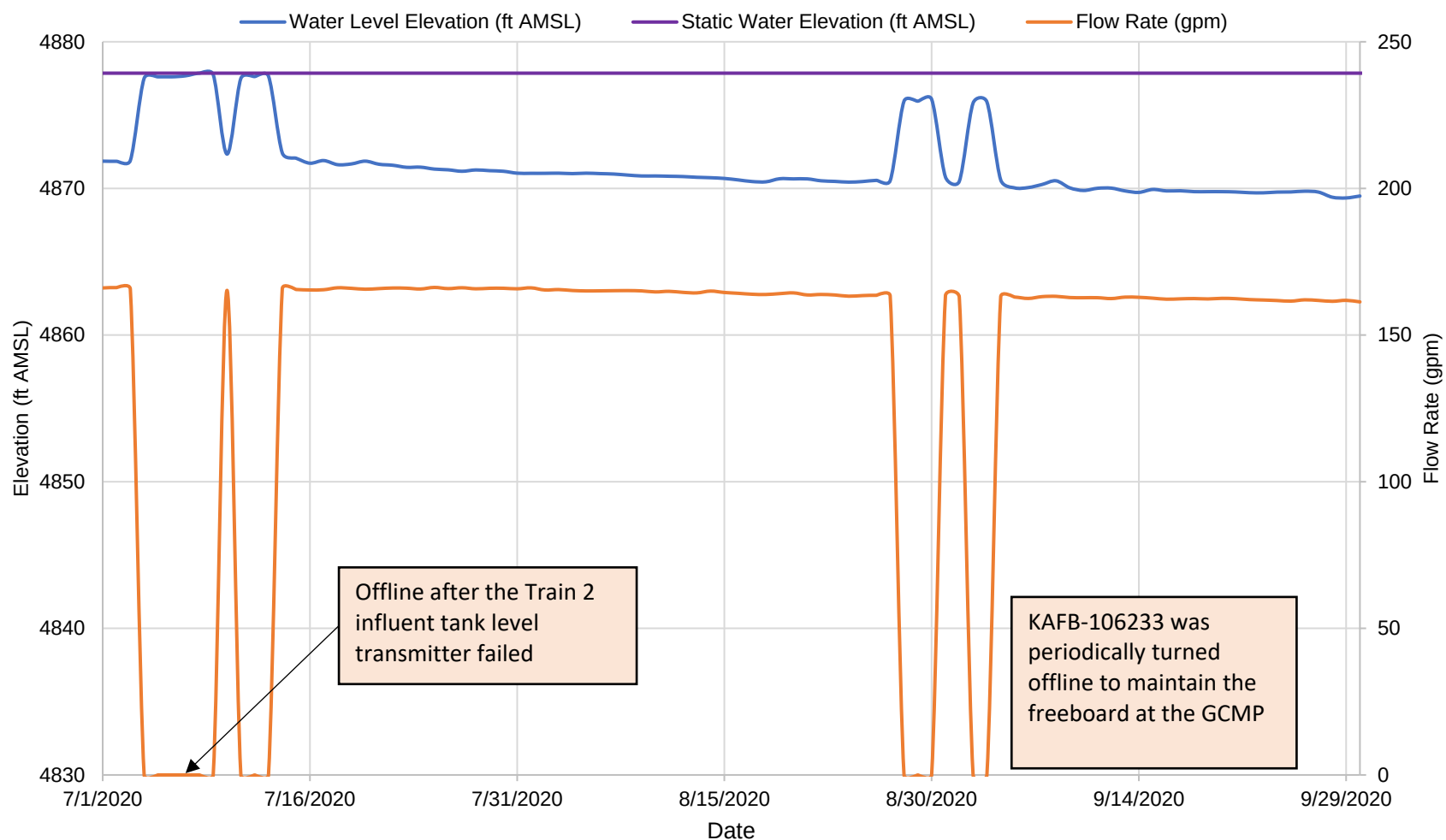
Water level elevation and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-3
KAFB-106228



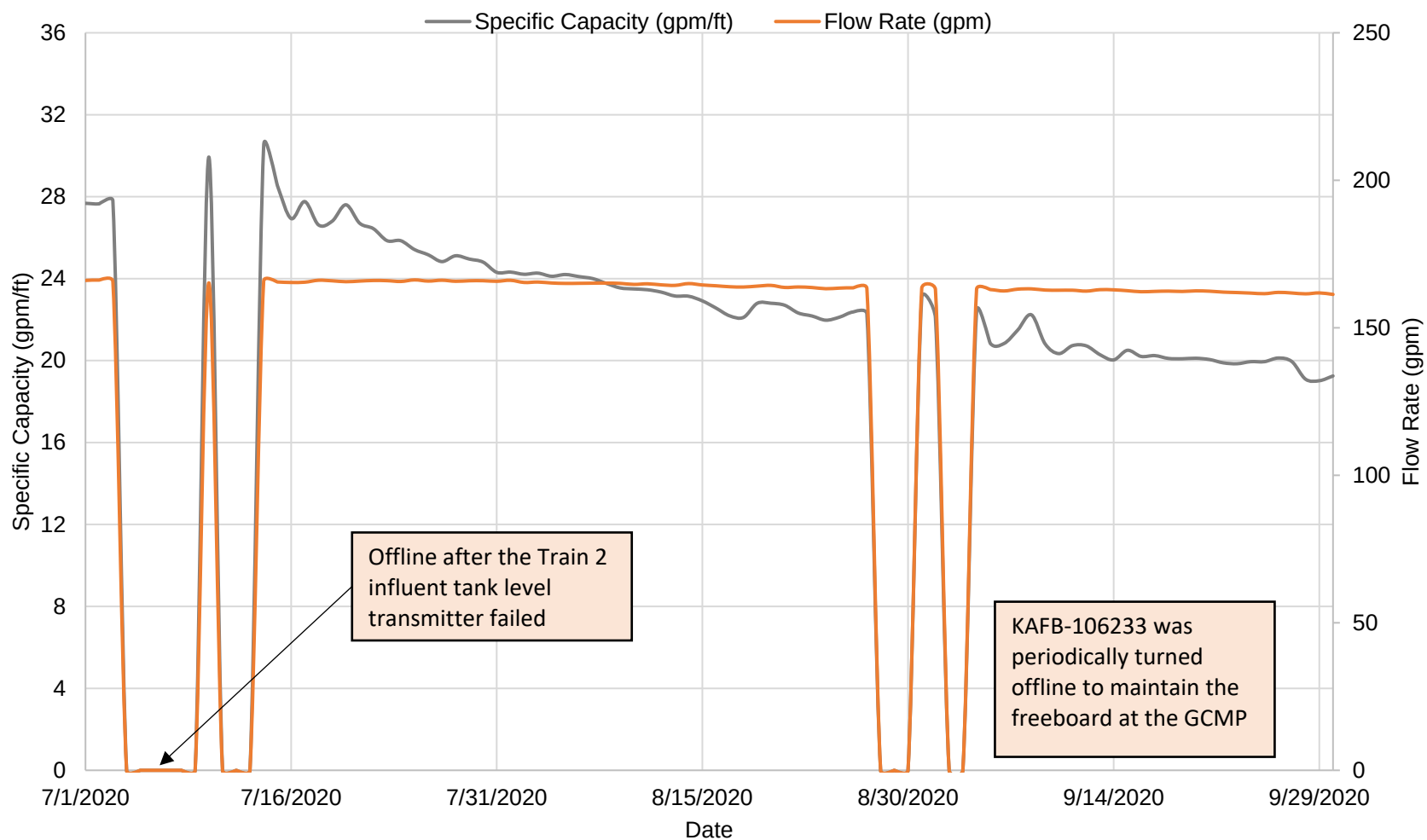
Flow rate is graphed from daily values.
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-4
KAFB-106233



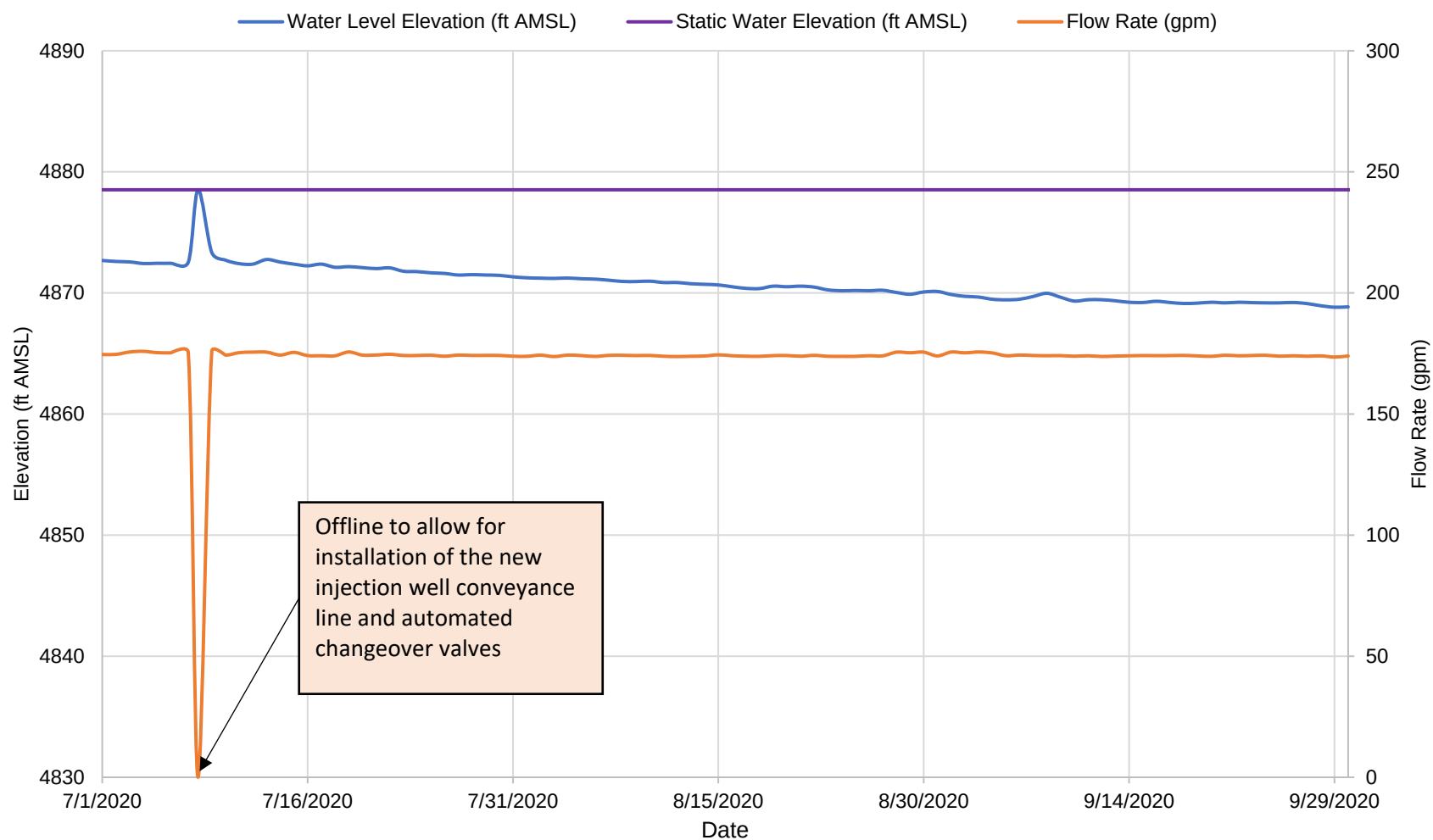
Water level elevation and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-5
KAFB-106233



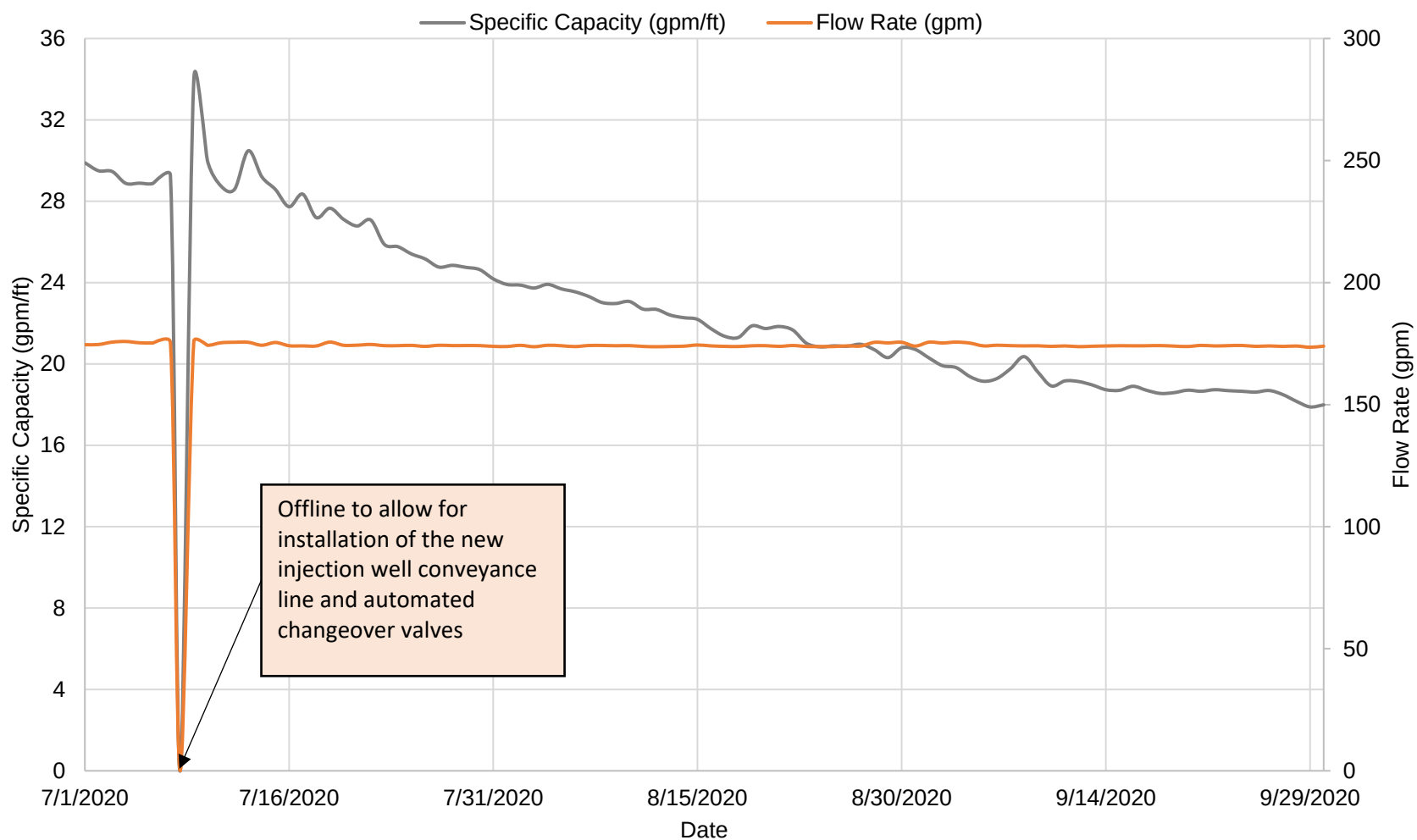
Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

Figure I-1-6
KAFB-106234



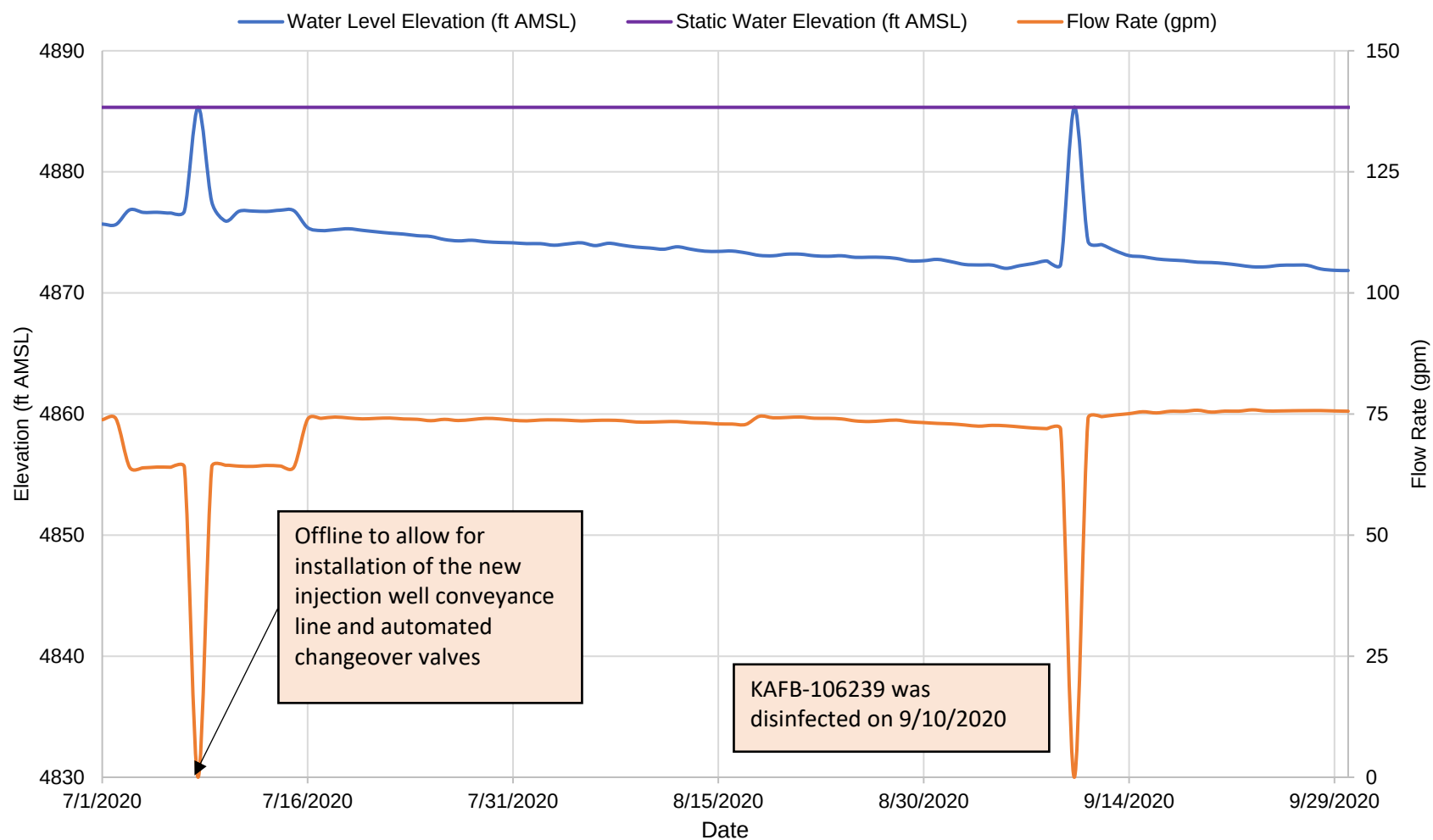
Water level and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-7
KAFB-106234



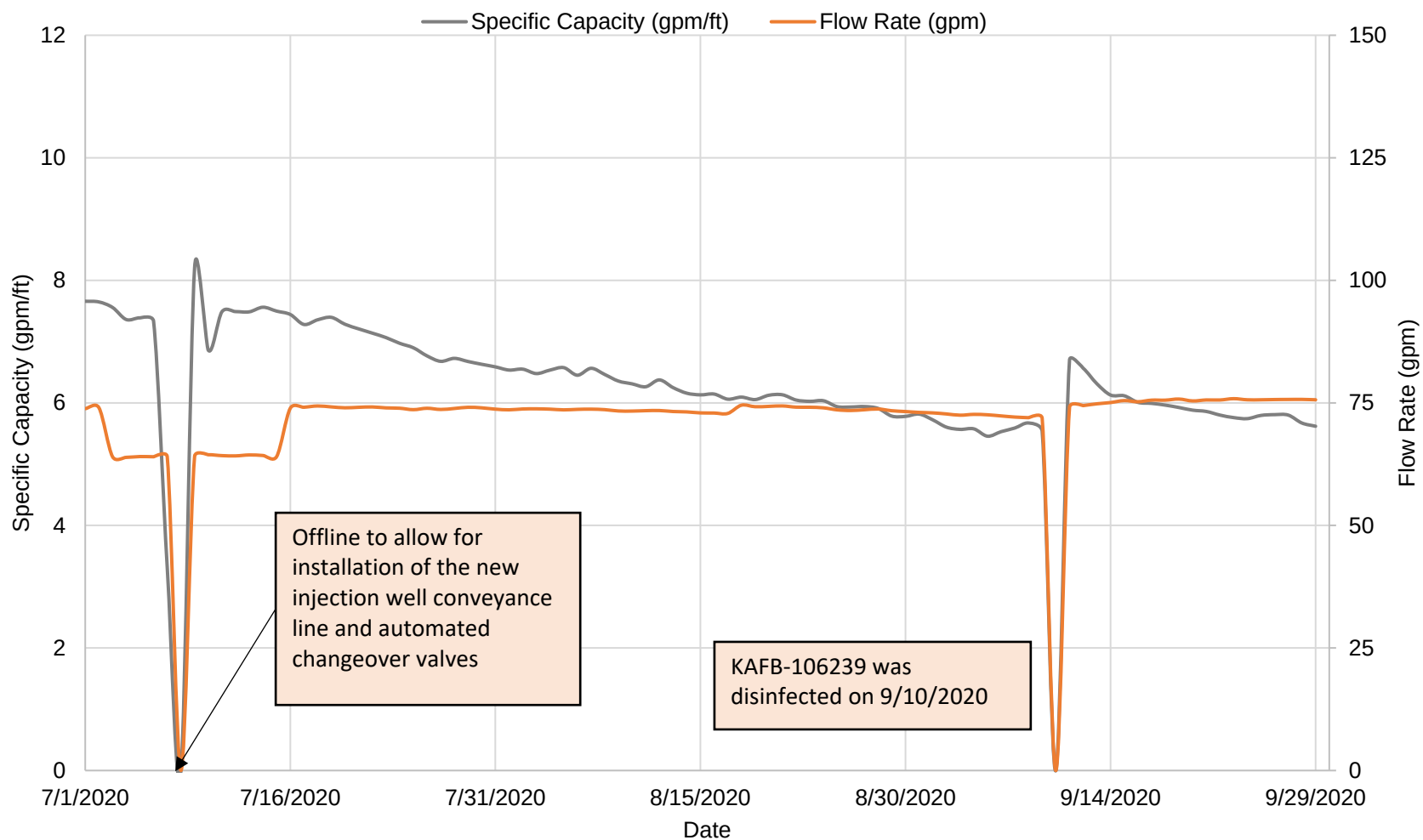
Flow rate is graphed from daily values.
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-8
KAFB-106239



Water level and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

Figure I-1-9
KAFB-106239



Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

Q3 2020 WELL PERFORMANCE TABLES

Table I-1-1
Extraction Well KAFB-106228 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d·ft)
7/1/2020	143.00	4859.27	20.30	7.04	10566.50
7/2/2020	142.80	4859.29	20.28	7.04	10562.13
7/3/2020	143.40	4859.84	19.73	7.27	10902.18
7/4/2020	142.50	4859.70	19.87	7.17	10757.42
7/5/2020	143.41	4859.63	19.94	7.19	10788.11
7/6/2020	143.20	4859.52	20.05	7.14	10713.22
7/7/2020	143.59	4859.89	19.68	7.30	10944.36
7/8/2020	0.00	4879.57	--	--	--
7/9/2020	143.08	4860.77	18.80	7.61	11415.96
7/10/2020	143.15	4860.39	19.18	7.46	11195.26
7/11/2020	143.06	4860.02	19.55	7.32	10976.47
7/12/2020	143.04	4859.92	19.65	7.28	10919.08
7/13/2020	143.11	4861.04	18.53	7.72	11584.73
7/14/2020	143.62	4860.92	18.65	7.70	11551.21
7/15/2020	143.03	4860.70	18.87	7.58	11369.63
7/16/2020	143.37	4860.46	19.11	7.50	11253.53
7/17/2020	143.96	4860.16	19.41	7.42	11125.19
7/18/2020	143.06	4860.51	19.06	7.51	11258.66
7/19/2020	143.43	4860.66	18.91	7.58	11377.31
7/20/2020	143.64	4860.60	18.97	7.57	11357.93
7/21/2020	143.52	4860.50	19.07	7.53	11288.94
7/22/2020	143.59	4860.35	19.22	7.47	11206.30
7/23/2020	143.58	4860.14	19.43	7.39	11084.41
7/24/2020	143.44	4859.86	19.71	7.28	10916.29
7/25/2020	143.33	4859.68	19.89	7.21	10809.20
7/26/2020	143.27	4859.53	20.04	7.15	10723.80
7/27/2020	143.15	4859.32	20.25	7.07	10603.70
7/28/2020	142.72	4859.38	20.19	7.07	10603.27
7/29/2020	142.65	4859.28	20.29	7.03	10545.84
7/30/2020	142.56	4859.38	20.19	7.06	10591.38
7/31/2020	142.88	4859.67	19.90	7.18	10769.85
8/1/2020	142.86	4859.36	20.21	7.07	10603.17
8/2/2020	142.71	4859.22	20.35	7.01	10519.16
8/3/2020	142.24	4859.14	20.43	6.96	10443.47
8/4/2020	142.63	4859.30	20.27	7.04	10554.76
8/5/2020	142.77	4859.38	20.19	7.07	10606.98
8/6/2020	142.88	4859.22	20.35	7.02	10531.70
8/7/2020	142.68	4859.55	20.02	7.13	10690.31
8/8/2020	142.77	4859.19	20.38	7.01	10508.10
8/9/2020	142.91	4858.95	20.62	6.93	10395.97
8/10/2020	142.37	4858.89	20.68	6.88	10326.64
8/11/2020	142.86	4858.74	20.83	6.86	10287.57
8/12/2020	142.79	4859.13	20.44	6.99	10478.72
8/13/2020	142.77	4858.97	20.60	6.93	10395.87
8/14/2020	142.71	4858.80	20.77	6.87	10306.45
8/15/2020	142.63	4858.68	20.89	6.83	10241.50
8/16/2020	142.51	4858.79	20.78	6.86	10287.05

Table I-1-1
Extraction Well KAFB-106228 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
8/17/2020	142.48	4858.76	20.81	6.85	10270.06
8/18/2020	142.51	4858.58	20.99	6.79	10184.14
8/19/2020	142.34	4858.59	20.98	6.78	10176.84
8/20/2020	142.89	4858.79	20.78	6.88	10314.49
8/21/2020	142.68	4859.04	20.53	6.95	10424.74
8/22/2020	142.82	4858.74	20.83	6.86	10284.69
8/23/2020	142.62	4859.73	19.84	7.19	10782.76
8/24/2020	142.22	4858.56	21.01	6.77	10153.74
8/25/2020	142.62	4858.47	21.10	6.76	10138.86
8/26/2020	142.34	4858.41	21.16	6.73	10090.26
8/27/2020	142.13	4858.25	21.32	6.67	9999.77
8/28/2020	142.82	4858.24	21.33	6.70	10043.60
8/29/2020	142.56	4858.08	21.49	6.63	9950.67
8/30/2020	141.93	4858.09	21.48	6.61	9911.31
8/31/2020	142.33	4858.03	21.54	6.61	9911.56
9/1/2020	141.92	4857.83	21.74	6.53	9792.09
9/2/2020	142.07	4857.70	21.87	6.50	9744.17
9/3/2020	141.96	4857.60	21.97	6.46	9692.31
9/4/2020	142.13	4857.46	22.11	6.43	9642.47
9/5/2020	142.16	4857.21	22.36	6.36	9536.67
9/6/2020	141.61	4857.22	22.35	6.34	9504.03
9/7/2020	141.98	4857.40	22.17	6.40	9606.22
9/8/2020	141.87	4857.92	21.65	6.55	9829.33
9/9/2020	141.76	4857.49	22.08	6.42	9630.43
9/10/2020	144.97	4856.78	22.79	6.36	9541.68
9/11/2020	145.06	4856.94	22.63	6.41	9615.11
9/12/2020	141.63	4857.75	21.82	6.49	9736.25
9/13/2020	141.79	4857.48	22.09	6.42	9628.11
9/14/2020	141.37	4857.59	21.98	6.43	9647.63
9/15/2020	141.81	4857.42	22.15	6.40	9603.39
9/16/2020	141.49	4857.56	22.01	6.43	9642.66
9/17/2020	141.35	4857.44	22.13	6.39	9580.89
9/18/2020	141.37	4857.51	22.06	6.41	9612.65
9/19/2020	141.40	4857.31	22.26	6.35	9528.30
9/20/2020	141.69	4857.16	22.41	6.32	9483.94
9/21/2020	140.65	4857.10	22.47	6.26	9389.19
9/22/2020	141.14	4857.01	22.56	6.26	9384.31
9/23/2020	140.73	4856.91	22.66	6.21	9315.75
9/24/2020	141.32	4856.83	22.74	6.21	9321.90
9/25/2020	140.97	4857.05	22.52	6.26	9389.65
9/26/2020	141.18	4857.19	22.38	6.31	9462.47
9/27/2020	141.37	4857.28	22.29	6.34	9513.46
9/28/2020	141.23	4856.97	22.60	6.25	9373.67
9/29/2020	141.06	4856.87	22.70	6.21	9321.15
9/30/2020	141.09	4856.92	22.65	6.23	9343.71

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-2
Extraction Well KAFB-106233 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
7/1/2020	166.06	4871.86	6.00	27.68	41515.00
7/2/2020	166.18	4871.85	6.01	27.65	41475.87
7/3/2020	165.64	4871.90	5.96	27.79	41687.92
7/4/2020	0.00	4877.51	--	--	--
7/5/2020	0.00	4877.61	--	--	--
7/6/2020	0.00	4877.61	--	--	--
7/7/2020	0.00	4877.68	--	--	--
7/8/2020	0.00	4877.86	--	--	--
7/9/2020	0.00	4877.76	--	--	--
7/10/2020	165.25	4872.34	5.52	29.94	44904.89
7/11/2020	0.00	4877.50	--	--	--
7/12/2020	0.00	4877.63	--	--	--
7/13/2020	0.00	4877.66	--	--	--
7/14/2020	165.81	4872.42	5.44	30.48	45719.67
7/15/2020	165.54	4872.06	5.80	28.54	42812.07
7/16/2020	165.37	4871.72	6.14	26.93	40399.84
7/17/2020	165.46	4871.90	5.96	27.76	41642.62
7/18/2020	166.12	4871.62	6.24	26.62	39932.69
7/19/2020	165.93	4871.67	6.19	26.81	40209.21
7/20/2020	165.63	4871.86	6.00	27.61	41407.50
7/21/2020	165.84	4871.65	6.21	26.71	40057.97
7/22/2020	166.04	4871.58	6.28	26.44	39659.24
7/23/2020	165.98	4871.44	6.42	25.85	38780.37
7/24/2020	165.71	4871.45	6.41	25.85	38777.69
7/25/2020	166.24	4871.32	6.54	25.42	38128.44
7/26/2020	165.84	4871.27	6.59	25.17	37748.10
7/27/2020	166.13	4871.17	6.69	24.83	37248.88
7/28/2020	165.77	4871.26	6.60	25.12	37675.00
7/29/2020	165.95	4871.21	6.65	24.95	37432.33
7/30/2020	165.96	4871.17	6.69	24.81	37210.76
7/31/2020	165.77	4871.04	6.82	24.31	36459.68
8/1/2020	166.10	4871.03	6.83	24.32	36478.77
8/2/2020	165.37	4871.03	6.83	24.21	36318.45
8/3/2020	165.51	4871.04	6.82	24.27	36402.49
8/4/2020	165.19	4871.01	6.85	24.12	36172.99
8/5/2020	165.05	4871.04	6.82	24.20	36301.32
8/6/2020	165.08	4871.01	6.85	24.10	36148.91
8/7/2020	165.13	4870.98	6.88	24.00	36002.18
8/8/2020	165.16	4870.91	6.95	23.76	35646.04
8/9/2020	165.06	4870.85	7.01	23.55	35319.54
8/10/2020	164.71	4870.85	7.01	23.50	35244.65
8/11/2020	164.91	4870.83	7.03	23.46	35187.06
8/12/2020	164.56	4870.81	7.05	23.34	35012.77
8/13/2020	164.38	4870.76	7.10	23.15	34728.17
8/14/2020	164.99	4870.73	7.13	23.14	34710.38
8/15/2020	164.52	4870.68	7.18	22.91	34370.47
8/16/2020	164.24	4870.58	7.28	22.56	33840.66
8/17/2020	163.92	4870.47	7.39	22.18	33271.99
8/18/2020	163.83	4870.45	7.41	22.11	33163.97
8/19/2020	164.13	4870.66	7.20	22.80	34193.75

Table I-1-2
Extraction Well KAFB-106233 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
8/20/2020	164.38	4870.65	7.21	22.80	34198.34
8/21/2020	163.68	4870.65	7.21	22.70	34052.70
8/22/2020	163.84	4870.52	7.34	22.32	33482.29
8/23/2020	163.66	4870.48	7.38	22.18	33264.23
8/24/2020	163.25	4870.43	7.43	21.97	32957.60
8/25/2020	163.46	4870.47	7.39	22.12	33178.62
8/26/2020	163.55	4870.55	7.31	22.37	33560.19
8/27/2020	163.28	4870.53	7.33	22.28	33413.37
8/28/2020	0.00	4875.95	--	--	--
8/29/2020	0.00	4875.95	--	--	--
8/30/2020	0.00	4876.08	--	--	--
8/31/2020	163.37	4870.78	7.08	23.07	34612.29
9/1/2020	162.94	4870.48	7.38	22.08	33117.89
9/2/2020	0.00	4875.82	--	--	--
9/3/2020	0.00	4875.90	--	--	--
9/4/2020	163.03	4870.58	7.28	22.39	33591.35
9/5/2020	162.96	4870.04	7.82	20.84	31258.31
9/6/2020	162.49	4870.06	7.80	20.83	31248.08
9/7/2020	163.10	4870.27	7.59	21.49	32233.20
9/8/2020	163.20	4870.52	7.34	22.23	33351.50
9/9/2020	162.79	4870.04	7.82	20.82	31225.70
9/10/2020	162.73	4869.86	8.00	20.34	30511.88
9/11/2020	162.74	4870.01	7.85	20.73	31096.82
9/12/2020	162.44	4870.02	7.84	20.72	31079.08
9/13/2020	162.93	4869.83	8.03	20.29	30435.24
9/14/2020	162.87	4869.73	8.13	20.03	30049.82
9/15/2020	162.58	4869.93	7.93	20.50	30752.84
9/16/2020	162.23	4869.83	8.03	20.20	30304.48
9/17/2020	162.35	4869.84	8.02	20.24	30364.71
9/18/2020	162.44	4869.78	8.08	20.10	30155.94
9/19/2020	162.32	4869.78	8.08	20.09	30133.66
9/20/2020	162.52	4869.78	8.08	20.11	30170.79
9/21/2020	162.41	4869.76	8.10	20.05	30075.93
9/22/2020	162.10	4869.71	8.15	19.89	29834.36
9/23/2020	161.95	4869.70	8.16	19.85	29770.22
9/24/2020	161.77	4869.75	8.11	19.95	29920.47
9/25/2020	161.57	4869.76	8.10	19.95	29920.37
9/26/2020	162.01	4869.81	8.05	20.13	30188.20
9/27/2020	161.80	4869.75	8.11	19.95	29926.02
9/28/2020	161.51	4869.40	8.46	19.09	28636.52
9/29/2020	161.83	4869.35	8.51	19.02	28524.68
9/30/2020	161.31	4869.48	8.38	19.25	28874.11

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-3
Extraction Well KAFB-106234 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
7/1/2020	174.57	4872.68	5.84	29.89	44838.18
7/2/2020	174.63	4872.60	5.92	29.50	44247.47
7/3/2020	175.61	4872.56	5.96	29.46	44197.15
7/4/2020	175.88	4872.43	6.09	28.88	43320.20
7/5/2020	175.35	4872.45	6.07	28.89	43331.96
7/6/2020	175.26	4872.45	6.07	28.87	43309.72
7/7/2020	175.35	4872.53	5.99	29.27	43910.68
7/8/2020	0.00	4878.52	--	--	--
7/9/2020	175.88	4873.34	5.18	33.95	50930.50
7/10/2020	174.33	4872.71	5.81	30.01	45007.75
7/11/2020	175.35	4872.42	6.10	28.75	43118.85
7/12/2020	175.56	4872.38	6.14	28.59	42889.25
7/13/2020	175.55	4872.76	5.76	30.48	45716.15
7/14/2020	174.34	4872.55	5.97	29.20	43804.02
7/15/2020	175.46	4872.38	6.14	28.58	42864.82
7/16/2020	174.14	4872.24	6.28	27.73	41593.95
7/17/2020	174.07	4872.38	6.14	28.35	42525.24
7/18/2020	174.04	4872.12	6.40	27.19	40790.62
7/19/2020	175.62	4872.17	6.35	27.66	41485.04
7/20/2020	174.33	4872.09	6.43	27.11	40667.96
7/21/2020	174.36	4872.01	6.51	26.78	40175.12
7/22/2020	174.66	4872.07	6.45	27.08	40618.60
7/23/2020	174.17	4871.79	6.73	25.88	38819.47
7/24/2020	174.17	4871.76	6.76	25.76	38647.19
7/25/2020	174.28	4871.66	6.86	25.41	38107.87
7/26/2020	173.87	4871.61	6.91	25.16	37743.13
7/27/2020	174.33	4871.48	7.04	24.76	37144.18
7/28/2020	174.19	4871.51	7.01	24.85	37273.18
7/29/2020	174.22	4871.48	7.04	24.75	37120.74
7/30/2020	174.19	4871.45	7.07	24.64	36956.86
7/31/2020	173.88	4871.33	7.19	24.18	36275.38
8/1/2020	173.82	4871.25	7.27	23.91	35863.82
8/2/2020	174.30	4871.22	7.30	23.88	35815.07
8/3/2020	173.73	4871.20	7.32	23.73	35600.41
8/4/2020	174.33	4871.23	7.29	23.91	35870.37
8/5/2020	174.13	4871.17	7.35	23.69	35536.73
8/6/2020	173.79	4871.14	7.38	23.55	35323.17
8/7/2020	174.22	4871.05	7.47	23.32	34983.94
8/8/2020	174.25	4870.95	7.57	23.02	34527.74
8/9/2020	174.13	4870.94	7.58	22.97	34458.44
8/10/2020	174.19	4870.97	7.55	23.07	34607.28
8/11/2020	173.85	4870.86	7.66	22.70	34043.73
8/12/2020	173.73	4870.86	7.66	22.68	34020.23
8/13/2020	173.84	4870.76	7.76	22.40	33603.09
8/14/2020	173.96	4870.71	7.81	22.27	33411.01
8/15/2020	174.43	4870.66	7.86	22.19	33288.17
8/16/2020	174.07	4870.51	8.01	21.73	32597.38
8/17/2020	173.88	4870.38	8.14	21.36	32041.77
8/18/2020	173.82	4870.36	8.16	21.30	31952.21
8/19/2020	174.11	4870.56	7.96	21.87	32809.67

Table I-1-3
Extraction Well KAFB-106234 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
8/20/2020	174.16	4870.51	8.01	21.74	32614.23
8/21/2020	173.87	4870.56	7.96	21.84	32764.45
8/22/2020	174.22	4870.48	8.04	21.67	32503.73
8/23/2020	173.84	4870.25	8.27	21.02	31530.83
8/24/2020	173.81	4870.18	8.34	20.84	31260.79
8/25/2020	173.81	4870.20	8.32	20.89	31335.94
8/26/2020	174.07	4870.18	8.34	20.87	31307.55
8/27/2020	174.02	4870.22	8.30	20.97	31449.40
8/28/2020	175.53	4870.04	8.48	20.70	31048.94
8/29/2020	175.30	4869.89	8.63	20.31	30469.29
8/30/2020	175.55	4870.08	8.44	20.80	31199.64
8/31/2020	173.99	4870.12	8.40	20.71	31069.64
9/1/2020	175.59	4869.87	8.65	20.30	30449.13
9/2/2020	175.27	4869.72	8.80	19.92	29875.57
9/3/2020	175.62	4869.66	8.86	19.82	29732.51
9/4/2020	175.23	4869.48	9.04	19.38	29075.77
9/5/2020	174.08	4869.43	9.09	19.15	28726.07
9/6/2020	174.34	4869.48	9.04	19.29	28928.10
9/7/2020	174.17	4869.71	8.81	19.77	29654.37
9/8/2020	174.08	4869.97	8.55	20.36	30540.35
9/9/2020	174.11	4869.64	8.88	19.61	29410.47
9/10/2020	173.87	4869.33	9.19	18.92	28379.22
9/11/2020	174.05	4869.44	9.08	19.17	28752.75
9/12/2020	173.76	4869.44	9.08	19.14	28704.85
9/13/2020	173.93	4869.35	9.17	18.97	28450.93
9/14/2020	174.04	4869.23	9.29	18.73	28101.18
9/15/2020	174.14	4869.21	9.31	18.70	28056.93
9/16/2020	174.10	4869.31	9.21	18.90	28355.05
9/17/2020	174.13	4869.21	9.31	18.70	28055.32
9/18/2020	174.20	4869.13	9.39	18.55	27827.48
9/19/2020	173.99	4869.16	9.36	18.59	27883.01
9/20/2020	173.82	4869.23	9.29	18.71	28065.66
9/21/2020	174.27	4869.18	9.34	18.66	27987.69
9/22/2020	174.05	4869.23	9.29	18.74	28102.80
9/23/2020	174.17	4869.20	9.32	18.69	28031.65
9/24/2020	174.25	4869.18	9.34	18.66	27984.48
9/25/2020	173.88	4869.18	9.34	18.62	27925.05
9/26/2020	174.05	4869.21	9.31	18.69	28042.43
9/27/2020	173.85	4869.12	9.40	18.49	27742.02
9/28/2020	174.01	4868.94	9.58	18.16	27245.82
9/29/2020	173.52	4868.82	9.70	17.89	26832.99
9/30/2020	173.96	4868.85	9.67	17.99	26984.49

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-4
Extraction Well KAFB-106239 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
7/1/2020	73.83	4875.69	9.64	7.66	11488.07
7/2/2020	74.03	4875.65	9.68	7.65	11471.59
7/3/2020	64.01	4876.86	8.47	7.56	11335.89
7/4/2020	63.89	4876.65	8.68	7.36	11040.90
7/5/2020	64.05	4876.66	8.67	7.39	11081.31
7/6/2020	64.01	4876.60	8.73	7.33	10998.28
7/7/2020	64.00	4876.76	19.34	3.31	4963.81
7/8/2020	0.00	4885.33	--	--	--
7/9/2020	64.09	4877.52	7.81	8.21	12309.22
7/10/2020	64.42	4875.94	9.39	6.86	10290.73
7/11/2020	64.24	4876.75	8.58	7.49	11230.77
7/12/2020	64.19	4876.76	8.57	7.49	11235.12
7/13/2020	64.38	4876.73	8.60	7.49	11229.07
7/14/2020	64.27	4876.83	8.50	7.56	11341.76
7/15/2020	64.03	4876.79	8.54	7.50	11246.49
7/16/2020	73.91	4875.40	9.93	7.44	11164.65
7/17/2020	74.11	4875.15	10.18	7.28	10919.94
7/18/2020	74.37	4875.22	10.11	7.36	11034.12
7/19/2020	74.18	4875.30	10.03	7.40	11093.72
7/20/2020	74.00	4875.17	10.16	7.28	10925.20
7/21/2020	74.10	4875.05	10.28	7.21	10812.26
7/22/2020	74.17	4874.94	10.39	7.14	10707.89
7/23/2020	73.98	4874.86	10.47	7.07	10598.85
7/24/2020	73.91	4874.73	10.60	6.97	10458.96
7/25/2020	73.62	4874.66	10.67	6.90	10349.58
7/26/2020	73.90	4874.41	10.92	6.77	10151.10
7/27/2020	73.66	4874.30	11.03	6.68	10017.23
7/28/2020	73.86	4874.35	10.98	6.73	10090.16
7/29/2020	74.10	4874.23	11.10	6.68	10013.51
7/30/2020	73.99	4874.17	11.16	6.63	9944.89
7/31/2020	73.72	4874.14	11.19	6.59	9882.04
8/1/2020	73.59	4874.07	11.26	6.54	9803.29
8/2/2020	73.76	4874.07	11.26	6.55	9825.93
8/3/2020	73.79	4873.94	11.39	6.48	9717.73
8/4/2020	73.72	4874.05	11.28	6.54	9803.19
8/5/2020	73.58	4874.14	11.19	6.58	9863.27
8/6/2020	73.68	4873.91	11.42	6.45	9677.76
8/7/2020	73.72	4874.10	11.23	6.56	9846.84
8/8/2020	73.62	4873.94	11.39	6.46	9695.35
8/9/2020	73.35	4873.79	11.54	6.36	9534.23
8/10/2020	73.33	4873.71	11.62	6.31	9466.01
8/11/2020	73.41	4873.61	11.72	6.26	9395.48
8/12/2020	73.44	4873.81	11.52	6.38	9562.50
8/13/2020	73.24	4873.61	11.72	6.25	9373.72
8/14/2020	73.16	4873.45	11.88	6.16	9237.37
8/15/2020	72.96	4873.43	11.90	6.13	9196.64
8/16/2020	72.93	4873.46	11.87	6.14	9216.09
8/17/2020	72.85	4873.31	12.02	6.06	9091.10
8/18/2020	74.53	4873.10	12.23	6.09	9141.05
8/19/2020	74.22	4873.07	12.26	6.05	9080.75

Table I-1-4
Extraction Well KAFB-106239 Performance Figure Data, Q3 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
8/20/2020	74.29	4873.20	12.13	6.12	9186.73
8/21/2020	74.38	4873.20	12.13	6.13	9197.86
8/22/2020	74.13	4873.07	12.26	6.05	9069.74
8/23/2020	74.11	4873.03	12.30	6.03	9037.80
8/24/2020	73.99	4873.07	12.26	6.04	9052.61
8/25/2020	73.58	4872.94	12.39	5.94	8907.99
8/26/2020	73.45	4872.95	12.38	5.93	8899.43
8/27/2020	73.60	4872.94	12.39	5.94	8910.41
8/28/2020	73.75	4872.85	12.48	5.91	8864.18
8/29/2020	73.40	4872.64	12.69	5.78	8676.12
8/30/2020	73.23	4872.66	12.67	5.78	8669.69
8/31/2020	73.06	4872.77	12.56	5.82	8725.32
9/1/2020	72.96	4872.58	12.75	5.72	8583.53
9/2/2020	72.74	4872.35	12.98	5.60	8406.01
9/3/2020	72.49	4872.31	13.02	5.57	8351.38
9/4/2020	72.66	4872.30	13.03	5.58	8364.54
9/5/2020	72.57	4872.03	13.30	5.46	8184.59
9/6/2020	72.34	4872.25	13.08	5.53	8295.87
9/7/2020	72.11	4872.43	12.90	5.59	8384.88
9/8/2020	71.98	4872.64	12.69	5.67	8508.27
9/9/2020	71.84	4872.35	12.98	5.53	8302.00
9/10/2020	0.00	4885.33	--	--	--
9/11/2020	74.09	4874.27	11.06	6.70	10048.37
9/12/2020	74.45	4873.99	11.34	6.57	9847.88
9/13/2020	74.81	4873.48	11.85	6.31	9469.62
9/14/2020	75.07	4873.08	12.25	6.13	9192.24
9/15/2020	75.47	4872.99	12.34	6.12	9173.82
9/16/2020	75.23	4872.81	12.52	6.01	9013.18
9/17/2020	75.56	4872.72	12.61	5.99	8988.10
9/18/2020	75.56	4872.66	12.67	5.96	8945.54
9/19/2020	75.78	4872.54	12.79	5.92	8887.41
9/20/2020	75.40	4872.51	12.82	5.88	8822.15
9/21/2020	75.60	4872.43	12.90	5.86	8790.70
9/22/2020	75.59	4872.30	13.03	5.80	8701.84
9/23/2020	75.86	4872.16	13.17	5.76	8640.09
9/24/2020	75.63	4872.16	13.17	5.74	8613.90
9/25/2020	75.63	4872.28	13.05	5.80	8693.10
9/26/2020	75.68	4872.30	13.03	5.81	8712.20
9/27/2020	75.70	4872.28	13.05	5.80	8701.15
9/28/2020	75.71	4871.98	13.35	5.67	8506.74
9/29/2020	75.63	4871.87	13.46	5.62	8428.31
9/30/2020	75.58	4871.85	13.48	5.61	8410.24

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

DAILY INSPECTIONS AND RECORD FORMS

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					71.6120 Time: 1601	71.7120	71.8120	71.9120	71.0120	1 1	1 1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	↑	↑	143	144		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.8			67.9	67.7 66.4		
		Water Level Above Transducer (ft)	---	Daily	12.52			13.33	12.67		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	---	↑	↑	---	166		
		Wellhead Pressure (psig)	< 150 psig	Daily	---			---	23.0 23.07		
		Water Level Above Transducer (ft)	---	Daily	39.77			39.35	24.30		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	↑	↑	176	175		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.9			18.9	23.1 23.10		
		Water Level Above Transducer (ft)	---	Daily	27.35			27.86	26.91		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	64	↑	↑	64	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	47.0			47.1	49.9 49.90		
		Water Level Above Transducer (ft)	---	Daily	19.85			20.64	18.67		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	400			400	360		
		Totalizer (1000 gal)	---	Daily	397473472			398382645	398826160		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.46			0.46	0.38		
	Influent Pump Skid (2)	Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.46			0.47	0.38		
		GW flow (gpm)	0-400 gpm	Daily	---			---	245		
		Totalizer (1000 gal)	---	Daily	270353432			270353432	270374008		
	Effluent Skid Pump (1)	Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	---			---	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	---			2.00	0.09		
		GW flow (gpm)	0-400 gpm	Daily	415			415	385		
	Effluent Skid Pump (2)	Totalizer (1000 gal)	---	Daily	445158564			445554340	445785612		
		GW flow (gpm)	0-400 gpm	Daily	---			---	260		
		Totalizer (1000 gal)	---	Daily	365772536			365772536	265801648		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4			~10.0	~10.0		
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFFLINE			OFFLINE	OFFLINE		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.76			2.82	3.20		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	50.03 50.09			50.19 50.18	49.81 47.77		
		Amperage (A, P112A B)	>10 A	Daily	12.3 12.5			12.3 12.5	11.1 11.3		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	8.5			9.9	4.9		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	---			---	44.5 44.27	47.81 47.82	
		Amperage (A, P212A B)	>10 A	Daily	---			---	9.6 9.6	10.7 10.4	
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	---			---	9		
	Effluent Pump Skid (1)	Frequency (Hz, P118)-	>30 Hz	Daily	49.91			47.90	59.3	48.44	
		Amperage (A, P118)	>10 A	Daily	17.4			16.7	20.5	16.5	
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	---			---	53.88	41.85	
		Amperage (A, P218)	>10 A	Daily	---			---	15.9	12.7	
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---			---	157.0334		
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---			---	139.1		
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly	---			---	79.0254		
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---			---	74.2		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---			---	101 (psi)		
	KAFB-106234	GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---			---	78 (psi)		
		Totalizer (Mgal)	---	Weekly	---			---	165.7		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---			---	183.7189		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---			---	165.77	173.5	
Well Head	KAFB-7	Totalizer (Mgal)	---	Weekly	---			---	287.2032		
		*Totalizer (1000 gal)	---	Weekly	---			---	22		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

T2
OFF

VFD 35.9 °C
AC 88 °F
86 °F
I+2 54.27
Amps 33.26

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/16/20 Time: 1558	7/17/20	7/18/20	7/19/20	7/19/20	7/19/20	7/19/20
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	40	↑	↑	1604	0827		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.467			0.460	0.377		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.458			0.455	0.378		
		Sand filter differential pressure, SF-101 (1)	---	Daily	36			36	35		
		Sand filter differential pressure, SF-101 (2)	---	Daily	31			31	32		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	9.3			7.3	13		
		GW flow (gpm)	0-500 gpm	Daily	400.1			700.0	360.7		
		Totalizer (Mgal)	---	Daily	403,2134			403,5559	403,9303		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No			No	44-35.5		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	---			---	0.093		
		Bag filter differential pressure, F212A	<15 psid	Daily	---			---	0.126		
		Bag filter differential pressure, F212B	<15 psid	Daily	---			---	41		
		Sand filter differential pressure, SF-201 (1)	---	Daily	---			---	36		
		Sand filter differential pressure, SF-201 (2)	---	Daily	---			---	124.1/38		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	---			---	247.9		
		GW flow (gpm)	0-500 gpm	Daily	---			---	359,4952		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	359,4952			359,4952	359,4980		
		Bag filters changed?	yes/no	Daily	No				No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.8			9.8	9.2		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.5			12.1	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9			7.9	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A			A	A		
		Which Tank is Lag?	---	Daily	B			B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	---			---	3.1		
		Between Tanks (psig)	0-20 psig	Daily	---			---	13.1		
		V-214B Pressure (psig)	0-20 psig	Daily	---			---	8.9		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	---			---	B		
		Which Tank is Lag?	---	Daily	---			---	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	23			22.2	40	24	
		Bag filter differential pressure, F-118A	<15 psid	Daily	0			0	0	0	
		Bag filter differential pressure, F-118B	<15 psid	Daily	0-20.44			0	0	0	
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.44			17.57	35.05	19.44	
		GW flow (gpm)	0-500 gpm	Daily	414.6			414.9	385.3	385.4	
		Totalizer (Mgal)	---	Daily	418,3701			418,7175	419,0922	419,0992	
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	---			---	36	20.9	
		Bag filter differential pressure, F-218A	<15 psid	Daily	---			---	0	0	
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	---			---	0	0	
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	---			---	35.04	17.50	
		GW flow (gpm)	0-500 gpm	Daily	---			---	260.0	259.9	
		Totalizer (Mgal)	---	Daily	355,3099			355,3099	355,3177	355,3224	
		Clarifier Level (ft)	---	Daily	Cell 2 2.6			Cell 2 2.6	Cell 2 2.6		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No			No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100			>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100			>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes			Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	43			44	44		
		Generator Faulted?	yes/no	Daily	No			No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.3			2.1	3.4		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No			No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No			OFF	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10			0.10	0.06		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF			OFF	0.07		

Notes:

SMART Discharge valve not in auto at restant

T2 OFF

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/13/20 Time: 0700	7/14/20 0700	7/15/20 1028	7/16/20 1027	7/17/20 0730	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	144	143	143	144		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.8	67.8	67.7	66.9 66.54	67.2		
		Water Level Above Transducer (ft)	---	Daily	12.00	12.83	12.91	12.65	12.31		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFFLINE	OFFLINE	OFFLINE	166	166		
		Wellhead Pressure (psig)	< 150 psig	Daily				23.0 23.00	23.0		
		Water Level Above Transducer (ft)	---	Daily	39.62	39.55	39.49	33.73	33.63		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	17.5	17.5	17.5	17.4	17.4		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.9	18.9	18.9	23.1	23.2		
		Water Level Above Transducer (ft)	---	Daily	26.60	26.57	26.52	26.42 23.16	26.30		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	64	64	64	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	46.8	47.0	46.9	49.7 49.61	49.7		
		Water Level Above Transducer (ft)	---	Daily	19.31	19.31	19.33	17.88	17.78		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	400	400	400	360	360		
		Totalizer (1000 gal)	---	Daily	400,633,209	401,063,916	401,478,945	401,957,724	402,360,302		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.46	0.47	0.47	0.38	0.38		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.46	0.47	0.47	0.38	0.38		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily				246	245		
		Totalizer (1000 gal)	---	Daily	270,386,992		270,386,992	270,883,736	271,413,768		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily			415	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily			365,851.44	0.110	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	416	415	415	385	386		
		Totalizer (1000 gal)	---	Daily	447,768,664	448,228,388	448,696,081	449,258,376	449,793,488		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily				260	260		
		Totalizer (1000 gal)	---	Daily	368,868,756		368,868,756	366,164,880	366,423,400		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	10.0	10.0	3.2	4.6	3.8		
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFFLINE	OFFLINE	OFFLINE	0	0		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	2.18	2.79	2.83	3.92	3.88		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	47.88 47.57	48.45 48.49	46.21 46.67	46.57 46.51	46.05 46.09		
		Amperage (A, P112A B)	>10 A	Daily	11.70 11.80	11.90 12.00	16.4 11.5	10.8 10.9	10.9 11.0		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	7	9	5	5.2	5.2		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily				42.24 42.27	45.81 45.81		
		Amperage (A, P212A B)	>10 A	Daily				9.3 9.2	10.1 9.9		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily				5.0	7.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	47.40	48.25	49.74	47.97	48.58		
		Amperage (A, P118)	>10 A	Daily	16.40	16.50	17.20	16.3	16.5		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily				42.02	41.09		
		Amperage (A, P218)	>10 A	Daily				12.80	12.70		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly				138,0944			
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly				139.0			
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly				79,6254	5264		
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly				74.0			
		Wellhead Pressure (psig)	< 150 psig	Weekly			car parked on cover				
	KAFB-106234	GW flow, FT-7001 (gpm)	0-200 gpm	Weekly				166.0			
		Totalizer (Mgal)	---	Weekly				183,9841			
		Wellhead Pressure (psig)	< 150 psig	Weekly				~ 80 psi			
	Well Control House	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly				173.0			
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly				22.1			
		*Totalizer (1000 gal)	---	Weekly							
		GW flow (gpm)	0-800 gpm	Weekly							

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

79,5264

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/13/20	7/14/20	7/15/20	7/16/20	7/17/20	7/18/20	7/19/20
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	35	36.5	10.19	10.20	0.720		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.467	0.460	0.465	0.378	0.375		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.462	0.465	0.468	0.379	0.378		
		Sand filter differential pressure, SF-101 (1)	---	Daily	31	31	29	30	30		
		Sand filter differential pressure, SF-101 (2)	---	Daily	27	28	28	29	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.5	13.0	13.5	12.6	12.0		
		GW flow (gpm)	0-500 gpm	Daily	400.7	400.0	399.5	360.2	360.3		
		Totalizer (Mgal)	---	Daily	405.5213	405.5213	406.3377	406.8281	407.2326		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	---	---	---	54	40		
		Bag filter differential pressure, F212A	<15 psid	Daily	---	---	---	0.096	0.098		
		Bag filter differential pressure, F212B	<15 psid	Daily	---	---	---	0.132	0.129		
		Sand filter differential pressure, SF-201 (1)	---	Daily	---	---	---	31.5	33		
		Sand filter differential pressure, SF-201 (2)	---	Daily	---	---	---	33	33		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	---	---	---	14.9	14.1		
		GW flow (gpm)	0-500 gpm	Daily	---	---	---	244.8	245.4		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	---	---	359.9900	360.1691			
		Bag filters changed?	yes/no	Daily	---	---	---	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	10.0	10.0	10.1	9.8	9.7		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.9	12.9	12.9	11.8	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	8.0	8.1	7.9	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	---	---	---	5.9	5.1		
		Between Tanks (psig)	0-20 psig	Daily	---	---	---	14.1	13.8		
		V-214B Pressure (psig)	0-20 psig	Daily	---	---	---	9.8	9.1		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	---	---	---	B	B		
		Which Tank is Lag?	---	Daily	---	---	---	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	21.0	25.0	24.9	24.9	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	17.43	20.07	19.94	19.94	19.77		
		GW flow (gpm)	0-500 gpm	Daily	410.4	415.6	414.4	385.2	385.4		
		Totalizer (Mgal)	---	Daily	420.6921	421.1076	421.5157	422.0010	422.4070		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	---	---	---	21.3	21.7		
		Bag filter differential pressure, F-218A	<15 psid	Daily	---	---	---	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	---	---	---	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	---	---	---	20.01	19.69		
		GW flow (gpm)	0-500 gpm	Daily	---	---	---	260.3	260.5		
		Totalizer (Mgal)	---	Daily	---	---	---	355.6967	355.9731		
		Clarifier Level (ft)	---	Daily	cell 2.6'	cell 2.6'	cell 2.6'	cell 2.6'	cell 2.6'		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	Yes	Yes	Yes		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	105	2100	105		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	101	>100	103		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	41	40	45	45	45		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.1'	1.9'	3.4'	3.05'	2.75'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	OFF	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.10	0.07	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	0.08	0.07		

Notes:

98 Pre filter
96 Post "
80 Cell current
29 Cell voltage
108 oxidant temp
31 water temp
32 Pressure
Manual BW
Manual BW
T2
113 Brine pump Voltage

2.64 Pond
3.83 AMI

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday			
					7/20/20 Time: 0830	7/21/20	7/22/20	7/23/20	7/24/20	1/1	1/1			
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	144	144	144	143					
		Wellhead Pressure (psig)	< 150 psig	Daily	67.1	67.3	67.3	67.3	67.0/66.30					
		Water Level Above Transducer (ft)	---	Daily	12.95	12.68	12.54	12.31	12.13					
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	166	166	166	166	166					
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	22.9	23.0	22.9	22.9/23.00					
		Water Level Above Transducer (ft)	---	Daily	34.23	33.63	33.53	33.45	33.43					
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	174					
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1	23.0	23.1/23.14					
		Water Level Above Transducer (ft)	---	Daily	26.32	26.19	26.09	26.01	25.98					
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	74	74	74	74					
		Wellhead Pressure (psig)	< 150 psig	Daily	49.6	49.7	49.6	49.6	49.4/49.48					
		Water Level Above Transducer (ft)	---	Daily	17.85	17.68	17.49	17.36	17.27					
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	355	365	365	366	368					
		Totalizer (1000 gal)	---	Daily	403,591,224	404,113,366	404,528,724	405,001,684	405,456,240					
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.37	0.39	0.38	0.40	0.39					
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.37	0.39	0.39	0.39	0.39					
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	244	245	245	245					
		Totalizer (1000 gal)	---	Daily	273,131,384	273,774,336	274,313,136	274,845,617	275,472,184					
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13					
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.10	0.10	0.10	0.09					
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	370	380	380	380	380					
		Totalizer (1000 gal)	---	Daily	451,205,464	451,877,832	452,427,736	453,015,196	453,599,340					
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	259	260	260	260					
		Totalizer (1000 gal)	---	Daily	367,348,976	367,946,152	368,447,464	368,991,136	369,527,712					
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	10.0	12.3	-1.0	-2.0	-2.0					
		Water Level Above Transducer (ft)	10-30 ft	Daily	38.63	82.35	59.37	56.84	56.66					
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.72	4.32	3.01	2.90	2.80					
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.04	47.97	47.87	48.89	48.99	48.30	48.25	45.23	45.27	
		Amperage (A, P112A B)	>10 A	Daily	11.30	11.30	11.30	11.50	11.70	11.70	11.40	11.50	10.60	10.80
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	7	8	9	5					
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	45.80	45.96	45.90	45.83	45.31	45.18	44.41	44.34	47.70	47.80
		Amperage (A, P212A B)	>10 A	Daily	10.20	10.00	10.10	9.90	10.10	9.70	9.80	9.60	10.60	10.30
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	6	10	5	8	10					
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.56	54.65	48.45	48.11	50.70					
		Amperage (A, P118)	>10 A	Daily	16.70	18.70	16.50	16.40	17.20					
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	43.05	48.05	42.34	42.98	44.47					
Amperage (A, P218)		>10 A	Daily	13.10	14.50	12.80	13.00	13.50						
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	---	139.6003					
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	---	---	139.0						
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	---	---	80.3535					
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	---	---	79.0						
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	105					
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	---	166.4					
		Totalizer (Mgal)	---	Weekly	---	---	---	---	185.6099					
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	80					
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	---	---	173.4					
		Totalizer (Mgal)	---	Weekly	---	---	---	---	290.4953					
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	---	---	22.0						
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---						
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---						

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/20/20	7/21/20	7/22/20	7/23/20	7/24/20	7/25/20	7/26/20
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0830	1036	0737	1014	0730		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	38.5	36.0	39.3	36.0	33.0		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.367	0.358	0.383	0.389	0.388		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.380	0.390	0.392	0.391	0.390		
		Sand filter differential pressure, SF-101 (2)	---	Daily	35	31	36	32	30		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	32	29	30	29	29		
		GW flow (gpm)	0-500 gpm	Daily	8.0	12.5	11.5	12.5	11.5		
		Totalizer (Mgal)	---	Daily	375.5	365.5	366.0	365.4	364.9		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	408.4446	408.9699	409.4115	409.9214	410.3514		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	No	No	No	No	No		
		Bag filter differential pressure, F212A	<15 psid	Daily	41.0	40.5	39.0	38.0	43.0		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.098	0.095	0.095	0.094	0.094		
		Sand filter differential pressure, SF-201 (1)	---	Daily	0.129	0.129	0.129	0.130	0.130		
		Sand filter differential pressure, SF-201 (2)	---	Daily	39	39	37	37	40		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	38	31	36	31	35		
		GW flow (gpm)	0-500 gpm	Daily	15.0	14.1	14.9	14.1	14.9		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	245.5	244.1	244.7	244.9	245.1		
		Bag filters changed?	yes/no	Daily	361.0656	361.3999	361.6822	362.0065	362.2491		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	No	No	No	No	No		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.0	9.5	9.0	9.0	9.5		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	11.5	12.0	11.9	12.0	12.0		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	80	8.0	7.9	8.0	8.0		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		V-214A Pressure (psig)	0-20 psig	Daily	B	B	B	B	B		
		Between Tanks (psig)	0-20 psig	Daily	5.5	5.0	5.5	5.1	6.0		
		V-214B Pressure (psig)	0-20 psig	Daily	14.0	13.9	14.0	14.0	14.1		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	9.1	8.9	9.0	9.0	9.5		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	A	A	A	A	A		
		Bag filter differential pressure, F-118A	<15 psid	Daily	25.0	23.0	25.0	24.5	29.0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	0	0	0	0	0		
		GW flow (gpm)	0-500 gpm	Daily	20.33	20.31	20.38	20.12	23.00		
		Totalizer (Mgal)	---	Daily	371.3	380.0	380.7	380.8	382.1		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	423.6293	424.1555	424.5989	425.1121	425.5424		
		Bag filter differential pressure, F-218A	<15 psid	Daily	22.0	22.0	22.0	22.0	25.0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	0	0	0	0	0		
		GW flow (gpm)	0-500 gpm	Daily	20.33	20.31	20.38	20.12	23.00		
		Totalizer (Mgal)	---	Daily	280.4	260.0	260.4	260.1	260.4		
		Clarifier Level (ft)	---	Daily	356.2633	357.1928	357.4724	357.7935	358.0691		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	4112.26'	4112.26'	4112.26'	4112.26'	4112.26'		
		Upstream Filter Pressure (psi)	>30 psig	Daily	No	No	No	No	No		
		Downstream Filter Pressure (psi)	>30 psig	Daily	98	>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	98	>100	>100	>100	>100		
		Generator Inlet Pressure (psi)	>30 psig	Daily	465	465	465	465	465		
		Generator Faulted?	yes/no	Daily	33	43	44	43	43		
		Oxidant Tank Level (ft)	>2 ft	Daily	No	No	No	No	No		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	2.7'	3.1'	2.7'	2.4'	2.2'		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	No	No	No	No	No		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.10	0.10	0.10	0.10		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/27/20 Time: 0721	7/28/20 0710	7/29/20 1232	7/30/20 1144	7/31/20 1025	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	142	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	66.8	66.5	66.5 66.32	66.5	66.5		
		Water Level Above Transducer (ft)	---	Daily	11.55	11.57	11.47	11.56	11.82		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	166	166	166	166	166		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.0	23.0 23.0	23.0	23.0		
		Water Level Above Transducer (ft)	---	Daily	33.22	33.23	33.25	33.40	33.05		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174 23.0	174	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1 23.8	23.1	23.1		
		Water Level Above Transducer (ft)	---	Daily	25.73	25.71	25.70	25.67	25.48		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	74	74	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.4	49.3	49.4 49.4	49.4	49.5		
		Water Level Above Transducer (ft)	---	Daily	16.86	16.90	16.83	16.83	16.83		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	364	365	365	365		
		Totalizer (1000 gal)	---	Daily	406,883,710	407,355,770	407,936,294	408,394,062	408,838,455		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.34	0.34	0.39	0.37	0.39		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.39	0.39	0.39	0.40		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	247	245	245	246	245		
		Totalizer (1000 gal)	---	Daily	277,272,504	277,863,248	278,598,472	279,176,520	277,736,192		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.14	0.13	0.13	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.10	0.09	0.09	0.07		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	380	379	380	379	380		
		Totalizer (1000 gal)	---	Daily	455,428,552	456,033,536	456,777,888	457,364,736	457,935,932		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	260	260	260	259		
		Totalizer (1000 gal)	---	Daily	371,200,112	371,756,424	372,435,990	372,773,544	373,497,264		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	-2.0	-2.0	-2.0	-2.0	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.43	56.45	56.40	56.37	57.22		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	2.70	3.38	3.71	3.94	3.23		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	47.00 47.04	46.65 46.66	46.59 46.51	43.30 43.31	48.12 48.15		
		Amperage (A, P112A B)	>10 A	Daily	11.10 11.20	11.10 11.10	11.0 16.1	7.5 9.4	11.4 11.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	6	6	8	8.5	9		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	47.50 47.43	47.76 47.59	43.18 43.11	46.84 46.80	44.01 44.70		
		Amperage (A, P212A B)	>10 A	Daily	10.50 10.20	9.90 9.60	9.5 9.2	11.0 11.2	9.9 9.6		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	11	5	4.9	3	5.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.44	50.00	47.97	47.38	48.10		
		Amperage (A, P118)	>10 A	Daily	16.50	17.00	16.3	16.1	16.3		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.22	44.30	42.27	41.77	42.51		
Amperage (A, P218)		>10 A	Daily	12.80	13.46	12.8	12.7	12.8			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	140.6589	---	---		
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	73.7	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	100	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	166.3	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	186,801.6	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	79 psig	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	173.5	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	291,738.4	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22.1	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					7/27/20	7/28/20	7/29/20	7/30/20	7/31/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0726 34.5	0704 35.0	1220 35.0	1144 35.9	1022 36.5		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.389	0.393	0.384	0.390	0.391		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.398	0.392	0.389	0.385	0.389		
		Sand filter differential pressure, SF-101 (1)	---	Daily	31	31	32	32	32.5 PA		
		Sand filter differential pressure, SF-101 (2)	---	Daily	29	29	28	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.0	12.0	12.44.0	12.2	12.5		
		GW flow (gpm)	0-500 gpm	Daily	365.6	365.9	265.3	365.3	365.1		
		Totalizer (Mgal)	---	Daily	411.8178	412.3003	412.8561	413.3702	413.8226		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	43.5	38.0	34.9	35	36.5		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.095	0.091	0.093	0.094	0.077		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.126	0.126	0.131	0.126	0.123		
		Sand filter differential pressure, SF-201 (1)	---	Daily	40	37	53	33	35		
		Sand filter differential pressure, SF-201 (2)	---	Daily	34	36	32	32	32		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.0	15.0	15.0	15.0	15.0		
		GW flow (gpm)	0-500 gpm	Daily	245.2	244.6	244.8	245.3	245.6		
		Totalizer (Mgal)	---	Daily	363.2187	363.5264	363.9054	364.2080	364.4976		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.8	9.5	9.8	9.8	9.8		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.0	12.0	12.0	12.0	12.1		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	8.0	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	5.4	6.0	6.0	6.0	6.0		
		Between Tanks (psig)	0-20 psig	Daily	14.5	14.5	14.9	14.8	14.8		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.5	7.8	7.8	7.8		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
	Effluent Pump Skid (Train 1)	Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	25.0	25.0	25.0	24.0	24.2		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.21	20.88	20.45	19.48	19.76		
		GW flow (gpm)	0-500 gpm	Daily	380.5	380.4	380.6	380.5	379.6		
		Totalizer (Mgal)	---	Daily	427.0129	427.4144	428.0933	428.5700	429.0222		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	22.0	22.1	21.9	21.1	21.3		
	Backwash System	Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.21	20.88	20.44	19.51	19.69		
		GW flow (gpm)	0-500 gpm	Daily	261.5	260.5	260.6	260.5	260.3		
	Sodium Hypochlorite Generator	Totalizer (Mgal)	---	Daily	358.7923	359.2979	359.6724	359.9727	360.2571		
		Clarifier Level (ft)	---	Daily	9112.28	9112.26	Cell 2 2.6	Cell 2 2.2	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	42	42	43	42		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.7	2.4	2.1	3.35	3.0		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.10	0.10	0.09	0.10		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/29/20 Time: 0715	6/30/20 1158	7/1/20 0716	7/2/20 0955	1/1	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	Independence		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.5 / 66.4	67.1	67.4	67.0			
		Water Level Above Transducer (ft)	---	Daily	11.96	11.73	11.52	11.45			
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	166	166	166	166			
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9	23.0	23.0			
		Water Level Above Transducer (ft)	---	Daily	34.23	34.00	33.89	33.82			
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	175	174			
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1	23.1			
		Water Level Above Transducer (ft)	---	Daily	27.16	26.94	26.85	26.78			
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	74	74	74			
		Wellhead Pressure (psig)	< 150 psig	Daily	49.9 / 49.73	49.8	49.8	49.9			
		Water Level Above Transducer (ft)	---	Daily	18.92	18.62	18.41	18.23			
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	360	360	360			
		Totalizer (1000 gal)	---	Daily	393,525.20	394,186.40	394,706.48	395,420.52			
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.38	0.38	0.38	0.38			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.38	0.38	0.39			
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	244	245	245	245			
		Totalizer (1000 gal)	---	Daily	269,173.336	269,672.752	269,851.920	269,815.088			
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13			
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.10			
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	385	388	385	385			
		Totalizer (1000 gal)	---	Daily	441,042.072	441,540.940	442,030.88	442,701.012			
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	262	261	260			
		Totalizer (1000 gal)	---	Daily	364,769.568	365,004.100	365,226.604	365,538.852			
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.5	0.5	0.5	0.4			
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFFLINE	OFFLINE	OFFLINE	OFFLINE			
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.85	4.05	4.00	4.16			
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.80 / 48.78	48.08 / 47.94	48.61 / 48.60	46.13 / 46.14			
		Amperage (A, P112A B)	>10 A	Daily	11.5 / 11.6	11.30 / 11.40	11.80 / 11.60	10.8 / 11.0			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	11	11	12	5.1			
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	43.76 / 43.80	48.16 / 48.27	44.72 / 44.73	44.07 / 44.00			
		Amperage (A, P212A B)	>10 A	Daily	9.6 / 9.5	10.60 / 10.40	9.40 / 9.60	9.8 / 9.6			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5	9	6			
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	47.05	48.14	48.93	48.74			
		Amperage (A, P118)	>10 A	Daily	16.70	17.10	16.60	16.6			
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.08	45.8	42.10	42.32			
Amperage (A, P218)		>10 A	Daily	12.80	13.60	12.80	12.9				
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	135.3476	---	---				
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	139.1	---	---	---				
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	78.1916	---	---				
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	73.5	---	---	---				
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	23.04	---	---	---			
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	168.3	---	---	---			
		Totalizer (Mgal)	---	Weekly	182.7415	---	---	---			
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	23.16	---	---	---			
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	173.8	---	---	---			
		Totalizer (Mgal)	---	Weekly	285.0887	---	---	---			
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22	---	---	---				
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---				
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/29/20	6/30/20	7/1/20	7/2/20	7/3/20	7/4/20	7/5/20
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	38	37.5	39	33.5			
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.375	0.377	0.378	0.379			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.378	0.375	0.378	0.379			
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.334	35	36	30			
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	26	28	28			
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	128	11.5	12.5	12.8			
		GW flow (gpm)	0-500 gpm	Daily	360.7	360.2	360.5	360.6			
		Totalizer (Mgal)	---	Daily	399.7592	400.1669	400.5614	401.1079			
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No			
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	35.5	44.0	37.0	37.0			
		Bag filter differential pressure, F212A	<15 psid	Daily	0.091	0.095	0.091	0.094			
		Bag filter differential pressure, F212B	<15 psid	Daily	0.122	0.128	0.123	0.125			
		Sand filter differential pressure, SF-201 (1)	---	Daily	34	34	36	35			
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	31	32			
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	143	14.5	14.5	14.5			
		GW flow (gpm)	0-500 gpm	Daily	245.3	244.5	245.0	245.9			
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	358.3569	358.6177	358.8866	359.2136			
		Bag filters changed?	yes/no	Daily	No	No	No	No			
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.7	9.5	9.5	9.8			
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.8	11.5	11.5	11.8			
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	8.0	8.0	7.9			
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A			
		Which Tank is Lag?	---	Daily	B	B	B	B			
		V-214A Pressure (psig)	0-20 psig	Daily	6	6	6.0	5.9			
		Between Tanks (psig)	0-20 psig	Daily	13.9	14	14.0	14.0			
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.5	9.5	9.5			
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B			
		Which Tank is Lag?	---	Daily	A	A	A	A			
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24	27	25	24.1			
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0			
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0			
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.77	18.94	20.30	19.84			
		GW flow (gpm)	0-500 gpm	Daily	385	385.7	385.7	384.8			
		Totalizer (Mgal)	---	Daily	441.9003	418.3067	418.7052	416.2512			
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21	20	22.0	21.2			
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0			
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0			
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.31	18.94	20.30	19.71			
		GW flow (gpm)	0-500 gpm	Daily	260.0	260.2	259.6	260.2			
		Totalizer (Mgal)	---	Daily	354.1865	354.4734	354.6880	355.0299			
		Clarifier Level (ft)	---	Daily	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'			
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No			
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100			
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100			
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes			
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	42	41	41			
		Generator Faulted?	yes/no	Daily	No	No	No	No			
		Oxidant Tank Level (ft)	>2 ft	Daily	2.7	2.5	2.25				
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF			
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No				
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF			
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		0.10	0.10				

Notes:

Independence

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Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday			
					8/13/20 Time: 0717	8/14/20 0730	8/15/20 1445	8/16/20 1312	8/17/20 0955	1/1	1/1			
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	142	143					
		Wellhead Pressure (psig)	< 150 psig	Daily	66.3	66.9	66.6	66.2	66.6					
		Water Level Above Transducer (ft)	---	Daily	11.26	11.37	11.5	11.4	11.21					
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	166	166	165	166	165					
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.0	23.0	23.0	22.9					
		Water Level Above Transducer (ft)	---	Daily	32.99	33.04	33.07	33.04	32.97					
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	175	174	174	174	174					
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1	23.1	23.1					
		Water Level Above Transducer (ft)	---	Daily	25.38	25.38	25.38	25.35	25.27					
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	73	74	74	74	73					
		Wellhead Pressure (psig)	< 150 psig	Daily	49.2	49.4	49.4	49.4	49.4					
		Water Level Above Transducer (ft)	---	Daily	16.52	16.63	16.63	16.63	16.58					
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	365	365	365	365					
		Totalizer (1000 gal)	---	Daily	410,281,830	410,678,181	411,288,226	411,733,668	412,138,291					
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.34	0.39	0.39	0.39	0.39					
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.34	0.39	0.39	0.39	0.39					
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245					
		Totalizer (1000 gal)	---	Daily	281,455,84	282,044,056	282,812,56	283,375,320	283,880,910					
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.13	0.12	0.13	0.13					
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.09	0.10	0.10	0.09					
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	380		378	379	380					
		Totalizer (1000 gal)	---	Daily	459,685,86	460,297,608	461,076,684	461,649,148	462,167,850					
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	259	260	260	260					
		Totalizer (1000 gal)	---	Daily	375,093,296	375,640,648	376,357,504	376,918,516	377,350,264					
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.5	13.2	2.0	2.0	2.3					
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.46	57.36	56.75	56.50	57.57					
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.93	3.50	3.81	3.95	3.08					
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.87	48.87	49.26	49.27	45.34	45.50	46.25	46.32	45.44	45.45
		Amperage (A, P112A B)	>10 A	Daily	11.60	11.70	11.7	11.9	10.7	10.7	10.9	11.1	10.8	10.9
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10	11	5.1	5.1	5.1	5.1				
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	44.38	44.45	46.43	46.51	46.15	46.11	45.20	48.33	48.36	48.00
		Amperage (A, P212A B)	>10 A	Daily	9.80	9.60	10.3	10.1	10.4	10.0	10.2	10.4	11.4	11.5
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	7	9	10.5	12	5					
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.46	49.03	47.80	47.76	48.11					
		Amperage (A, P118)	>10 A	Daily	16.40	16.7	16.3	16.3	16.3					
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	41.67	42.11	41.47	41.40	42.05					
		Amperage (A, P218)	>10 A	Daily	12.70	12.3	12.6	12.6	12.7					
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	141,6468	---	---	---	---					
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	138.6	---	---	---	---					
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	81,4086	---	---	---	---					
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	73.6	---	---	---	---					
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	99 psi	---	---					
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	166.1	---	---	---	---					
		Totalizer (Mgal)	---	Weekly	187,9853	---	---	---	---					
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	80 psi	---	---					
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	173.4	---	---	---	---					
		Totalizer (Mgal)	---	Weekly	292,9744	---	---	---	---					
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22.1	---	---	---	---						
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---					
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---					

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

humidity
to
well 7

AC 98°F
Amb 96°F
VFD 29.8°C
Amp 33.38
Hz 54.31

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/13/20 Time: 0710	8/14/20	8/15/20	8/16/20	8/17/20	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	37.5	38	38.32	33.5	37.37		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.391	0.385	0.382	0.384	0.388		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.385	0.382	0.388	0.387	0.393		
		Sand filter differential pressure, SF-101 (1)	---	Daily	29	35	29	29	30		
		Sand filter differential pressure, SF-101 (2)	---	Daily	29	28	28	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.5	12.4	11.6	12.4	12.4		
		GW flow (gpm)	0-500 gpm	Daily	365.1	364.9	365.8	365.8	366.1		
		Totalizer (Mgal)	---	Daily	415.2225	415.7136	416.3409	416.7971	417.2016		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No			
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	37.5	41	41.9	44.2	35		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.090	0.090	0.092	0.092	0.093		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.123	0.126	0.127	0.131	0.128		
		Sand filter differential pressure, SF-201 (1)	---	Daily	35	38.5	39	40.5	32		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	33	33	33	32		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.0	15.1	14.7	15.1	15.1		
		GW flow (gpm)	0-500 gpm	Daily	245.8	245.3	244.8	245.2	245.1		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	365.3839	365.6956	366.0968	366.3865	366.6491		
		Bag filters changed?	yes/no	Daily	No	No	No	No			
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.5	9.8	9.9	9.9	9.9		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.0	11.8	12.0	12.0	12.0		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	7.9	7.9	8.0	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	6.0	5.2	6.0	5.9		
		Between Tanks (psig)	0-20 psig	Daily	14.9	14.8	14.1	14.9	14.9		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	7.8	7.0	7.8	7.8		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	25.0	24.5	25.1	24.0	24.8		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.32	19.92	20.67	20.02	20.12		
		GW flow (gpm)	0-500 gpm	Daily	381.0	379.9	380.3	380.3	380.9		
		Totalizer (Mgal)	---	Daily	430.4303	430.9227	431.5581	432.0071	432.4229		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	22.0	21.8	22.1	21.9	21.8		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.63	19.94	20.77	20.32	20.09	2	
		GW flow (gpm)	0-500 gpm	Daily	260.0	260.5	261.1	260.5	260.5		
		Totalizer (Mgal)	---	Daily	361.1398	361.4420	361.8422	362.1252	362.3848		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	7100	105	>100	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	101	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	43	43	41	42		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.1	3.35	2.90	2.65	2.35		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.10	0.10	0.10	0.08		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
					8/10/20 Time: 10:16	8/11/20 09:55	8/12/20 07:29	8/13/20 14:21	8/14/20 11:27	1/1	1/1	
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	142	143			
		Wellhead Pressure (psig)	< 150 psig	Daily	66.5	66.3	66.2	66.4 66.0	66.4			
		Water Level Above Transducer (ft)	---	Daily	11.03	10.94	11.18	11.18	10.90			
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	165	165	165	165	165			
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.0	22.9	22.9 23.0	22.9			
		Water Level Above Transducer (ft)	---	Daily	32.84	32.82	32.82	32.91	32.72			
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	174			
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.0	23.1	23.0 23.08	23.1			
		Water Level Above Transducer (ft)	---	Daily	25.11	25.06	25.04	25.01	24.91			
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	73	73	73	73			
		Wellhead Pressure (psig)	< 150 psig	Daily	49.3	49.1	49.0	49.1 48.96	48.9			
		Water Level Above Transducer (ft)	---	Daily	16.47	16.22	16.27	16.21	16.01			
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	365	365	365	365			
		Totalizer (1000 gal)	---	Daily	413 563 017	414 032 590	414 455 734	415 053 801	415 470 630			
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.39	0.39	0.39	0.39	0.39			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.40	0.39	0.37	0.39	0.39			
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245			
		Totalizer (1000 gal)	---	Daily	285 685 746	286 273 256	286 883 160	287 555 432	288 083 064			
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.12	0.13	0.13	0.13			
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.10	0.09			
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	380	380	380	380	380			
		Totalizer (1000 gal)	---	Daily	463 995 049	464 558 448	465 141 408	465 908 368	466 473 004			
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	261	260	260	260	260			
		Totalizer (1000 gal)	---	Daily	379 028 712	379 573 104	380 069 304	380 773 048	381 263 536			
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	2.3	2.3	13.8	2.2	2.2			
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.43	56.38	106.17	56.65	56.38			
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.72	3.87	3.21	3.73	3.72			
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	46.27 46.22	47.11 47.12	47.90 47.53	47.55 47.51	47.94 47.76			
		Amperage (A, P112A B)	>10 A	Daily	10.9 11.0	11.1 11.2	11.2 11.4	11.2 11.3	11.2 11.4			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	7	7.5	8	8.5	9.5			
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	45.55 45.40	46.25 46.29	43.19 43.18	42.78 42.82	44.51 44.34			
		Amperage (A, P212A B)	>10 A	Daily	10.1 9.8	10.2 10.0	9.5 9.3	9.4 9.2	9.8 9.6			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	7.5	9.5	5	5.1	6			
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.10	48.53	49.07	48.25	48.28			
		Amperage (A, P118)	>10 A	Daily	16.3	16.4	16.6	16.3	16.3			
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	43.10	42.20	42.87	42.82	42.72			
		Amperage (A, P218)	>10 A	Daily	13.0	12.8	12.9	12.9	12.9			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	143.6451	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	---	---	138.7	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	---	164.8	82.5498	82.4598		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	---	---	73.1	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	99 psi	---			
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	164.8	---			
		Totalizer (Mgal)	---	Weekly	---	---	---	190.3668	---			
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	78 psi	---			
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	---	172.9	---			
		Totalizer (Mgal)	---	Weekly	---	---	---	295.4688	---			
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	---	22 psi	---				
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---			
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

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Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/11/20	8/11/20	8/12/20	8/13/20	8/14/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 1006 34.5	0947 35.1	0729 35.5	1415 35.5	1115 36		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.388	0.388	0.390	0.391	0.389		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.386	0.389	0.390	0.388	0.389		
		Sand filter differential pressure, SF-101 (1)	---	Daily	31	31	32	32	32		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	28	28	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.4	12.5	12.0	12.4	12.6		
		GW flow (gpm)	0-500 gpm	Daily	365.1	365.7	365.3	364.9	365.6		
		Totalizer (Mgal)	---	Daily	418,6760	419,1583	419,5913	420,2075	420,6334		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	38	41	34.9	34.9	37		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.091	0.093	0.090	0.094		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.124	0.125	0.129	0.124	0.126		
		Sand filter differential pressure, SF-201 (1)	---	Daily	36	38	33	33	34		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	33	32	31	32		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.1	15.1	14.8	14.9	14.9		
		GW flow (gpm)	0-500 gpm	Daily	245.2	245.6	244.8	244.9	245.6		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	367,5861	367,8916	368,1681	368,5615	368,8314		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.8	9.8	9.8	9.9	9.8		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.0	12.0	12.0	12.0	12.0		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	7.9	8.0	7.9	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.7	5.0	6.0	4.9		
		Between Tanks (psig)	0-20 psig	Daily	15.0	14.8	14.1	14.9	13.9		
		V-214B Pressure (psig)	0-20 psig	Daily	9.9	7.8	9.1	8.9	7.9		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	25.0	25.0	25.5	24.5	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.40	20.92	21.02	20.05	19.54		
		GW flow (gpm)	0-500 gpm	Daily	380.5	380.6	380.9	380.4	379.8		
		Totalizer (Mgal)	---	Daily	433,8964	434,3769	434,8157	435,4311	435,8589		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	22.0	21.9	22.0	21.8	21.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.134	20.71	21.05	20.08	19.90		
		GW flow (gpm)	0-500 gpm	Daily	260.3	260.4	260.6	260.1	260.3		
		Totalizer (Mgal)	---	Daily	363,3157	363,6129	363,8886	364,2768	364,5452		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6"	Cell 2 2.6"	Cell 2 2.6"	Cell 2 2.6"	Cell 2 2.6"		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	YES	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	108	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	104	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	42	43	45	44		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.95'	2.6'	2.35'	2.195'	3.25'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.09	0.10	0.12	0.09		

Notes:

T2
Back
wash

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/11/20 Time: 1437	8/11/20 1253	8/11/20 10741	8/12/20 1152	8/12/20 1016	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	142	142	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	65.8	66.0 66.0	66.4	66.4	66.1		
		Water Level Above Transducer (ft)	---	Daily	11.00	10.37	10.73	11.64	11.21		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	164	164	164	164	164		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9 22.9	22.9	22.9	22.9		
		Water Level Above Transducer (ft)	---	Daily	32.54	32.54	32.59	32.57	32.66		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.0 23.07	23.0	23.1	23.0		
		Water Level Above Transducer (ft)	---	Daily	24.66	24.65	24.66	24.96	24.69		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	73	75	74	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	43.9	49.6 48.2	49.4	49.4	49.3		
		Water Level Above Transducer (ft)	---	Daily	15.96	15.60	15.81	16.21	15.91		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	366	365	365	365		
		Totalizer (1000 gal)	---	Daily	416932.592	417390.786	417741.774	418245.574	418687.028		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.38	0.39	0.38	0.39	0.39		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.39	0.39	0.39	0.39	0.39		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	244	245	246		
		Totalizer (1000 gal)	---	Daily	28979.400	290500.576	290745.360	291578.624	292132.680		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	381	380	380	381	381		
		Totalizer (1000 gal)	---	Daily	468320.552	468911.276	469359.856	470006.952	470573.498		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	261	260	268	260	262		
		Totalizer (1000 gal)	---	Daily	382768.960	383509.744	383922.352	384517.984	385031.040		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	2.8	2.8	3.0	2.7	2.8		
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.66	56.40	56.34	57.47	56.70		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.25	3.46	3.62	3.35	3.48		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.07 48.04	48.78 49.03	48.67 48.60	51.33 51.87	49.06 49.10		
		Amperage (A, P112A B)	>10 A	Daily	11.3 11.4	11.5 11.7	11.5 11.6	12.2 12.4	11.6 11.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10.1	10.5	11	13	12		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	44.01 44.06	44.95 45.10	46.88 46.84	47.95 47.78	45.68 45.62		
		Amperage (A, P212A B)	>10 A	Daily	9.7 9.5	10.0 9.7	10.4 10.1	10.6 10.4	10.0 9.8		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	6.5	10	10.5	5.1		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	47.74	48.92	47.89	47.85	48.77		
		Amperage (A, P118)	>10 A	Daily	16.2	16.4	16.2	16.2	16.5		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	41.80	42.50	41.81	42.48	42.62		
		Amperage (A, P218)	>10 A	Daily	12.6	12.8	12.7	12.9	12.9		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	144,627.6	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	138.6	---	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	82,979.3	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	72.8	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	100	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	164.1	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	191,536.0	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	78	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	173.2	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	276,699.7	---	---	---		
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	22.1	---	---	---			
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---		
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Increase
KAFB-106239
from 90%
to 91%

76°F Amb,
33.96 Amps
76°F AC
2904 VFD
5423 Hz
74.5 GPM

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/17/20	8/18/20	8/19/20	8/20/20	8/21/20	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 1630 37	1340 37	0731 37.5	1143 42.5	1004 39		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.385	0.388	0.392	0.391	0.391		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.392	0.394	0.392	0.388	0.392		
		Sand filter differential pressure, SF-101 (1)	---	Daily	33	34	35	39	36		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	28	28	30.5	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.1	13.512	12.0	10.5	12.3		
		GW flow (gpm)	0-500 gpm	Daily	365.2	365.8	365.2	365.1	365.1		
		Totalizer (Mgal)	---	Daily	422,1559	422,6105	422,9670	423,4851	423,9363		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	37	38	42	43.5	40		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.095	0.092	0.093	0.095		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.127	0.125	0.124	0.120	0.126		
		Sand filter differential pressure, SF-201 (1)	---	Daily	34	35	39	40.5	38		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	32.5	33	36		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.2	15.2	15.2	14.9	15.0		
		GW flow (gpm)	0-500 gpm	Daily	245.5	245.2	245.1	244.8	245.3		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	367,7881	370,0894	370,3776	370,6509	370,9381		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.9	9.8	9.8	9.2	9.8		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.0	12.0	12.0	11.9	12.0		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	7.9	7.9	7.9	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.9	5.9	5.0	5.1		
		Between Tanks (psig)	0-20 psig	Daily	14.9	14.9	15.0	14.0	14.3		
		V-214B Pressure (psig)	0-20 psig	Daily	9.7	10.0	9.9	8.8	9.1		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.1	25.0	25.0	24.1	25.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.71	20.05	20.58	19.65	20.96		
		GW flow (gpm)	0-500 gpm	Daily	380.1	380.1	381.4	380.5	381.7		
		Totalizer (Mgal)	---	Daily	437,3667	437,8438	438,2658	438,7229	439,1781		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.0	21.9	22.1	21.1	22.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.63	20.15	20.62	19.54	20.94		
		GW flow (gpm)	0-500 gpm	Daily	260.6	260.3	261.9	260.2	260.0		
		Totalizer (Mgal)	---	Daily	365,4886	365,7891	366,0167	366,3452	366,6290		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	105	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	102	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	44	42	43	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.2	1.9	3.3	2.9	2.6		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.10	0.10	0.10	0.11		

Notes:

T2
back
wash

T1
manual
back
wash

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/24/20 Time: 10:13	8/25/20 0737	8/26/20 1418	8/27/20 0906	8/28/20 1312	/	/
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	142	143	142	142	142		
		Wellhead Pressure (psig)	< 150 psig	Daily	66.0	66.3	65.8 65 ⁹⁰	65.9	66.0		
		Water Level Above Transducer (ft)	---	Daily	10.18	10.58	10.65	10.43	10.34		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	164	164	164	164	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9	22.9 22 ⁷³	22.9	OFF		
		Water Level Above Transducer (ft)	---	Daily	32.40	32.38	32.51	32.41	37.95		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	175		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.0	23.1 23 ⁰⁴	23.0	18.5		
		Water Level Above Transducer (ft)	---	Daily	24.38	24.35	24.45	24.35	24.24		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	74	74	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.1	49.0	49.0 48 ⁹⁰	48.9	49.0		
		Water Level Above Transducer (ft)	---	Daily	15.57 / 36.4	15.42	15.60	15.39	15.34		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	364 420 1020 66	365	365	365	216		
		Totalizer (1000 gal)	---	Daily	0.39	420 524 106	421 126 150	421 497 418	422 008 038		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.39	0.39	0.39	0.39	0.13		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.39	0.39	0.48	0.39	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	244	245	245	245		
		Totalizer (1000 gal)	---	Daily	293 917 152	294 456 872	295 217 608	295 684 984	296 385 088		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.09	0.10	0.10	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	380	380	381	380	260		
		Totalizer (1000 gal)	---	Daily	472 393 048	472 933 328	473 707 280	474 184 936	474 866 592		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	262	260	263	260	260		
		Totalizer (1000 gal)	---	Daily	386 698 450	387 196 432	387 701 784	388 340 048	388 992 240		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	2.8	2.8	2.8	2.8	2.8		
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.65	56.38	56.42	56.29	56.29		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	2.80	2.77	3.33	3.55	3.81		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	46.44 46.45	46.43 46.53	46.52 46.50	46.77 46.94	47.30 47.35		
		Amperage (A, P112A B)	>10 A	Daily	11.0 11.1	11.0 11.1	11.0 11.1	11.1 11.2	8.5 8.6		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5.5	5.5	6	6	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	44.77 44.74	45.64 43.63	44.67 44.68	43.04 43.05	43.94 43.92		
		Amperage (A, P212A B)	>10 A	Daily	9.9 9.7	9.6 9.4	9.6 9.6	9.7 9.5	9.6 9.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5	8.5	4.9	5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.04	47.34	47.90	48.25	43.14		
		Amperage (A, P118)	>10 A	Daily	16.2	16.2	16.3	16.4	13.8		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.55	42.43	41.74	42.00	42.11		
		Amperage (A, P218)	>10 A	Daily	12.9	12.8	12.7	12.7	12.8		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	146,236.8	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	138.0	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	83,837.7	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	73.8	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	Car parked on cover	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	163.4	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	143,444.5	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	78	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	173.1	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	278,714.7	---	---		
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22.1	---	---			
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
GW flow (gpm)		0-800 gpm	Weekly	---	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

T2
BF diff.
press. 11.8
before
back
wash

AC 86°F
44.3 VFD
54.90 Hz
34.09 Amp
89°F Amb.

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/24/20	8/25/20	8/26/20	8/27/20	8/28/20	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 10:00	0730	1408	0853	1258		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	33.9	33.8	34.1	34.1	30		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.393	0.387	0.383	0.394	0.130		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.396	0.386	0.390	0.394	0.135		
		Sand filter differential pressure, SF-101 (2)	---	Daily	30	30	31	30	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	28	28	28	28	28		
		GW flow (gpm)	0-500 gpm	Daily	12.5	12.0	12.1	12.7	8.9		
		Totalizer (Mgal)	---	Daily	365.1	365.3	365.6	366.2	210.2		
		Bag filters changed?	yes/no	Daily	425.3927	425.8272	426.4442	426.8262	427.3425		
					No	No	No		No		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	38.8	35	37	35.3	35.5		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.093	0.072	0.095	0.092		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.125	0.124	0.129	0.126	0.127		
		Sand filter differential pressure, SF-201 (1)	---	Daily	37	37	36	34	34		
		Sand filter differential pressure, SF-201 (2)	---	Daily	36.5	32	42	34	32		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.7	15.8	15.0	15.5	15.0		
		GW flow (gpm)	0-500 gpm	Daily	245.2	245.1	245.7	245.2	245.2		
		Totalizer (Mgal)	---	Daily	371.8727	372.1485	372.5470	372.1878	373.1514		
		Bag filters changed?	yes/no	Daily	No	No	No		No		
					No	No	No		No		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.9	9.8	9.9	9.8	8.2		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.1	12.0	12.1	12.0	9.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	8.0	8.0	7.9	7.7		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	5.9	5.9	5.2	5.8	5.0		
		Between Tanks (psig)	0-20 psig	Daily	15.0	15.0	14.6	14.8	14.1		
		V-214B Pressure (psig)	0-20 psig	Daily	9.9	9.9	9.8	9.5	8.9		
		Which Tank is Lead?	---	Daily	B	B	B	A	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.5	24.6	24.5	24.1	21.1		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.91	19.94	19.85	19.86	19.32		
		GW flow (gpm)	0-500 gpm	Daily	380.0	380.8	380.7	380.7	259.8		
		Totalizer (Mgal)	---	Daily	440.6358	441.0720	441.6979	442.0775	442.5969		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.6	21.8	21.6	21.5	20.9		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.92	19.92	19.97	20.03	19.31		
		GW flow (gpm)	0-500 gpm	Daily	260.3	259.9	260.3	260.4	260.5		
		Totalizer (Mgal)	---	Daily	367.5495	367.8249	368.2172	368.4574	368.8171		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	Yes	No	No	Yes	No		
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	105	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	102	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes			
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	44	42	42	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.2	2.8	2.5	2.25	1.9		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.09	0.10	0.07	0.10			

Notes:

Backwash
T2

Manual Man.
BW
Train 2 T2

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/13/20 Time: 0731	8/14/20 0800	8/15/20 0754	8/16/20 0753	8/17/20 0829	8/18/20 1	8/19/20 1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	142	142	142	142	142		
		Wellhead Pressure (psig)	< 150 psig	Daily	65.7 65.69	65.5	65.4	65.6	65.5		
		Water Level Above Transducer (ft)	---	Daily	10.23	10.03	9.86	9.25	9.64		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	16.3	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	22.8	---	---	---		
		Water Level Above Transducer (ft)	---	Daily	38.1	32.44	37.83	37.85	37.72		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	175	174	175	176	175		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5 18.54	23.0	18.5	18.5	18.5		
		Water Level Above Transducer (ft)	---	Daily	24.14	27.17	23.89	23.82	23.69		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	73	73	73	73	73		
		Wellhead Pressure (psig)	< 150 psig	Daily	48.7 48.66	48.16	48.5	48.6	48.5		
		Water Level Above Transducer (ft)	---	Daily	15.24	15.19	15.07	14.97	14.78		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	36.5	210	210	210		
		Totalizer (1000 gal)	---	Daily	422786916	42352558	423550246	423633298	424124532		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.13	0.39	0.13	0.13	0.13		
	Influent Pump Skid (2)	Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.39	0.13	0.13	0.13		
		GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	298027048	298632704	299230152	299820912	300214242		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.13	0.13	0.12	0.15		
	Effluent Skid Pump (1)	Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.10	0.10	0.10		
		GW flow (gpm)	0-400 gpm	Daily	260	253 380	260	260	260		
		Totalizer (1000 gal)	---	Daily	476118208	476712752	477196449	477651632	478117944		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	253	257	260	261		
		Totalizer (1000 gal)	---	Daily	390516552	391078560	39163274	392182320	392738984		
		Pressure (psig)	0-120 psig	Daily	2.8	2.8	2.7	3.0	3.0		
	Injection Well 7	Water Level Above Transducer (ft)	10-30 ft	Daily	56.27	56.25	56.04	56.02	55.84		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.26	3.54	3.63	3.57	3.31		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	3972 3972	4626 4627	4003 4002	4030 4027	4074 4071		
		Amperage (A, P112A B)	>10 A	Daily	8.2 8.3	10.9 11.1	8.4 8.3	8.3 8.4	8.4 8.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	4.9	6.5	5	4.9	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	4274 4274	4357 4353	4558 4557	4568 4569	4391 4395		
		Amperage (A, P212A B)	>10 A	Daily	9.3 9.2	9.7 9.5	10.0 9.9	10.0 9.8	9.6 9.4		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5	7	10.2	4.9		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	4297	4872	4295	4305	4296		
		Amperage (A, P118)	>10 A	Daily	13.8	16.5	13.8	13.8	13.8		
		Frequency (Hz, P218)	>30 Hz	Daily	4253	4224	4214	4226	4180		
	Effluent Pump Skid (2)	Amperage (A, P218)	>10 A	Daily	13.0	12.8	12.8	12.9	12.7		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	147,2102	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	137.8	---	---	---	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	84,3515	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	73.1	---	---	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	Car Parked on cover						
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	193,8705	---	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	77.02	---	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	17512	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	299,9376	---	---	---	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	17.6	---	---	---	---		
Well Head		*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---		
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					8/31/20	9/1/20	9/2/20	9/3/20	9/4/20	10/1	10/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	29	34.5	29.1	29.5	30		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.132	0.392	0.133	0.132	0.131		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.134	0.392	0.135	0.131	0.133		
		Sand filter differential pressure, SF-101 (1)	---	Daily	28	30	28	28	29		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	28	27	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	7.7	11.5	7.9	7.9	7.5		
		GW flow (gpm)	0-500 gpm	Daily	210.4	365.5	210.2	210.4	210.2		
		Totalizer (Mgal)	428-0348	Daily	374.0050	428.4902	428.7783	429.0296	429.2880		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	33.5	36	38	40.3	37		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.094	0.090	0.093	0.092	0.093		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.127	0.125	0.125	0.121	0.124		
		Sand filter differential pressure, SF-201 (1)	---	Daily	31	34	36	38	34		
		Sand filter differential pressure, SF-201 (2)	---	Daily	31	32	33	32	34		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.0	15.0	15.1	15.9	15.0		
		GW flow (gpm)	0-500 gpm	Daily	244.3	245.1	245.7	245.1	245.9		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	374.0050	374.3205	374.6298	374.9380	375.2503		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.2	9.9	8.2	8.2	8.2		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.1	12.1	9.5	9.7	9.2		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.8	7.9	7.8	7.8	7.8		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	5.1	5.0	4.9	6.0	5.2		
	GAC (Train 2)	Between Tanks (psig)	0-20 psig	Daily	14.3	14.0	14.1	13.1	14.7		
		V-214B Pressure (psig)	0-20 psig	Daily	9.6	9.0	8.9	10.1	9.5		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	23.0	23.0	24	21.5	22.8		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	21.57	19.79	19.62	20.47	20.67		
		GW flow (gpm)	0-500 gpm	Daily	261.5	380.2	260.4	259.7	260.3		
		Totalizer (Mgal)	---	Daily	443.2903	443.7406	444.0383	444.2922	444.5514		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	23	21.9	21.1	22	22.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	21.54	17.88	17.55	20.45	21.47		
		GW flow (gpm)	0-500 gpm	Daily	261.0	259.9	260.3	260.0	260.7		
		Totalizer (Mgal)	---	Daily	369.8613	369.9704	370.2780	370.5831	370.8923		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6			
		Clarifier Discharged to Sump?	yes/no	Daily	Yes	No	No	No	Yes		
		Upstream Filter Pressure (psi)	>30 psig	Daily	105	>100	108	>100	105		
		Downstream Filter Pressure (psi)	>30 psig	Daily	102	>100	105	>100	102		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	43	43	43	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.55	2.2	1.9	3.2	2.8		
	Sodium Hypochlorite Generator	Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF			
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.11	0.09	0.10	0.09		

Notes:

0730
Train-2
BW

80 Volts
29 Amps
1.17 Brine Pumps ✓
72°F Water temp
104°F Oxidant temp
33 psi
21 GPH

T2
BW

24.0 °C VFD
92°F AC
71°F Am
54.83
34.85

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Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1/1	9/10/20	9/19/20	9/10/20	9/11/20	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	Time: 12:40	12:40	12:07	08:12	10:52		
		Wellhead Pressure (psig)	< 150 psig	Daily		65.1	65.2 65.2	65.3	65.8		
		Water Level Above Transducer (ft)	---	Daily		10.96	9.89	9.48	10.05		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily		163	163	163	163		
		Wellhead Pressure (psig)	< 150 psig	Daily		22.8	22.8 22.8	22.8	22.9		
		Water Level Above Transducer (ft)	---	Daily		32.79	32.12	31.89	31.85		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily		174	174	174	174		
		Wellhead Pressure (psig)	< 150 psig	Daily		23.0	23.0 23.0	23.0	23.0		
		Water Level Above Transducer (ft)	---	Daily		24.12	23.79	23.55	23.50		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily		72	72	72	74		
		Wellhead Pressure (psig)	< 150 psig	Daily		48.2	48.1 48.03	47.9	49.0		
		Water Level Above Transducer (ft)	---	Daily		15.27	15.16	14.88	17.27		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily		365	364	---	365		
		Totalizer (1000 gal)	---	Daily		426053332	426510774	426908122	427431300		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily		0.39	0.39	---	0.39		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily		0.39	0.39	---	0.39		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily		245	245	---	245		
		Totalizer (1000 gal)	---	Daily		301455529	301744996	301992727	302213269		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily		0.12	0.13	---	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily		0.09	0.09	---	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily		380	379	380	380		
		Totalizer (1000 gal)	---	Daily		480617032	481203587	481713904	482387464		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily		266	266	260	260		
		Totalizer (1000 gal)	---	Daily		395040204	395570960	396032928	396434552		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily		14.0	3.4	1.4	13.8		
		Water Level Above Transducer (ft)	10-30 ft	Daily		88.81	* 84.62	56.43	105.72		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily		4.10	3.39	3.54	3.02		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily		48.81 48.80	49.26 49.25	48.35 48.72	48.58 48.55		
		Amperage (A, P112A B)	>10 A	Daily		11.3 11.6	11.7 11.8	11.5 11.6	11.9 11.6		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily		9	9	9.9	10.5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily		43.71 43.71	47.91 47.91	45.47 45.46	44.90 44.88		
		Amperage (A, P212A B)	>10 A	Daily		9.6 9.6	10.4 10.2	10.0 9.8	9.9 9.6		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily		6	10.5	5	6		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily		48.45	48.23	47.92	48.08		
		Amperage (A, P118)	>10 A	Daily		16.4	16.3	16.2	16.4		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily		43.04	42.08	42.32	42.50		
		Amperage (A, P218)	>10 A	Daily		13.1	12.8	12.8	12.9		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly		---	147.0219 147.0217	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly		---	157.5	---	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly		---	85.3129	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly		---	72.0	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly		---	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly		---	163.1	---	---		
		Totalizer (Mgal)	---	Weekly		---	195.2786	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly		---	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly		---	173	---	---		
		Totalizer (Mgal)	---	Weekly		---	302.3304	---	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly		---	22.0	---	---		
		*Totalizer (1000 gal)	---	Weekly		---	---	---	---		
Well Head	KAFB-7	GW flow (gpm)	0-800 gpm	Weekly		---	---	---	---		
						---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Running to * Just changed to pond
6756 e3
Well 7

To Well 7

Ac 78°F
Amb 44°F
H2 54.76
Amps 33.81
VFD 18.4

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1/1	1/08/20	1/9/20	1/10/20	1/11/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: ↑	1236	1212	0905	1040		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily		36	40.5	36.5	37.5		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily		0.398	0.393	0.392	0.396		
		Sand filter differential pressure, SF-101 (1)	---	Daily		0.391	0.396	0.400	0.396		
		Sand filter differential pressure, SF-101 (2)	---	Daily		32	38	34	35		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily		28	32	28	28		
		GW flow (gpm)	0-500 gpm	Daily		12.6	12.1	17.121	13.2		
		Totalizer (Mgal)	---	Daily		365.2	365.5	365.7	365.8		
		Bag filters changed?	yes/no	Daily		431,2624	431,7352	432,1395	432,6761		
		Bag filters changed?	yes/no	Daily		No	No	No	No		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	↓	37	43.5	38	37.5		
		Bag filter differential pressure, F212A	<15 psid	Daily		0.092	0.094	0.090	0.091		
		Bag filter differential pressure, F212B	<15 psid	Daily		0.130	0.125	0.130	0.128		
		Sand filter differential pressure, SF-201 (1)	---	Daily		31	41	36	35		
		Sand filter differential pressure, SF-201 (2)	---	Daily		34	35	35	32		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily		15.6	15.6	15.2	14.9		
		GW flow (gpm)	0-500 gpm	Daily		244.7	245.0	245.3	244.8		
		Totalizer (Mgal)	---	Daily		376,5360	376,8363	377,0910	377,3193		
		Bag filters changed?	yes/no	Daily		No	No	No	No		
		Bag filters changed?	yes/no	Daily		No	No	No	No		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	↓	9.9	9.2	9.8	9.9		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily		12.1	12.0	12.1	12.1		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily		8.0	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily		A	A	A	A		
		Which Tank is Lag?	---	Daily		B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	↓	5.9	5.9	6.0	5.0		
		Between Tanks (psig)	0-20 psig	Daily		14.9	14.9	15.1	14.1		
		V-214B Pressure (psig)	0-20 psig	Daily		10.2	9.8	10.4	9.1		
		Which Tank is Lead?	---	Daily		B	B	B	B		
		Which Tank is Lag?	---	Daily		A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	Labor	24.1	24.1	23.9	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily		0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily		0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily		19.83	19.68	19.36	19.94		
		GW flow (gpm)	0-500 gpm	Daily		380.9	380.1	380.5	279.9		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	Labor	446,5297	447,0069	447,4112	447,9488		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily		21.5	21.5	21.1	21.8		
		Bag filter differential pressure, F-218A	<15 psid	Daily		0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily		0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily		19.35	19.64	19.37	19.82		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily	Labor	261.1	260.2	260.7	260.1		
		Totalizer (Mgal)	---	Daily		372,1626	372,4597	372,7113	372,9355		
		Clarifier Level (ft)	---	Daily		Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily		No	No	Yes	Yes		
		Upstream Filter Pressure (psi)	>30 psig	Daily		>100	108	>100	>100		
	Sodium Hypochlorite Generator	Downstream Filter Pressure (psi)	>30 psig	Daily	↓	>100	104	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily		Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily		43	44	44	46		
		Generator Faulted?	yes/no	Daily		No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily		3.0	2.7	2.45	2.15		
		Train 1 Dosing Pump Faulted?	yes/no	Daily		No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily		No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		0.09	0.08	0.09	0.12		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		0.09	0.08	0.09	0.12		

Notes:

↑ T2 backwash 2/19
TL manual Back Wash

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					9/14/20 Time: 0727	9/15/20	9/16/20	9/17/20	9/18/20	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	142	142	142	141	141		
		Wellhead Pressure (psig)	< 150 psig	Daily	65.2	65.2 8540	65.5	65.3	65.3		
		Water Level Above Transducer (ft)	---	Daily	9.48	9.58	9.68	9.68	9.67		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	162	162	162	163	162		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.8 2292	22.9	22.9	22.8		
		Water Level Above Transducer (ft)	---	Daily	31.86	31.77	31.8	31.80	31.77		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9 2305	23.0	23.0	23.0		
		Water Level Above Transducer (ft)	---	Daily	23.40	23.40	23.48	23.43	23.38		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	75	75	75	75	76		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.1	49.3 4927	49.4	49.6	49.9		
		Water Level Above Transducer (ft)	---	Daily	15.68	15.53	15.39	15.37	15.27		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	365	365	365	366		
		Totalizer (1000 gal)	---	Daily	428777844	429269770	429279636	430318980	430768070		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.40	0.39	0.39	0.39	0.34		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.39	0.39	0.39	0.39	0.40		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	246	246		
		Totalizer (1000 gal)	---	Daily	303069180	303385974	303692502	307056172	307343452		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.10	0.09	0.09	0.10		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	381	380	380	380	380		
		Totalizer (1000 gal)	---	Daily	484115808	484746320	485362592	486093832	486669152		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	261	260	260	260	260		
		Totalizer (1000 gal)	---	Daily	398016528	398598784	399163912	399832960	400185896		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	2.6	13.7	2.5	13.3	1.9		
		Water Level Above Transducer (ft)	10-30 ft	Daily	58.02	107.91	56.52	102.52	57.72		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.81	3.33	3.63	3.87	2.92		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	46.60 46.61	46.32 3633	46.70 46.68	46.69 46.63	47.34 47.28		
		Amperage (A, P112A B)	>10 A	Daily	10.9 11.1	10.8 11.0	10.9 11.1	11.0 11.1	11.1 11.3		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5.5	6	6	6.5	7		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	45.34 45.48	44.41 44.45	44.99 45.02	44.04 43.99	45.07 45.08		
		Amperage (A, P212A B)	>10 A	Daily	9.9 9.8	9.7 9.5	9.9 9.7	9.7 9.5	9.9 9.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10	5	8.5	5	5.1		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.45	48.20	48.53	48.37	47.55		
		Amperage (A, P118)	>10 A	Daily	16.3	16.2	16.3	16.3	16.1		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.02	42.69	42.27	42.64	41.71		
Amperage (A, P218)		>10 A	Daily	12.8	12.9	12.8	12.8	12.6			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	150,1724	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	137.1	---	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	85,8352	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	75.4	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	car parked on vault	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	163.1	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	196,6464	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	80 psi	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	173.2	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	303,6879	---	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	22.0	---	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

to
Well 7

to
Well 7

VFO 29.5
AC 76°F
54.55
H2 55.44
Amps 33.94
Amb. 71°F

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					9/14/20	9/15/20	9/16/20	9/17/20	9/18/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0720	0835	0909	1710	1312		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	34	33.5	34	34.5	35		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.392	0.392	0.392	0.390	0.388		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.395	0.392	0.394	0.398	0.397		
		Sand filter differential pressure, SF-101 (2)	---	Daily	29	29	30	30	31		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	28	28	28	28	28		
		GW flow (gpm)	0-500 gpm	Daily	12.0	12.1	12.3	12.6	12.6		
		Totalizer (Mgal)	---	Daily	365.8	365.2	365.4	365.7	365.3		
		Bag filters changed?	yes/no	Daily	434.0587	434.5641	435.0588	435.6429	436.1063		
					No	No	No	No	No		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	40	36.5	39	36	33.5		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.093	0.091	0.093	0.093	0.094		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.126	0.123	0.122	0.129	0.123		
		Sand filter differential pressure, SF-201 (1)	---	Daily	38	35	36	37	35		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	33	31	33	34		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	14.9	14.9	15.2	14.9	15.1		
		GW flow (gpm)	0-500 gpm	Daily	245.6	245.1	245.3	245.4	245.1		
		Totalizer (Mgal)	---	Daily	518.2027	518.5306	518.8489	519.2244	519.5226		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
					No	No	No	No	No		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.9	9.9	9.9	9.9	10.0		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.1	12.1	12.1	12.1	12.2		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	5.1	4.9	5.9	5.0	5.9		
		Between Tanks (psig)	0-20 psig	Daily	14.1	13.9	15.0	13.9	15.0		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	8.9	10.1	8.9	10.1		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.2	24.7	24.9	24.5	24.8		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.94	20.03	20.17	19.98	19.99		
		GW flow (gpm)	0-500 gpm	Daily	380.0	380.6	380.7	379.9	382.4		
		Totalizer (Mgal)	---	Daily	447.3429	447.8460	450.3376	450.9261	451.3941		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.9	21.9	21.9	21.7	22.0		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.02	20.04	20.07	19.97	19.92		
		GW flow (gpm)	0-500 gpm	Daily	260.7	260.5	260.4	260.8	259.8		
		Totalizer (Mgal)	---	Daily	373.8115	374.1246	374.4459	374.8180	375.1157		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	Yes	No		
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	102	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	45	44	45	44	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.8'	2.4'	2.1'	3.3'	2.95'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.09	0.09	0.09	0.09			

Notes:

T2
Backwashed
0933

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					9/12/20 Time: 0950	9/12/20 0801	9/12/20 0807	9/12/20 0805	9/12/20 0901	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	141	141	141	141	141		
		Wellhead Pressure (psig)	< 150 psig	Daily	65.3	65.1 65.38	65	65.0	65.3		
		Water Level Above Transducer (ft)	---	Daily	9.26	9.22	9.12	9.07	9.24		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	162	162	162	162	162		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.8	22.8 22.9	23	22.8	22.8		
		Water Level Above Transducer (ft)	---	Daily	31.72	31.74	31.71	31.71	31.71		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	174	174	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.0	23.0	23.0	22.9		
		Water Level Above Transducer (ft)	---	Daily	23.33	23.33 22.77	23.30	23.30	23.28		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	76	76	76	76	76		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.7	49.5 46.6	50	49.5	49.6		
		Water Level Above Transducer (ft)	---	Daily	14.88	14.83	14.83	14.71	14.78		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	365	365	365	365	365		
		Totalizer (1000 gal)	---	Daily	432,108,864	432,546,416	433,020,568	433,488,548	434,115,804		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.39	0.37	0.39	0.39	0.39		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.39	0.39	0.37	0.39	0.39		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	305,204,258	305,482,216	305,784,132	306,084,876	306,397,092		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.10	0.10		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	380	380	377	380	379		
		Totalizer (1000 gal)	---	Daily	448,390,560	448,953,088	449,562,168	450,162,152	450,786,736		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	259	260	260	260	260		
		Totalizer (1000 gal)	---	Daily	400,988,664	401,247,568	401,529,426	401,809,872	402,102,704		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	2.6	2.6	2.6	2.6	13.1		
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.17	56.15	56.14	56.12	45.43		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.42	3.48	3.83	4.03	3.13		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	46.77 46.73	47.11 47.37	46.52 46.52	46.90 46.92	47.65 47.75		
		Amperage (A, P112A B)	>10 A	Daily	10.9 11.2	11.1 11.4	9.6 9.7	11.0 11.2	11.20 11.40		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	7.5	9.0	9.0	9.2	9.5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	45.91 45.92	46.29 46.39	43.82 43.83	44.13 44.16	44.13 44.01		
		Amperage (A, P212A B)	>10 A	Daily	10.0 9.9	10.2 10.1	9.6 9.4	9.7 9.6	9.60 9.60		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9.9	11.0	5.0	5.0	7.0		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	47.60	48.21	47.93	48.37	48.19		
		Amperage (A, P118)	>10 A	Daily	16.00	16.5	16.2	16.4	16.30		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	41.90	42.41	41.92	42.96	43.36		
		Amperage (A, P218)	>10 A	Daily	12.8	13.0	12.7	13.0	13.00		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	151,5670	---	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	136.8	---	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	86,6095	---	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	75.9	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	* 95 ps.	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	162.1	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	198,300.1	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	80 ps.	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	162.4	172.9	---	---		
		Totalizer (Mgal)	---	Weekly	---	198,300.1	305,4457	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22.1	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
GW flow (gpm)		0-800 gpm	Weekly	---	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

* Cur
finally
moved
71 Amps
47.74 47.76
11.2 11.4

AC 78°F
VFD 36.8 °C
Amb 80°F
3392 Amps
55.45 Hz

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					9/21/20	9/22/20	9/23/20	9/24/20	9/25/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0939 35	0745 35.1	0755 36	0753 35.5	0855 36.0		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.390 0.072	0.395 0.072	0.390 0.072	0.394 0.072	0.393 0.072		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.391 0.072	0.392 0.072	0.395 0.072	0.398 0.072	0.397 0.072		
		Sand filter differential pressure, SF-101 (1)	---	Daily	32 32	32	32	32	32		
		Sand filter differential pressure, SF-101 (2)	---	Daily	32 32	28	28	27	27		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.4 15.2	11.9	12.0	12.1	12.0		
		GW flow (gpm)	0-500 gpm	Daily	365.5 245.1	365.5	365.7	365.3	365.5		
		Totalizer (Mgal)	---	Daily	487.0 380.4112	437.9300	438.4178	438.8969	439.4006		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	40.1	46.3	36.5	37	37		
	Influent Pump Skid (Train 2)	Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.095	0.099	0.091	0.091		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.125	0.126	0.121	0.125	0.125		
		Sand filter differential pressure, SF-201 (1)	---	Daily	32	39	35	35	35		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	33	33.5	30		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	15.2	15.2	14.9	15.2	15.1		
		GW flow (gpm)	0-500 gpm	Daily	245.1	245.4	245.2	245.5	246.1		
		Totalizer (Mgal)	---	Daily	380.4112	380.6787	381.0124	381.3220	381.6481		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.9	9.8	9.9	9.9	9.9		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.2	12.1	12.1	12.2	12.1		
	GAC (Train 1)	V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9	8.0		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	6.0	5.0	6.0	6.1		
	GAC (Train 2)	Between Tanks (psig)	0-20 psig	Daily	14.9	14.9	14.0	14.9	15.0		
		V-214B Pressure (psig)	0-20 psig	Daily	10.1	10.1	8.9	10.1	10.0		
		Which Tank is Lead?	---	Daily	B	B	A	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.1	25.2	24	25.1	24.9		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.37	21.12	19.47	20.72	20.02		
		GW flow (gpm)	0-500 gpm	Daily	380.2	380.7	380.6	380.2	380.3		
		Totalizer (Mgal)	---	Daily	452.7717	453.2284	453.7104	454.1736	454.6467		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.4	22.9	21.5	22.8	22.0		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.52	20.97	19.51	20.74	20.02		
		GW flow (gpm)	0-500 gpm	Daily	260.7	260.8	260.6	260.2	260.2		
		Totalizer (Mgal)	---	Daily	375.9923	376.2737	376.5836	376.8925	377.2144		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'		
		Clarifier Discharged to Sump?	yes/no	Daily	No	Yes	No	No	No		
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	43	43	42	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.1	3.4	3.0	2.7	2.35		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.09	0.09	0.09	0.09	0.10		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.09	0.09	0.09	0.09	0.10		

Notes:

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Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					9/12/20	9/12/20	9/13/20	10/11/20	1/1	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	Time: 10:10	080	0830	0847			
		Wellhead Pressure (psig)	< 150 psig	Daily	141	141	141	141			
		Water Level Above Transducer (ft)	---	Daily	65.0	65.1	65.2	65.1			
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	9.96	9.19	9.11	9.40			
		Wellhead Pressure (psig)	< 150 psig	Daily	162	162	162	162			
		Water Level Above Transducer (ft)	---	Daily	22.8	22.8	22.8	22.8			
	Well KAFB-106234	GW flow, FI-7002 (gpm)	0-200 gpm	Daily	31.36	31.36	31.46	31.48			
		Wellhead Pressure (psig)	< 150 psig	Daily	174	174	174	174			
		Water Level Above Transducer (ft)	---	Daily	23.0	22.9	23.0	23.0			
	Well KAFB-106239	GW flow, FI-7002 (gpm)	0-200 gpm	Daily	22.94	22.94	23.02	23.1			
		Wellhead Pressure (psig)	< 150 psig	Daily	76	76	76	76			
		Water Level Above Transducer (ft)	---	Daily	49.6	49.6	49.4	49.4			
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	14.37	14.45	14.42	14.60			
		Totalizer (1000 gal)	---	Daily	365	364	365	365			
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	436.075	436.587	437.217	437.666			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.39	0.39	0.39	0.39			
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	0.40	0.39	0.70	0.39			
		Totalizer (1000 gal)	---	Daily	245	245	245	244			
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	436.075	436.587	437.217	437.666			
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.13	0.13	0.13	0.12			
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	0.09	0.09	0.10	0.09			
		Totalizer (1000 gal)	---	Daily	380	380	380	380			
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	492.625	493.175	493.782	494.216			
		Totalizer (1000 gal)	---	Daily	261	259	260	260			
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	402.954	403.214	403.478	403.699			
		Water Level Above Transducer (ft)	10-30 ft	Daily	13.5	14.0	13.2	13.2			
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	108.47	113.53	113.67	56.66			
				Daily	8.74	3.61	2.87	2.75			
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.54	50.57	48.01	48.83			
		Amperage (A, P112A B)	>10 A	Daily	11.5	11.4	12.0	11.5			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10.5	11	11.1	11.5			
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	44.55	44.51	46.69	47.0			
		Amperage (A, P212A B)	>10 A	Daily	9.8	9.5	10.5	10.3			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5.1	10	11.5	5			
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.12	48.25	48.37	49.15			
		Amperage (A, P118)	>10 A	Daily	16.3	16.4	16.4	16.60			
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.80	43.08	42.54	44.97			
		Amperage (A, P218)	>10 A	Daily	12.9	13.0	12.9	13.6			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	152.7213	---	---	---			
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	136.7	---	---	---			
	KAFB-106239	Totalizer (Mgal)	---	Weekly	87.2437	---	---	---			
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	75.8	---	---	---			
	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	100.04	---	---	---			
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	161.9	---	---	---			
	KAFB-106234	Totalizer (Mgal)	---	Weekly	199.6688	---	---	---			
		Wellhead Pressure (psig)	< 150 psig	Weekly	79.01	---	---	---			
	Well Control House	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	172.9	---	---	---			
		Totalizer (Mgal)	---	Weekly	306.9097	---	---	---			
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22.1	---	---	---			
		*Totalizer (1000 gal)	---	Weekly	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

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VFD 22.3
AC 76°F
Amb 51°F
Hz 55.38
Amps 33.75

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	91281.20 Time: 0755	91291.20 0808	91301.20 0820	91311.20 0832	1	1	1
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.359	0.389	0.391	0.393			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.392	0.391	0.388	0.405			
		Sand filter differential pressure, SF-101 (1)	—	Daily	44	59	35	47			
		Sand filter differential pressure, SF-101 (2)	—	Daily	27.5	31	27.5	37.47			
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	13.0	12.0	12.1	11.9			
		GW flow (gpm)	0-500 gpm	Daily	365.6	365.1	365.2	365.4			
		Totalizer (Mgal)	—	Daily	440.8657	441.3107	441.7943	442.1397			
		Bag filters changed?	yes/no	Daily	No	No	No	No			
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	38	42	43.5	36			
	Influent Pump Skid (Train 2)	Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.091	0.093	0.093			
		Bag filter differential pressure, F212B	<15 psid	Daily	0.125	0.120	0.123	0.128			
		Sand filter differential pressure, SF-201 (1)	—	Daily	36	37	41	35			
		Sand filter differential pressure, SF-201 (2)	—	Daily	34	33	33	33			
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	19.8	14.9	15.1	17.9			
		GW flow (gpm)	0-500 gpm	Daily	245.0	245.5	245.5	245.7			
		Totalizer (Mgal)	—	Daily	332.5724	332.8775	333.1970	333.4158			
		Bag filters changed?	yes/no	Daily	No	No	No	No			
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.9	9.5	9.9	9.8			
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	12.2	12.1	12.2	12.1			
	GAC (Train 1)	V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9			
		Which Tank is Lead?	—	Daily	A	A	A	A			
		Which Tank is Lag?	—	Daily	B	B	B	B			
		V-214A Pressure (psig)	0-20 psig	Daily	5.5	5.5	6.0	4.9			
	GAC (Train 2)	Between Tanks (psig)	0-20 psig	Daily	14.1	14.1	14.9	13.9			
		V-214B Pressure (psig)	0-20 psig	Daily	9.8	9.7	10.1	8.9			
		Which Tank is Lead?	—	Daily	B	B	B	B			
		Which Tank is Lag?	—	Daily	A	A	A	A			
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.9	25.0	25.0	26.1			
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0			
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0			
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.22	20.38	20.53	21.74			
		GW flow (gpm)	0-500 gpm	Daily	380.8	380.3	380.8	380.3			
		Totalizer (Mgal)	—	Daily	456.1698	456.6143	457.1023	457.4803			
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	22	22.5	22.6	23.9			
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0			
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0			
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.24	20.34	20.43	21.71			
		GW flow (gpm)	0-500 gpm	Daily	260.6	260.9	260.4	260.7			
		Totalizer (Mgal)	—	Daily	378.1476	378.4325	378.7438	378.9652			
	Backwash System	Clarifier Level (ft)	—	Daily	2.26	2.26	2.26	2.26			
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	Yes	No			
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100			
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100			
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes			
		Generator Inlet Pressure (psi)	>30 psig	Daily	45	43	43	43			
		Generator Faulted?	yes/no	Daily	No	No	No	No			
		Oxidant Tank Level (ft)	>2 ft	Daily	2.9	2.6	2.3	2.05			
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No			
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No			
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF			
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.08	0.09	0.09			

Notes:

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WEEKLY INSPECTIONS AND RECORD FORMS

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PP	7-10-2020 1110
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓	✓	✓
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓	✓	✓
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PP	7-10-2020
Notes:			
Name: <i>Pete Ferraro</i> Signature: <i>Pete Ferraro</i>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PP	7-10-2020 1115
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) Flashing green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) 2 Green bars			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	7-10-2020
Notes:			
Name: <u>Pete Ferran</u> Signature: <u>Pete Ferran</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	7-13-2020
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

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Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>YES</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

Clarifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	✓	✓
Notes:			
Name: <i>Pete Ferraro</i> Signature: <i>Pete Ferraro</i>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	7-13-2020
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

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Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>YES</u>	✓		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	✓	✓
Notes:			
Name: <u>Pete Ferran</u> Signature: <u>Pete Ferran</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JRL	7/24/2020 0800
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes:			
Name: <u>JOSH LIVINGSTON</u> Signature: <u>[Signature]</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JRL	7/27/2020 0800
Feed pump seals free of leaks	↓		
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	↓		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks	↓		
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	↓		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	↓	↓
Notes:			
Name: <u>JOSH LIVINGSTON</u> Signature: <u>[Signature]</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	7-30-2020 1440
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)	Flashing green		
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed	✓		
Vent air from top of carbon beds	YES		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)	Flashing green		
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			
Name: <u>Pete Ferrans</u> Signature: <u>Peter Ferrans</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PK	7/29/2020 1450
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings <u>Yes</u>	↓	↓	↓
Notes: P-212B Radial 0.03 Horizontal 0.05 Axial 0.02 Temp 95°F			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	↓	↓
Pressure drop less than 15 psig for each bed	↓	↓	↓
Vent air from top of carbon beds <u>Yes</u>	↓	↓	↓
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	↓	↓	↓
Treated water discharge pump seal free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®)	↓	↓	↓
Oil reservoir for feed pump full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings <u>Yes</u>	↓	↓	↓
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	↓	↓	↓
Notes:			
Name: <u>Pete Ferraro</u> Signature: <u>Pete Ferraro</u>			

Form 16
Weekly Inspection
Kirtland AFB GWTS

Train 1

Groundwater Feed (tank, feed pumps and pre-filter)	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks	<i>Good</i>	<i>PF</i>	<i>8-7-20 1030</i>
Feed pump (P-112 A/B) seals free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Pump vibration normal <i>silent / flashing green</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>
Oil reservoir for feed pumps full	<i>↓</i>	<i>↓</i>	<i>↓</i>
Pump oil has been changed within last 90 days	<i>↓</i>	<i>↓</i>	<i>↓</i>
Filter housing (F-112 A/B) gaskets free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Filter differential pressure less than 15 psi	<i>↓</i>	<i>↓</i>	<i>↓</i>
Vent air from top of Filter housings <i>Yes</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>

Carbon Adsorbers	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Pressure drop less than 15 psig for each bed	<i>↓</i>	<i>↓</i>	<i>↓</i>
Vent air from top of carbon beds <i>YES</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>

Treated water discharge (tank, feed pumps and post-filter)	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Treated water discharge pump (P-118) seal free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Pump vibration normal <i>silent / flashing green</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>
Oil reservoir for feed pump full	<i>↓</i>	<i>↓</i>	<i>↓</i>
Pump oil has been changed within last 90 days	<i>↓</i>	<i>↓</i>	<i>↓</i>
Filter housing (F-118 A/B) gaskets free of leaks	<i>↓</i>	<i>↓</i>	<i>↓</i>
Filter differential pressure less than 15 psi	<i>↓</i>	<i>↓</i>	<i>↓</i>
Vent air from top of Filter housings <i>Yes</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>

clarifier - free of leaks, bag filter is in good shape, operating fine

Peter Luman

Form 16
Weekly Inspection
Kirtland AFB GWTS

Train 2

Groundwater Feed (tank, feed pumps and pre-filter)	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks	Good	PF	8-7-20 1035
Feed pump (P-112 A/B) seals free of leaks			
Pump vibration normal <i>latent 2 Green bars</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing (F-112 A/B) gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of Filter housings <i>Yes</i>			

Carbon Adsorbers	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			

Treated water discharge (tank, feed pumps and post-filter)	condition	inspected by	date - time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump (P-118) seal free of leaks <i>(slight drip)</i>			
Pump vibration normal <i>latent / flashing green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing (F-118 A/B) gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of Filter housings <i>Yes</i>			

Peter J. [Signature]

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	8-14-2020 11:50
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			

Peter J. Jones 8-14-2020

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<u>Good</u>	<u>PF</u>	<u>8-14-2020 1200</u>
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<u>✓</u>	<u>✓</u>	<u>✓</u>
Notes:			

Peter J. ... 8-14-2020

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	8/21/2020 1045
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	
Notes:			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?		PF	✓

Name: <i>Pete Ferran</i>	Signature: <i>Pete Ferran</i>
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	8/24/2020 1055
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) 2			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓		
Notes:			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?		✓	✓

Name: <u>Pete Ferraro</u>	Signature: <u>Pete Ferraro</u>
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	RF	8-27-2020 1140
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) Flashing green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) Flashing green			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?	Yes	✓	✓

Name: Pete Furrant	Signature: Pete Furrant
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	8-27-2020 1150
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<u>Yes</u>		
Notes:			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?	<u>Yes</u>	☒	☒

Name:	Signature:
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PIF	9-2-20 0930
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes: <u>Slight oil drip at</u>			

Clarifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes: <u>change clarifier drain filter</u>			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?	<u>Yes</u>	<u>✓</u>	<u>✓</u>

Name: <u>Pete Ferran</u>	Signature: <u>Pete Ferran</u>
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-2-2020 0940
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)	Flashing Green		
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds	Yes		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)	Flashing Green		
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes: changed claw for drain filter			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?	Yes		

Name: <u>Pete Ferraro</u>	Signature: <u>Pete Ferraro</u>
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-11-2020 1755
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) Flashing Green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		9-11-2020
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) Flashing Green			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Caltrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes: Manual BW for weekend			

Influent Basket Strainers (answer on one page only)	Yes/No	Inspector	Date/Time
Have the influent basket strainers been cleaned this week?	Yes		

Name: Pete Ferran	Signature: Pete Ferran
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-11-2020 1205
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green Beers</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing Green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes: <u>Slight drip near seal of bearing frame</u>			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes:			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<u>Good</u>	<u>PF</u>	<u>9-15-2020 1251</u>
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing Green</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing Green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<u>OK</u>	<u>✓</u>	<u>✓</u>
Notes:			

Pete FurrarPete Furrar

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-15-2020
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green Boxes</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

1300

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>1 Flashing Green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes: <u>Slight drip re-seal of bearding frame</u>			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			

Pete Ferran

Peter Luvann

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<i>Good</i>	<i>PR</i>	<i>9-23-2020</i>
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) / <i>Flashing green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

1240

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) / <i>Flashing Green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	<i>✓</i>	<i>✓</i>	<i>✓</i>
Notes:			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-25-2020 1250
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>2 (1) Flashing Green</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes: <u>slight oil drip at heavy frame rear seal,</u>			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-29-2020 1500
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) Flashing green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) Flashing Green			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			

Peter Zeman

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	9-29-2020 1510
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) 2 Green bars			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) 1 Flashing Green			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			

Peter J. [Signature]

MONTHLY INSPECTIONS AND RECORD FORMS

Monthly Operation and Maintenance Inspections
Vaults

Wellhead Vault KAFB-106228	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF/SRL	7-29-2020 0800
Air relief valve (ARV-3005) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3002) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Locks on electrical shed and panels intact	↓	↓	↓
Valve Vault KAFB-106228 (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	7-29-2020 1025
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3003) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106233	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	7-29-2020 0950
Air relief valve (ARV-4001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-4001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106234	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	7-29-2020 0920
Air relief valve (ARV-5001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-5001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Air Release Valve Vault - Eastern Avenue Pumped vault	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF/SRL	7-29-2020 0910
Air relief valve (ARV-6001 and ARV-6002) outlets clear	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓
Vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106239 Pumped vault	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	7-29-2020 0825
Pressure in double wall pipe interstitial space (PI-7001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Junction Vault KAFB-106239 (Ridgecrest inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	7-14-2020 1515
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Well Control House (WCH) - Gibson Avenue (inside base fence)	Condition	Inspected by	Date/Time
WCH dry and free of debris	Good	PF	7-29-2020 0745
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead.	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/3RL	7-29-2020 1025
Air relief valve (ARV-8001) outlet clear	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion			
Electrical cables intact			
Air Relief Valve Vaults on Discharge line (on base)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	7-14-2020 1350-1500
Air relief valve outlets clear	"	↓	" "
KAFB Well 7 Wellhead - Done pressure test 7-14-2020 good to singer valve	Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris	Good	PF	7-14-2020 1500-1800
Air relief valve (ARV-9012) outlet clear	Good		
V-Smart valve hydraulic oil reservoir full	NA	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	Good		
Electrical cables intact	Good		
Filter pressure reading within green on dial	NA		
Oil temperature between 90-110 degrees Farenheit	NA		
Oil clear and without solids	NA	↓	↓
Golf Course Main Pond	Condition	Inspected by	Date/Time
GCMP water level consistent with HMI	Good	PF	7-14-2020 1300
Discharge line clear of obstruction(s)	↓	↓	

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: <i>Pete Ferraro</i>	<i>7-29-2020</i>										
Flowmeter Inspection Items	FIT- 3001	FIT- 7001	FIT- 7002	FIT- <i>239</i>	FIT- 3102	FIT- 3108	FIT- 3202	FIT- 3208	FIT- 3120	FIT- 3120	KAFB-7
Flow reading operational	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>
PLC totalizer functional	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>
No moisture in readout	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>
Free of mechanical damage	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>
Readings consistent with past operations	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discharged to the truck bay.
FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7.

V-Cone inspected 7-14-2020

Monthly Operation and Maintenance Inspections
Vaults

Wellhead Vault KAFB-106228 wellhead vault dry and free of debris Air relief valve (ARV-3005) outlet clear Pressure in double wall pipe interstitial space (PI-3002) is near zero after vent valve is opened for 2 minutes and then closed Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact Locks on electrical shed and panels intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 0900
Pipes appear to be sweating, moisture on floor			
Valve Vault KAFB-106228 (Louisiana inside base fence) Vault dry and free of debris Air relief valve (ARV-3008) outlet clear Pressure in double wall pipe interstitial space (PI-3003) is near zero after vent valve is opened for 2 minutes and then closed Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 1035
Dry			
Wellhead Vault KAFB-106233 Vault dry and free of debris Air relief valve (ARV-4001) outlet clear Pressure in double wall pipe interstitial space (PI-4001) is near zero after vent valve is opened for 2 minutes and then closed Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 0935
Car parked on north cover			
Wellhead Vault KAFB-106234 Vault dry and free of debris Air relief valve (ARV-5001) outlet clear Pressure in double wall pipe interstitial space (PI-5001) is near zero after vent valve is opened for 2 minutes and then closed Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 1000
Air Release Valve Vault - Eastern Avenue wellhead vault dry and free of debris Air relief valve (ARV-6001 and ARV-6002) outlets clear Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables intact Vault cover and seals intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 1030
Wellhead Vault KAFB-106239 Vault dry and free of debris Pressure in double wall pipe interstitial space (PI-7001) is near zero after vent valve is opened for 2 minutes and then closed Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 0930
9105			
Junction Vault KAFB-106239 (Ridgecrest inside base fence) Vault dry and free of debris Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables, vault cover and seals intact	Condition Good	Inspected by PF	Date/Time 8/19/2020 1010
Well Control House (WCH) - Gibson Avenue (inside base fence) WCH dry and free of debris Air relief valve (ARV-3008) outlet clear Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead. Piping, valves and electrical boxes are free of leaks and external corrosion Electrical cables intact	Condition Good	Inspected by PF/SRL	Date/Time 8/18/2020 0830
Retrieve 5 gallon bucket weekly			

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence)	Pumped Vault, rain water	Condition	Inspected by	Date/Time
Vault dry and free of debris		Good	PF/SRL	8/18/2020 1035
Air relief valve (ARV-8001) outlet clear		↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion				
Electrical cables intact				
Air Relief Valve Vaults on Discharge line (on base)	Close ARV #3, leaking consistently	Condition	Inspected by	Date/Time
Vault dry and free of debris		Good	PF	8/19/20 0900-1000
Air relief valve outlets clear		"	↓	↓
KAFB Well 7 Wellhead		Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris		Good	PF	8/19/2020 0945
Air relief valve (ARV-9012) outlet clear		Good	↓	↓
Smart valve hydraulic oil reservoir full	Singer Valve	Good		
Piping, valves and electrical boxes are free of leaks and external corrosion		Good		
Electrical cables intact		Yes		
Filter pressure reading within green on dial		N/A		
Oil temperature between 90-110 degrees Farenheit		N/A		
Oil clear and without solids		N/A	↓	↓
Golf Course Main Pond		Condition	Inspected by	Date/Time
GCMP water level consistent with HMI		Good	PF	8/19/2020 0845
Discharge line clear of obstruction(s)		"	"	"

Pete Ferrani, Peter L. ...

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: 08/18/2020 PF/SRL		Flowmeters									
Flowmeter Inspection Items	FIT- 3001	FIT- 7001	FIT- 7002	FIT- 239	FIT- 3102	FIT- 3108	FIT- 3202	FIT- 3208	FIT- 3120	FIT- 3120	KAFB-7
Flow reading operational	Good	Good	Good	Good	Good	Good	Good	Good	Good		Good
PLC totalizer functional	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
No moisture in readout	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
Free of mechanical damage	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
Readings consistent with past operations	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓

overstates gpm by ~ 15 gpm

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discahrged to the truck bay.
FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7.

Name: Rede Ferrari	Signature: Pete Zanoni
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Monthly Operation and Maintenance Inspections
Vaults

Wellhead Vault KAFB-106228	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris <i>Moisture in vault directly under pipe / might be condensation</i>	<i>Good</i>	<i>PF/SRL</i>	<i>9-11-2020 9-17-2020 0815</i>
Air relief valve (ARV-3005) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3002) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Locks on electrical shed and panels intact	↓	↓	↓
Valve Vault KAFB-106228 (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	<i>Good</i>	<i>PF</i>	<i>9-11-2020 1030</i>
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3003) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106233	Condition	Inspected by	Date/Time
Vault dry and free of debris	<i>Good</i>	<i>PF/SRL</i>	<i>9-17-2020 1020</i>
Air relief valve (ARV-4001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-4001) is near zero after ventvalve is opened for 2 minutes and then closed <i>- Cor on vault</i>	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106234	Condition	Inspected by	Date/Time
Vault dry and free of debris	<i>Good</i>	<i>PF/SRL</i>	<i>9-17-2020 11:00</i>
Air relief valve (ARV-5001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-5001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Air Release Valve Vault - Eastern Avenue	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris <i>Pumped vault 9-11-2020</i>	<i>Good</i>	<i>PF</i>	<i>9-11-2020 1000</i>
Air relief valve (ARV-6001 and ARV-6002) outlets clear	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓
Vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106239 <i>Pumped vault subs 9-11-2020</i>	Condition	Inspected by	Date/Time
Vault dry and free of debris	<i>Good</i>	<i>PF/SRL</i>	<i>9-17-2020 0950</i>
Pressure in double wall pipe interstitial space (PI-7001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Junction Vault KAFB-106239 (Ridgecrest inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris <i>Small amt - water due to rain, not enough to pump</i>	<i>Good</i>	<i>PF</i>	<i>9-10-2020 1300</i>
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Well Control House (WCH) - Gibson Avenue (inside base fence) <i>Retrieve 5 gallon bucket every 2 changes</i>	Condition	Inspected by	Date/Time
WCH dry and free of debris	<i>Good</i>	<i>PF</i>	<i>9-11-2020 0830</i>
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead.	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	9-10-2020 1030
Air relief valve (ARV-8001) outlet clear	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓
Air Relief Valve Vaults on Discharge line (on base)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	9-10-2020 11:40-12:40
Air relief valve outlets clear	↓	"	"
KAFB Well 7 Wellhead	Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris	Good	PF	9-10-2020 1205
Air relief valve (ARV-9012) outlet clear	Good	↓	↓
V-Smart valve hydraulic oil reservoir full	NA	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	Good/OK	↓	↓
Electrical cables intact	Good	↓	↓
Filter pressure reading within green on dial	NA	↓	↓
Oil temperature between 90-110 degrees Farenheit	NA	↓	↓
Oil clear and without solids	NA	↓	↓
Golf Course Main Pond	Condition	Inspected by	Date/Time
GCMP water level consistent with HMI	Good	PF	9-10-2020 1219
Discharge line clear of obstruction(s)	"	"	"

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: 9-11-2020 PF	Flowmeters										
Flowmeter Inspection Items	FIT- 3001	FIT- 7001	FIT- 7002	FIT-239	FIT- 3102	FIT- 3108	FIT- 3202	FIT- 3208	FIT- 3120	FIT- 3120	KAFB-7
Flow reading operational	Good	Good	Good	Good	Good	Good	Good	Good	Good	PF	Good
PLC totalizer functional	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
No moisture in readout	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Free of mechanical damage	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Readings consistent with past operations	*↓	↓	↓	↓	↓	↓	↓	↓	↓	*↓	↓

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS. → * GPM at well at HMI have been dropping

FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.

FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.

FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.

FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.

FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discahrged to the truck bay.

FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7. * showing 18.73 GPM more than FE/FIT3202 + 3208

V-Lone digital digital

Pete Ferran Peter Ferran

WEEKLY YARD INSPECTIONS

Weekly Yard Inspection - KATO OFF Project				
Inspected by:	Pete Ferrari			
Date:	07/02/2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are oil flammables stored in the appropriate cabinet?	☐	☒	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☒	
Are the BA vehicles and compressors free of leaks or spillage?	☐	☒	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	No time to fight back
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (slip, trip, fall, etc.)	☒	☒	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☒	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - (KAB BFF Project)				
Inspected by:	Reto Ferrer			
Date:	7-10-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom outdoors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clean of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway/intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (railer, refrigerator, etc.)	☐	☐	☐	

Weekly Yard Inspection - (AFB BFF) Project				
Inspected by:	Pete Ferraro			
Date:	7-16-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eye wash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☐	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☐	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☐	☐	☐	
Are the BA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☐	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, slip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - Kirtland AFB BFF Project				
Inspected by	J Livingston			
Date	7/22/2020			
Safety Information				
Is emergency contact information in place and up to date?	Yes	No	NA	Corrective Action Taken
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	Comments
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☒	☐	☐	
Containment				
Are all flammables stored in the appropriate cabinet?	Yes	No	NA	Comments
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the SA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness				
Is the yard free of trash?	Yes	No	NA	Comments
Is the yard free of weeds?	☒	☐	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality				
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	Yes	No	NA	Comments
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the endorsed fence upright and intact?	☒	☐	☐	
Are all tools smooth and functional? (mallet, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - IAW BFF Project				
Inspected by	Date			
	Peti Ferran			
	7-31-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	Need to add Amy Rosebrough
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	Getting bad
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clean and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☐	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Structural Integrity	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - ICAFF BFF Project				
Inspected by	Pete Ferrar			
Date	8-7-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	Some removal this week Getting back
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (pile, trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (radiator, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - IAW BFF Project				
Inspected by:	Pete Farrar			
Date:	8-14-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☐	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	Started cutting sections
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☐	☐	☐	
Is the enclosed fence upright and intact?	☐	☒	☐	
Are all locks smooth and functional? (millar, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - (KAFB BFF Project)					
Inspected by:	Pete Ferraro				
Date:	8-21-2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐		
Are flammable storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the IDW storage area?	☐	☐	☒		
Cleanliness	Yes	No	NA		Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐		
Are the portable restroom containers free of leaks or spillage?	☒	☐	☐		
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☐	☒	☐		cut more today
Is all equipment clear of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐		
Are all IDW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - (KIRLAND AFB) Project				
Inspected by:	Pete Ferraro			
Date:	8/28/2020			
Safety Information				
Is emergency contact information in place and up to date?	Yes	No	NA	Corrective Action Taken
Are signs present for emergency safety equipment? (eye wash, fire extinguisher, etc.)	☒	☐	☐	Comments
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Confineement				
Are all flammables stored in the appropriate cabinet?	Yes	No	NA	Comments
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness				
Is the yard free of trash?	Yes	No	NA	Comments
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☐	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality				
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	☒	☐	☐	Comments
Is the gravel driveway/intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☐	☒	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - KAFB BFF Project				
Inspected by:	Pete Ferranti			
Date:	9-4-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	Cutting as time permits
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, trip, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (railer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - (KIA ODFP) Project				
Inspected by	Date			
	Pete Ferrari 9-11-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	Comments
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IOW storage area?	☐	☐	☒	
Environmental	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	Comments
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	Comments
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IOW yard?	☒	☐	☐	
Are all IOW yard signs in place and upright?	☒	☐	☐	
Accessibility	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (pile, trip, fall, etc.)	☒	☐	☐	Comments
Is the gravel driveway/intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (millar, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - (UJA BFF Project)					
Inspected by	Pete Ferran				
Date	9-18-2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eye wash, fire extinguisher, etc.)	☒	☐	☐		
Are flammable storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the HW storage area?	☒	☐	☒		
Containment	Yes	No	NA		Comments
Are all chemicals stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐		
Are the portable refrigerators free of leaks or spillage?	☒	☐	☐		
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☐	☒	☐		
Is all equipment clear of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the HW yard?	☒	☐	☐		
Are all HW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (trip, slip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (millar, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - ICA/B BFF Project					
Inspected by:		Pete Ferrari			
Date:		9-23-2020			
Safety Information		Yes	No	NA	
Is emergency contact information in place and up to date?		☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)		☒	☐	☐	
Are flammable storage signs in place and legible?		☒	☐	☐	
Is caution tape in tact around the IDW storage area?		☐	☐	☒	
Cold Storage		Yes	No	NA	
Are all flammables stored in the appropriate cabinet?		☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spills?		☒	☐	☐	
Are the portable restroom containers free of leaks or spills?		☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spills?		☒	☐	☐	
Cleanliness		Yes	No	NA	
Is the yard free of trash?		☒	☐	☐	
Is the yard free of weeds?		☐	☒	☐	
Is all equipment clear of the yard and put away?		☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?		☒	☐	☐	
Are all IDW yard signs in place and upright?		☐	☒	☐	
Functionality		Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)		☒	☐	☐	
Is the gravel driveway intact for vehicle access?		☒	☐	☐	
Is the enclosed fence upright and intact?		☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)		☒	☐	☐	

Extraction Well Filter Pack Tagging Table

Filter Pack Tagging						
Well		KAFB-106228	KAFB-106233*	KAFB-106234	KAFB-106239	Notes
January	Date/Time	01/29/2020 0815	01/29/2020 0926	01/29/2020 0954	01/29/2020 0844	
	WL Depth (ft)	463.24	437.02	453.61	465.74	
	Filter Pack Depth (ft)	418.88	419.88	429.52	432.09	
February	Date/Time	02/07/2020 1120	02/07/2020 1210	02/07/2020 1238	02/07/2020 1147	
	WL Depth (ft)	462.3	436.85	453.4	465.60	
	Filter Pack Depth (ft)	418.87	419.87	429.52	432.07	
March	Date/Time	3/25/2020 0821	3/25/2020 0913	3/25/2020 0941	3/25/2020 0846	
	WL Depth (ft)	462.50	436.3	452.82	464.51	
	Filter Pack Depth (ft)	418.92	419.77	429.52	432.00	
April	Date/Time	04/03/2020 0804	04/03/2020 0914	04/3/2020 0956	04/03/2020 0838	Used interface probe as tape measure
	WL Depth (ft)	462.6	436.38	453.05	464.84	
	Filter Pack Depth (ft)	418.72	419.68	429.52	431.84	
May	Date/Time	5/21/2020 0802	5/21/2020 0848	5/21/2020 0916	5/21/2020 0822	
	WL Depth (ft)	463.90	441.97	453.23	465.97	
	Filter Pack Depth (ft)	418.94	419.89	429.52	432.02	
June	Date/Time	6/11/2020 0820	6/11/2020 0912	6/11/2020 0940	6/11/2020 0855	
	WL Depth (ft)	464.92	442.40	453.75	466.08	
	Filter Pack Depth (ft)	418.82	419.8	429.52	431.96	
July	Date/Time	7/29/2020 0835	7/29/2020 0937	7/29/2020 0921	7/29/2020 0910	
	WL Depth (ft)	465.01	443.17	455.00	466.25	
	Filter Pack Depth (ft)	418.92	419.72	429.52	431.97	
August	Date/Time	8/18/2020 0801	8/18/2020 0923	8/18/2020 0950	8/18/2020 0833	
	WL Depth (ft)	465.71	443.91	456.25	467.68	
	Filter Pack Depth (ft)	419.07	419.72	429.52	432.15	
September	Date/Time	9/17/2020 0804	9/17/2020 0854	9/17/2020 0918	9/17/2020 0831	
	WL Depth (ft)	466.8	444.67	457.29	467.85	
	Filter Pack Depth (ft)	418.73	419.70	429.40	432.00	Filter pack depth measurements are now made with Solinst Tag Line 351978
October	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
November	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
December	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
bgs = below ground surface		Bottom of Silver mark (ft) =				429
ft = feet		Red mark (ft) =				429.62
NM = not measured		Yellow mark (ft) =				429.28
* On October 22, 2019, KAFB-106233 was turned offline to facilitate injection into KAFB-7 until KAFB-7 could be rehabilitated.		Filter pack tagging tool reference points				
Rehabilitation pending.						

SHUTDOWN LOGS

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
9/14/20	1048	9/14/20	1109	YES ☒ NO ☐	233	change effluent strainers	PF
9/14/20	1343	9/14/20	1344	YES ☒ NO ☐	T1 449.4629 T2 373.8935 Well 7 7397.000	change to Well 7	PF
9/15/20	1315	9/15/20	1317	YES ☒ NO ☐	T1 449.9380 T2 374.1928 Well 7 8206.000	change to Pond GCMP	PF
9/17/20	0747	9/17/20	0749	YES ☒ NO ☐	T1 450.7950 T2 374.7371 Well 7 8206.000	change to Well 7	PF
9/18/20	1025	9/18/20	1026	YES ☒ NO ☐	T1 451.451.334 T2 375.0766 Well 7 9123.000	change to GCMP	PF H41 2.87 - 2.89 Rod 1.57
9/24/20	1027	9/24/20	1030	YES ☒ NO ☐	T1 454.2458 T2 376.9260 Well 7 9123.000	change to Well 7	PF
9/25/20	0907	9/25/20	0909	YES ☒ NO ☐	T1 454.704 T2 377.2151 Well 7	Change to GCMP	JRL
9/27/20	0807	9/27/20	0809	YES ☒ NO ☐	T1 455.6469 T2 377.5180 Well 7 9899.000	Change to Well 7	JRL
9/28/20	1452	9/28/20	1454	YES ☒ NO ☐	T1 456.2652 T2 378.2094 Well 7 10940.000	change to GCMP	PF (10940) 1041.000
9/29/20	0732	9/29/20	0733	YES ☒ NO ☐	T1 456.6030 T2 378.4235 Well 7 10940.000	change to Well 7	PF (10940) 1041.000
7/30/20	1155	7/30/20	1854	YES ☒ NO ☐	T1 457.1719 T2 378.7876 Well 7 11910.000	IN2 Pump steps test change to GCMP	PF 1191.000
10/1/20	0850			YES ☒ NO ☐		IN2 PUMP TEST	PF
				YES ☒ NO ☐			PF
				YES ☒ NO ☐			
				YES ☒ NO ☐			

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
8-15-2020	1614	8-15-2020	1639	YES ☒ NO ☐	T1 436,9221 T2 365,2117 Well 7 4638,000	change to GCMP	DS
8-19-2020	1537	8-19-2020	1559	YES ☒ NO ☐	T1 438,3670 T2 366,1213 Well 7 4638,000	change to Well 7	PF
8-20-2020	0721	8-20-2020	0749	YES ☒ NO ☐	T1 438,6797 T2 366,3184 Well 7 5162,000	change to Pond	PF
8-20-20	0833 1025	9-20-20	1023	YES ☒ NO ☐		Test auto valves to	PF
8-22-20	1728	8-22-20	1729	YES ☒ NO ☐	T1 439,8098 T2 367,0308 Well 7 5162,000	change to Well 7	PF
8-23-20	1153	8-23-20	1157	YES ☒ NO ☐	T1 440,1868 T2 367,2654 Well 7 5162,000	change to GCMP	PF
8/28/20	0744	8/31/20	1214	YES ☐ NO ☒	233	Pond is getting high	PF
9/1/20	1221	9/4/20	1327	YES ☐ NO ☒	233	Pond getting high	PF
9/8/20	0731	9/8/20	0732	YES ☒ NO ☐	T1 446,4241 T2 372,10980 Well 7 5784,000	change to Well 7	PF
9/9/20	1200	9/9/20	1202	YES ☒ NO ☐	T1 447,0007 T2 372,4556 Well 7 6756,000	change to GCMP	PF
9/10/20	0843	9/11/20	0751	YES ☐ NO ☒	239	Disinfect 239	PF
9/10/20	1511	9/10/20	1514	YES ☒ NO ☐	T1 447,5545 T2 372,7738 Well 7 6756,000	change to Well 7	PF
9/11/20	0809	9/11/20	0915	YES ☐ NO ☒	228	Run disinfectant water 239 to Ext sump	PF
9/11/20	1236	9/11/20	1238	YES ☐ NO ☐	T1 447,9849 T2 372,9604 Well 7 7397,000	change to GCMP	PF

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
7/22/20	0735	7/22/20	0740	YES ☒ NO ☐	T1: 424.5836 T2: 357.4631 Well 7 1,533,000	Changeover to GCMP	JRL
7/22/20	1048	7/22/20	1140	YES ☒ NO ☐		Shutdown for tour	JRL
7/29/20	1339	7/29/20	1343	YES ☐ NO ☒	228 ONLY	228 Failed	PF
7/30/20	1603	7/30/20	1617	YES ☒ NO ☐	T1 428.6575 T2 360.0278 Well 7 1,533,000	Change to Well 7	PF
7/31/20	0645	7/31/20	0658	YES ☒ NO ☐	T1 428.4522 T2 360.2137 Well 7 2,034,000	Change to GCMP	PF
8/3/20	1338	—	—	YES ☐ NO ☒	239	AC temp. controller not working	PP
—	—	8/3/20	1527	YES ☐ NO ☒	239	sensor put in battery location at reassembly	PF
8/3/20	1552	8/3/20	1555	YES ☒ NO ☐	T1 430.6032 T2 361.2441 Well 7 2,034,000	Change to Well 7	PF
8/4/20	1453	8/4/20	1515	YES ☒ NO ☐	T1 431.0710 T2 361.5384 Well 7 2,722,000	Change to GCMP	PF
8/6/20	1507	8/6/20	1522	YES ☐ NO ☒	T1 432.0493 T2 362.1523 Well 7 2,722,000	Change to well 7	PF
8/7/20	0719	8/7/20	0730	YES ☐ NO ☒	T1 432.3757 T2 362.3560 Well 7 3,272,000	Change to GCMP	PF
8/11/20	1454	8/11/20	1510	YES ☐ NO ☒	T1 434.4784 T2 363.6778 Well 7 3,272,000	Change to Well 7	PF
8/12/20	0749	8/12/20	0815	YES ☐ NO ☒	T1 434.8210 T2 363.8924 Well 7 3,848,000	Change to GCMP	PF
8/15/20	1625	8-15-2020	8/17/20	YES ☒ NO ☐	T1 436.4504 T2 364.9167 Well 7 3,848,000	Change to well 7	DS

1.70 Rod
3.08 HML

1.82 3.05 AMI

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
7/14/20	1118	7/14/20	1903	YES ☒ NO ☐	228, 234, 239 on, he	effluent line pressure test	JRL
		7/15/20	1053	YES ☒ NO ☐	233 on		PF
7/15/20	1443	7/15/20	1511	YES ☒ NO ☐		Install INF Train 2 transducers	
7/16/20	1213	7/16/20	1314	YES ☒ NO ☐	233	oil change Train 1	PF
7/17/20	0937	7/17/20	1025	YES ☒ NO ☐	233	oil change	PF
7/17/20	1025			YES ☒ NO ☐	All pumps off	Well 7 single valve config.	PF → Well 7 at 20
7/17/20	1025			YES ☒ NO ☐		To Well 7	PF
		7/17/20	1105	YES ☒ NO ☐	228 234		PF
		7/17/20	1115	YES ☒ NO ☐	233 239	To Well 7	PF
7/17/20	1315	7/17/20	1354	YES ☒ NO ☐	T1 422.5109 T2 356.0227 Well 7 105.579	To GCMP 228, 233, 234, 239	PF
7/19/20	0845		0915	YES ☒ NO ☐	T1 423.3861 T2 356.5674 Well 7 105.579	To Well 7 Transducer (56.48)	PF static
—	—	7/19/20	0915	YES ☒ NO ☐	228, 234, 239 on	→ change to well 7	PF
7/19/20	1125	7/19/20	1150	YES ☒ NO ☐	TK217 High level		JRL
7/20/20	0829	7/20/20	0834	YES ☒ NO ☐	T1 423.6269 T2 356.8801 Well 7: 65.869	Changeover to GCMP	JRL
7/21/20	0630	7/21/20	0643	YES ☒ NO ☐	T1 424.0731 T2 357.1472 Well 7 65.869	24 hr. test Well 7	BL

Well 7 in US
Gallons at
V-cone totalizer

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
		6/26/20	1244	YES ☐ NO ☒	239	Rehab 239	PF
6/26/20	1254			YES ☐ NO ☒	228	Check for CL, divert CL	PF
6/26/20	1259	6/26/20	1303	YES ☐ NO ☒	239	Divert to ext. supply	PF
		6/26/20	1348	YES ☐ NO ☐	228	Run both 228, 239 through T2	PF
7/3/20	0825			YES ☐ NO ☒	233 239 to 64 gpm	T2 transducer died	PF
7/6/20	0931	7/6/20	1539	YES ☒ NO ☐	228 234 (239) (64 gpm)	Drain effluent line, dig near tee	PF
7/7/20	0654	7/9/20	1552	YES ☒ NO ☐	228, 234 239 @ 64 gpm	Order time for auto valves	PF
		7/10/20	0746	YES ☐ NO ☒	233 on	Sendance to sample today	PF
7/10/20	1324			YES ☐ NO ☒	233		
7/13/20	0810			YES ☒ NO ☐	228, 234, 239	offline for reduced flow (90 gpm) to KAFB for activation	JRL
		7/13/20	1320	YES ☐ NO ☒	228, 234, 239 ON	Purge line for pressure test	PF
7/13/20	1447	7/13/20	1627	YES ☒ NO ☐		Attempt press. test	PF
7/14/20	0737			YES ☒ NO ☐		Fix effluent ARV leakings	JRL
		7/14/20	0941	YES ☐ NO ☒	233		PF

Sampling Results from Well Disinfection

Table I-1-5
Kirtland BFF Well Disinfection Analyses, Q3 2020

Well Location ID:			KAFB-106239			KAFB-106239		
Field Sample ID:			GW239-203-PreDis			GW239-203-Post Dis		
Sample Date:			9/10/2020			9/14/2020		
Sample Type:			REG			REG		
Analytical Method	Analyte	Project Screening Level^a	Result	Val Qual	LOD	Result	Val Qual	LOD
Method E300.1 (µg/L)	Bromate	10	ND	U	25	ND	U	10
	Chlorite	1,000	ND	U	100	ND	U	40
Method E331.0 (µg/L)	Perchlorate	14	0.18	--	0.1	0.16	--	0.1

^a Screening Value based on EPA Safe Drinking Water Act Maximum Contaminant Level for chlorite and bromate (May 2018); and NMED tapwater non-cancer screening value for perchlorate (2018).

µg/L = microgram per liter

AFB = Air Force Base

BFF = Bulk Fuels Facility

EPA = U.S. Environmental Protection Agency

ID = identification

KAFB = Kirtland Air Force Base

MCL = maximum contaminant level

ND = not detected

NMED= New Mexico Environment Department

REG = normal field sample

RL = Reporting limit

Val Qual = validation qualifier

Shading = detected concentrations above the detection limit

Bold/Shading = reported concentrations exceed the project screening level

Val Quals based on independent data validation

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the reporting limit.

-- = Validation qualifier not assigned.

Documentation for Effluent Line Pressure Test



HYDROSTATIC PRESSURE TESTING FORM

Project: GWTS Effluent Conveyance Line
 EA Project No: 62599DM01 Date: 7/14/2020
 Air Temperature: 88°F Time: 1400
 Length of Pipe Tested: 8500 feet Type of Pipe Tested: HDPE
 Location of Pipe Tested: GWTS effluent to changeover tee

Hydrostatic specified test pressure (STP) is recommended at 150 percent (%) of operating pressure per American Society of Mechanical Engineers B31.3 Part 345 and will be measured at gauge PI-3208 on the effluent skid No. 2. The current operating pressure in the effluent conveyance line is approximately 12 pounds per square inch (psi) with a high pressure alarm at 45 psi; thus, an STP of 50 psi has been specified for this test (10% higher than the high pressure alarm set point). The final pressure will be compared to the STP at the end of the test period. ASTM International F2164 – 13 defines a hydrostatic pressure test as acceptable if the final pressure does not deviate by more than 30% from the STP reading (± 15 psi for this test). The results of the hydrostatic test will be included in the test report. Although the ASTM International F2164 – 13 method requires an air volume and rebound assessment for the installation of new, uniform piping, these assessments will not be performed due to the varying pipe thicknesses, types, and age of the pipes that comprise the effluent conveyance line.

Testing Procedure

Piping shall be vented and then brought to the STP and held at the STP by providing successive injections of makeup water. Piping shall then be subjected for 1 hour to a hydrostatic test pressure of 50 psi. No additional makeup water will be added during this period. Exposed pipe, joints, fittings, and valves shall be carefully examined for leaks. Record testing results below and compare the final pressure to the STP.

Testing Results

Initial pressure reading after 30-minute makeup period: 49.95

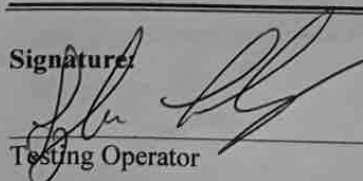
Pressure reading after 1 hour: 48.15

Difference in pressure: 1.80

Final Pressure within 30% of STP? Yes - Test PASSED

Are there any leaks present? No leaks detected

Additional testing comments: Initial reading of 49.80 psi at 1420.

Signature: 

Testing Operator

7/14/2020
Date



HYDROSTATIC PRESSURE TESTING FORM

Project: GWTS Effluent Conveyance Line
 EA Project No: 62599DM01
 Air Temperature: 93°F
 Length of Pipe Tested: ~ 12,000
 Location of Pipe Tested: GWTS effluent to KAFB-7 Valve
 Date: 7/14/2020
 Time: 1700
 Type of Pipe Tested: HDPE

Hydrostatic specified test pressure (STP) is recommended at 150 percent (%) of operating pressure per American Society of Mechanical Engineers B31.3 Part 345 and will be measured at gauge PI-3208 on the effluent skid No. 2. The current operating pressure in the effluent conveyance line is approximately 12 pounds per square inch (psi) with a high pressure alarm at 45 psi; thus, an STP of 50 psi has been specified for this test (10% higher than the high pressure alarm set point). The final pressure will be compared to the STP at the end of the test period. ASTM International F2164 – 13 defines a hydrostatic pressure test as acceptable if the final pressure does not deviate by more than 30% from the STP reading (± 15 psi for this test). The results of the hydrostatic test will be included in the test report. Although the ASTM International F2164 – 13 method requires an air volume and rebound assessment for the installation of new, uniform piping, these assessments will not be performed due to the varying pipe thicknesses, types, and age of the pipes that comprise the effluent conveyance line.

Testing Procedure

Piping shall be vented and then brought to the STP and held at the STP by providing successive injections of makeup water. Piping shall then be subjected for 1 hour to a hydrostatic test pressure of 50 psi. No additional makeup water will be added during this period. Exposed pipe, joints, fittings, and valves shall be carefully examined for leaks. Record testing results below and compare the final pressure to the STP.

Testing Results

Initial pressure reading after 30-minute makeup period: 50.02 psi

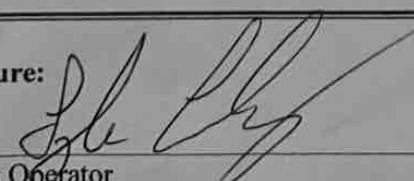
Pressure reading after 1 hour: 42.76 psi

Difference in pressure: 7.26 psi

Final Pressure within 30% of STP? Yes - Test PASSED

Are there any leaks present? No leaks detected

Additional testing comments: Initial reading of 49.75 psi at 1713.

Signature: 

Testing Operator

Date

7/14/2020

Table I-2-1
NM 811 Ticket Summary for Groundwater Conveyance Line July - September 2020

Year	Month	Date	Ticket #	Status
2020	July	7/10/2020	20JU100316	UFO Cleared
		7/27/2020	20JU270082	UFO Cleared
		7/28/2020	20JU280132	UFO Cleared
		7/28/2020	20JU280701	UFO Cleared
	August	8/3/2020	20AG030738	UFO Cleared
	September	9/2/2020	20SE020636	UFO Cleared

Notes:

UFO CLEARED - The Underground Facility Owner/Operator (UFO) has determined they do not have any underground lines in the area of excavation.

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20JU100316
Date: Friday, July 10, 2020 11:46:42 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20JU100316	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	07/10/20 11:46	Seq Num:	1

Excavator Information

Company:	A-1 SEWER & DRAIN	Main Contact Phone:	(505) 610-9404
Address:	PO BOX 10595	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87184	Main Contact Email:	steve@asiabq.com
Company Phone:	(505) 343-1030	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	STEVE STUCKEY	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	07/14/20 AT 11:45
County:	BERNALILLO	Expire Date:	08/04/20 AT 11:45
Place:	ALBUQUERQUE		
Address:	1316 KENTUCKY ST SE		
Intersection:	LOVELACE RD SE		
Latitude:	35.055404	Longitude:	-106.569556
Secondary Lat:	35.055786	Secondary Long:	-106.568971
Work Type:	Repair - See Remarks	Working For:	HOMEOWNER
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

SPOT FRM THE WHITE ARROWS IN THE MIDDLE OF THE STREET TO THE HOUSE

Remarks

SEWER SVC LINE // No Hazards - Open Access

 TRSQ: [W8T10NR03ES36NE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCII	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20JU270082
Date: Monday, July 27, 2020 7:49:20 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20JU270082	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	07/27/20 07:49	Seq Num:	1

Excavator Information

Company:	Rosalina Rubio	Main Contact Phone:	(505) 260-1131
Address:	909 Indiana St	Secondary Phone:	
City, St, Zip:	Albuquerque, NM 87108	Main Contact Email:	ramr4@aol.com
Company Phone:	(505) 260-1131	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	Rosalina Rubio	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	07/29/20 AT 08:00
County:	BERNALILLO	Expire Date:	08/19/20 AT 08:00
Place:	ALBUQUERQUE		
Address:	909 INDIANA ST SE		
Intersection:	ANDERSON AVE SE		
Latitude:	35.063133	Longitude:	-106.571208
Secondary Lat:	35.063133	Secondary Long:	-106.571208
Work Type:	Digging out dead tree stump & leveling ground	Working For:	Rosalina Rubio
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

South east corner of the house and leveling the front yard.

Remarks

Front yard to be leveled in order to add sod & rock as well as adding plants. Hazard : No Access : No

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20JU280132
Date: Tuesday, July 28, 2020 8:27:03 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20JU280132	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	07/28/20 08:26	Seq Num:	1

Excavator Information

Company:	ART JENKE	Main Contact Phone:	(505) 265-2956
Address:	1331 DAKOTA ST SE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87108	Main Contact Email:	adenke56@comcast.net
Company Phone:	(505) 265-2956	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	ART JENKE	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	07/30/20 AT 08:30
County:	BERNALILLO	Expire Date:	08/20/20 AT 08:30
Place:	ALBUQUERQUE		
Address:	1331 DAKOTA ST SE		
Intersection:	LOVELACE RD SE		
Latitude:	35.055032	Longitude:	-106.574754
Secondary Lat:	35.055155	Secondary Long:	-106.574309
Work Type:	Landscaping - Irrigation	Working For:	SELF
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

REAR OF THE ADDRESS FRM THE ELECTRICAL TRANSFORMER TO THE ELECTRIC METER

Remarks

No Hazards - CALL FOR ACCESS :: ART JENKE @ 505-265-2956

 TRSQ: [W8T10NR03ES36NE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCII	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20JU280701
Date: Tuesday, July 28, 2020 1:57:59 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20JU280701	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	07/28/20 13:57	Seq Num:	2

Excavator Information

Company:	MONKEYS TRESS SERVICES LLC	Main Contact Phone:	(505) 315-0880
Address:	4022 SILVER FOX DR SE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87105	Main Contact Email:	monkeytrees17@gmail.com
Company Phone:	(505) 315-0880	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	JAVIER GARCIA	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	07/30/20 AT 14:00
County:	BERNALILLO	Expire Date:	08/20/20 AT 14:00
Place:	ALBUQUERQUE		
Address:	909 GEORGIA ST SE		
Intersection:	ANDERSON AVE SE		
Latitude:	35.062994	Longitude:	-106.572632
Secondary Lat:	35.063345	Secondary Long:	-106.572042
Work Type:	Landscaping - Remove Stumps	Working For:	HOMEOWNER
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

SPOT THE BACK YARD; Area Marked in White

Remarks

DOG ON PROPERTY NEED TO CALL HOMEOWNER DORES @ 5059481230 IF ACCESS IS NEED

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20AG030738
Date: Monday, August 3, 2020 3:07:52 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20AG030738	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	08/03/20 15:07	Seq Num:	1

Excavator Information

Company:	MONKEYS TRESS SERVICES LLC	Main Contact Phone:	(505) 315-0880
Address:	4022 SILVER FOX DR SE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87105	Main Contact Email:	monkeytrees17@gmail.com
Company Phone:	(505) 315-0880	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	JAVIER GARCIA	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	08/05/20 AT 15:15
County:	BERNALILLO	Expire Date:	08/26/20 AT 15:15
Place:	ALBUQUERQUE		
Address:	909 GEORGIA ST SE		
Intersection:	ANDERSON AVE SE		
Latitude:	35.062994	Longitude:	-106.572632
Secondary Lat:	35.063345	Secondary Long:	-106.572042
Work Type:	Landscaping - Remove Stumps	Working For:	HOMEOWNER
Pre-marked:	Yes	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

BACK YARD OF PROPERTY Area Marked in White

Remarks

DOG ON PROPERTY NEED TO CALL HOMEOWNER DORES @ 505-948-1230 IF ACCESS IS NEED PER CALLER - THERE IS A GAS METER BY AREA OF LOCATE - PLEASE MARK GAS

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20SE020636
Date: Wednesday, September 2, 2020 2:51:00 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20SE020636	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	09/02/20 14:50	Seq Num:	1

Excavator Information

Company:	CABLECOM	Main Contact Phone:	(505) 350-8076
Address:	8401 Jefferson St NE Suite A	Secondary Phone:	
City, St, Zip:	Albuquerque, NM 87113	Main Contact Email:	monica.cordova@cablecomllc.net
Company Phone:	(505) 350-8076	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	Kathleen Parker	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	09/04/20 AT 15:00
County:	BERNALILLO	Expire Date:	09/28/20 AT 15:00
Place:	ALBUQUERQUE		
Address:	1300 Kentucky St SE		
Intersection:	Mitchell Rd SE		
Latitude:	35.056265	Longitude:	-106.570239
Secondary Lat:	35.056937	Secondary Long:	-106.569424
Work Type:	Bury - CATV Svc	Working For:	Comcast
Pre-marked:	Yes	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

Please spot all utilities along white lines

Remarks

Call Rene so he can come open gate??? he is 2 minutes away: 505-417-0122

 TRSQ: [W8T10NR03ES36NE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCII	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625										CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-GWTS1-072320	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA		YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS110		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		QUARTER: Q3					
				ANALYSIS REQUIRED (Specify number of bottles)						COMMENTS					
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	SVOCs (8270D)	EDB (8011)	(6010C/6020A) Dissolved Fe, Mn	Chloride, sulfate (300.0)	Nitrate-Nitrite (353.2)	Total Phenol (420.4)				
1	GWTS-EFF1-072320	07/23/2020	0850	35	9	6	6	3*	3	3	3	Additional Volume Provided for MSMDS			
2	GWTS-GAC1-072320	07/23/2020	0937	6	3**	--	2	1*	--	--					
3	GWTS-INF1-072320	07/23/2020	0951	11	3	2	2	1*	1	1	1				
4	GWTS-TB01-072320	07/23/2020	1130	4	2	--	2	--	--	--					
5	GWTS-FB01-072320	07/23/2020	0850	5	3	--	2	--	--	--		Collected simultaneously with GWTS-EFF1-072320			
6															
COMMENTS: *Dissolved Metals aliquot was field filtered. **Please analyze GWTS-GAC1-072320 VOCs samples for BTEX only.															
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8156 5978 3009											
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME				
Printed Name and Signature:				Printed Name and Signature:											
J Livingston				7/23/2020	1300										
Printed Name and Signature:				Printed Name and Signature:											
Printed Name and Signature:				Printed Name and Signature:											
Printed Name and Signature:				Printed Name and Signature:											

225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD								COC NUMBER COC-GWTS2-072320			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: Q3			
PROJECT SITE AND PHASE: ST106/SS110				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258							
				ANALYSIS REQUIRED (Specify number of bottles)									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	SVOCs (8270D)	EDB (8011)	Dissolved Fe, Mn (6010C/6020A)	Chloride, Sulfate (300.0)	Nitrate-Nitrite (353.2)	Total Phenol (420.4)	COMMENTS	
1	GWTS-EFF2-072320	07/23/2020	1032	11	3	2	2	1*	1	1	1		
2	GWTS-EFF2DUP-072320	07/23/2020	1032	14	3	2	2	1*	1	1	1		
3	GWTS-GAC2-072320	07/23/2020	1105	6	3**	--	2	1*	--	--	--		
4	GWTS-INF2-072320	07/23/2020	1118	11	3	2	2	1*	1	1	1		
5	GWTS-TB02-072320	07/23/2020	1130	4	2	--	2	--	--	--			
6													
COMMENTS: *Dissolved Metals aliquot was field filtered. **Please analyze GWTS-GAC2-072320 VOCs samples for BTEX only.													
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8156 5978 2995									
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME		
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:				DATE	TIME
J Livingston				7/23/2020		1300							
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:				DATE	TIME
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:				DATE	TIME
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:				DATE	TIME



Groundwater Purge and Sampling Log

Year: 2020
Quarter: Q3 July

Project: Kirtland AFB BFF ST-106/SS-111

Well ID:

Purge Information and Field Parameter

Date: 07/23/2020

Purge Start Time: -- Purge Rate: -- L/min X 0.265 = -- gal/min

Description of first water purged: Clear, odorless

Drawdown Limit: -- ft (based on previous water level)

Time	Sample Location	Facility	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Historical Data:									
0831	EFF1	GWTS	0.37	20.4	61.4	5.54	577	7.42	333.0
0930	GAC1	GWTS	0.22	20.4	42.7	3.83	577	7.53	281.4
0943	INF1	GWTS	0.16	20.3	68.8	6.21	578	7.82	281.9
1022	EFF2	GWTS	0.15	20.7	52.3	4.68	442.6	7.40	306.0
1059	GAC2	GWTS	0.21	20.7	12.0	1.07	441.7	7.39	81.8
1111	INF2	GWTS	0.25	20.8	57.9	5.25	443.6	7.80	550.9

Sample Time: 0831 - 1111

Sample Date: 07/23/2020

Purge End Time: --

Bubbles in the vials? ☐ Yes ☒ No Where? NA

Amount NA Size NA

Sampled by: JOSEPH LIVINGSTON

Sampler Signature: [Signature]

IDW Management

IDW will be taken to:

Sample Information

Estimated volume per Drum No. IDW drum (gal)

1	--
2	--
Total	--

--

IDW Label:

--

Sample ID: GWTS-XXXX-072320

Duplicate ID: (if applicable) GWTS-EFFXDUP-072320

COC#: COC-GWTSX-072320

Sampling Method: Tap

Sampling Medium: Water

Comments:

Reviewed by: Initials: Review Date:

Page 1 of 1

EA 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-080520				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q3				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258												
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCS (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500S2CF)	Alkalinity (SM2320B)	COMMENTS
1	GWTS-EFF1-080520	08/05/2020	0949	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF1DUP-080520	08/05/2020	0949	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC1-080520	08/05/2020	1000	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF1-080520	08/05/2020	1008	6	--	3	--	2	--	1*	--	--	--	--	--	
5	GWTS-TB01-080520	08/05/2020	1011	4	--	2	--	2	--	--	--	--	--	--	--	
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston								COURIER AND SHIPPING NUMBER: Fedex: 8160 9541369								
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME					
Printed Name and Signature:						Printed Name and Signature:										
J Livingston				8/5/2020	1100											
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										
Printed Name and Signature:						Printed Name and Signature:										

EA 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625												CHAIN-OF-CUSTODY RECORD												COC NUMBER COC-GWTS2-080520							
PROJECT NAME: Kirtland AFB Bulk Fuels Facility				PROJECT NUMBER: 62599DM01				LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020															
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				QUARTER: Q3															
ITEM				SAMPLE IDENTIFIER				DATE COLLECTED				TIME COLLECTED				ANALYSIS REQUIRED (Specify number of bottles)				COMMENTS											
																(SMA2320B) Alkalinity (SMA500S2CF) Sulfide (SMA500NH3) Ammonia (3332) Nitrate-Nitrite (300.0) Chloride, bromide, sulfate (6010C) Dissolved Fe, Mn (6020A/6010C) Total As, Pb, Cd, K, Na, Mg (6011) EDB (6200C) BTEXN (6200C) BTEX (6200C) VOCs Total Number of Bottles															
1	GWTS-EFF2-080520			08/05/2020	0911	18	--	9	--	6	--	3*	--	--	--	--	--	Additional Volume Provided for MSMDS													
2	GWTS-GAC2-080520			08/05/2020	0926	6	--	3	--	2	--	1*	--	--	--	--	--														
3	GWTS-INF2-080520			08/05/2020	0936	6	--	3	--	2	--	1*	--	--	--	--	--														
4	GWTS-FB02-080520			08/05/2020	0911	5	--	3	--	2	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-080520													
5																															
6																															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																															
SAMPLER(S): J Livingston												COURIER AND SHIPPING NUMBER: Fedex: 8160 9541 5369																			
RELINQUISHED BY:												DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature:												DATE				TIME				Printed Name and Signature:											
J Livingston												8/5/2020				1100															
Printed Name and Signature:																				Printed Name and Signature:											
																				Printed Name and Signature:											
Printed Name and Signature:																				Printed Name and Signature:											
																				Printed Name and Signature:											
Printed Name and Signature:																				Printed Name and Signature:											
																				Printed Name and Signature:											

Year: 2020
Quarter: Q3 August

Well ID:

Date: 08/05/2020

Description of first water purged:

Drawdown Limit: _____ ft (based on previous water level)

[illegible]

Purge End Time:

Bubbles in the vials? ☐ Yes ☒ No Where?

Sampled by:

NA Amount NA Size NA
Sampler Signature: [Signature]

IDW will be taken to:

Drum No.	Estimated volume per IDW drum (gal)
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
40	100
41	100
42	100
43	100
44	100
45	100
46	100
47	100
48	100
49	100
50	100
51	100
52	100
53	100
54	100
55	100
56	100
57	100
58	100
59	100
60	100
61	100
62	100
63	100
64	100
65	100
66	100
67	100
68	100
69	100
70	100
71	100
72	100
73	100
74	100
75	100
76	100
77	100
78	100
79	100
80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

1	—
2	—
Total	—

IDW Label:

Sample Information

Sample ID: GWTS-XXXX-080520

Duplicate ID:
(if applicable) GWTS-EFFXDUP-080520

COC#: COC-GWTSX-080520

Sampling Method: Tap

Sampling Medium: Water

Comments:

Reviewed by: _____ Initials: _____ Review Date: _____

Page 1 of 1

 225 Schling Circle Suite 400 Hunt Valley MO Tel No: (410) 584-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-090920				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q3				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (8200A/8010C)	Dissolved Fe, Mn (8200A/8010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM2320B)	
1	GWTS-EFF1-090920	09/09/2020	0825	18	--	9	--	6	--	3*	--	--	--	--	--	Additional Volume Provided for MS/MSD
2	GWTS-GAC1-090920	09/09/2020	0840	5	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-INF1-090920	09/09/2020	0851	5	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-FB01-090920	09/09/2020	0825	5	--	3	--	2	--	--	--	--	--	--	--	
5	GWTS-TB01-090920	09/09/2020	0930	4	--	2	--	2	--	--	--	--	--	--	--	
6																Collected simultaneously with GWTS-EFF1-090920
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston																
RELINQUISHED BY:				DATE		TIME		COURIER AND SHIPPING NUMBER: Fedex: 815 659 781 635								
Printed Name and Signature:				DATE		TIME		RECEIVED BY:								
J Livingston				9/9/2020		1030										
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:								
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:								
Printed Name and Signature:				DATE		TIME		Printed Name and Signature:								

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-090920				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258										QUARTER: Q3		
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	(820A/8010C)	Dissolved Fe, Mn (8010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM2320B)	
1	GWTS-EFF2-090920	09/09/2020	0900	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF2DUP-090920	09/09/2020	0900	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC2-090920	09/09/2020	0908	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF2-090920	09/09/2020	0925	6	--	3	--	2	--	1*	--	--	--	--	--	
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston																
RELINQUISHED BY: DATE TIME																
Printed Name and Signature: J Livingston 9/9/2020 1030																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
COURIER AND SHIPPING NUMBER: Fedex: 815659781635																
RECEIVED BY: DATE TIME																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																



Groundwater Purge and Sampling Log

Year: 2020
Quarter: Q3 September

Project: Kirtland AFB BFF ST-106/SS-111

Well ID: _____

Purge Information and Field Parameter

Date: 09/09/2020

Purge Start Time: --- Purge Rate: --- L/min X 0.265 = --- gal/min

Description of first water purged: Clear, odorless

Drawdown Limit: --- ft (based on previous water level)

Time	Sample Location	Facility	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Historical Data:									
0816	EFF1	GWTS	0.37	20.1	62.6	5.67	478.5	7.36	314.2
0838	GAC1	GWTS	0.47	20.0	43.6	3.95	479.6	7.44	182.9
0846	INF1	GWTS	0.24	20.2	68.3	6.18	480.1	7.54	191.6
0859	EFF2	GWTS	0.35	20.4	48.9	4.41	368.8	7.26	163.0
0910	GAC2	GWTS	0.29	20.4	15.5	1.41	368.4	7.27	167.7
0920	INF2	GWTS	0.72	20.5	62.1	5.59	369.9	7.57	584.3

Sample Time: 0816 - 0920 Sample Date: 09/09/2020

Purge End Time: ---

Bubbles in the vials? ☐ Yes ☒ No Where? NA Amount NA Size NA

Sampled by: Just Livingston Sampler Signature: [Signature]

IDW Management

Drum No. Estimated volume per IDW drum (gal)

1	---
2	---
Total	---

IDW will be taken to:

IDW Label:

Sample Information

Sample ID: GWTS-XXXX-090920

Duplicate ID: GWTS-EFFXDUP-090920
(if applicable)

COC#: COC-GWTSX-090920

Sampling Method: Tap

Sampling Medium: Water

Comments: _____

Reviewed by: _____ Initials: _____ Review Date: _____

Page 1 of 1

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record

Ver. 08/04/2016

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

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APPENDIX I-4

Data Quality Evaluation Report – Groundwater Treatment System Samples (July–September 2020)

LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
AFB	Air Force Base
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DL	detection limit
DoD	Department of Defense
EC	Eurofins Calscience
EDB	ethylene dibromide
ELLE	Eurofins Lancaster Laboratories Environmental, LLC
EPA	U.S. Environmental Protection Agency
GAC	granular activated carbon
GWTS	groundwater treatment system
ICP	inductively coupled plasma
ICS	interference check sample
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantification
MDL	method detection limit
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate
O&M	operations and maintenance
Q2	third quarter of the year (July 1 through September 30)
QAPjP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RPD	relative percent different
SDG	sample delivery group
SW	Solid Waste
VOA	volatile organic analysis
VOC	volatile organic compound

DATA QUALITY EVALUATION REPORT – GROUNDWATER TREATMENT SYSTEM SAMPLES (JULY–SEPTEMBER 2020)

1. LABORATORY DATA QUALITY SUMMARY

This Data Quality Evaluation Report describes the findings of the data validation performed for the analysis of samples collected during third quarter (Q3) of 2020 associated with the groundwater treatment system (GWTS) and associated extraction and monitoring wells. These data were collected in support of the Work Plan, Bulk Fuels Facility Expansion of the Dissolved-Phase Plume GWTS Design Revision 2, Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base (AFB), New Mexico (Kirtland AFB, 2017a). Sampling and analysis for the Q3 2020 events were conducted in accordance with the procedures and overall quality control (QC) and quality assurance protocols presented in the following documents: (1) Operations and Maintenance (O&M) Plan GWTS Bulk Fuels Facility Solid Waste Management Units ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2017b); (2) Quality Assurance Project Plan (QAPjP) (Kirtland AFB, 2017a); and (3) Standard Operating Procedure for Disinfection of the GWTS Remediation Wells and Groundwater Monitoring Wells, Discharge Permit DP-1839, Bulk Fuels Facility Solid Waste Management Units ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2018).

Samples discussed in this report were collected during the months of July, August, and September 2020 and include monthly/annual samples from (1) the untreated influent (GWTS-BFF-INF1 and GWTS-BFF-INF2), (2) a port located after the lead granular activated carbon (GAC) vessel (GWTS-BFF-GAC1 and GWTS-BFF-GAC2) but before the final GAC vessel, and (3) the treated effluent (GWTS-BFF-EFF1 and GWTS-BFF-EFF2). In addition to the monthly samples, pre- and post-disinfection treatment samples were collected from well KAFB-106239. Field QC samples were collected in association with the Q3 GWTS monthly and disinfection treatment sampling, and included three field duplicates, five trip blanks, and three field blank samples.

Samples collected from the GWTS treatment trains and extraction wells were shipped to Eurofins Lancaster Laboratories Environmental, LLC (ELLE), Lancaster, Pennsylvania for analysis. ELLE maintains a current Department of Defense (DoD) Environmental Laboratory Accreditation Program certification to perform the analyses required for this project. Sample analyses were performed in accordance with the following guidance documents:

- DoD Quality Systems Manual (QSM), Version 5.1.1 (DoD, 2018)
- U.S. Environmental Protection Agency (EPA) Solid Waste (SW) 846 – Test Methods for Evaluating SW, Third Edition and Updates (1986).
- EPA Methods for Chemical Analysis of Water and Wastes (1993).

Q3 2020 GWTS and well samples were analyzed for the following list of parameters and methods as required:

- ***Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)***—Method SW8260C.
- ***Volatile Organic Compounds (VOCs)***—Method SW8260C.

- **Ethylene Dibromide (EDB)**—Method SW8011.
- **Semivolatile Organic Compounds (SVOCs)**—Method SW8270D.
- **Dissolved Metals (Iron and Manganese)**—Method SW6010C.
- **Nitrate/Nitrite Nitrogen**—Method E353.2.
- **Anions (chloride, sulfate)**—Method E300.0.
- **Total Phenols**—Method E420.4.

Samples collected from well KAFB-106239 for pre- and post-disinfection monitoring were shipped to Eurofins Calscience (EC), Irvine and Garden Grove, California for analysis of drinking water disinfectants. Samples were analyzed in accordance with EPA Methods for Chemical Analysis of Water and Wastes (1993) and Determination of Perchlorate in Drinking Water by Liquid Chromatography Electrospray Ionization Mass Spectrometry (2005). Disinfectant analysis included the following list of parameters:

- **Bromate and Chlorite**—Method E300.1B.
- **Perchlorate**—Method E331.0.

Chemical analytical data for Q3 2020 were reported by ELLE in sample delivery groups (SDGs) 410-8628-1, 410-9909-1, 410-12115-1, 410-12727-1, 410-12731-1, and 410-13531-1. Q3 2020 analytical data were reported by EC in SDGs 440-271675-1 and 440-271831-1. Appendix I-4 – Table 1 summarizes GWTS, groundwater, and field QC samples; collection date; laboratory SDG; and analytical parameters for the Q3 2020 sampling events.

A third-party subcontractor, Environmental Data Services, Inc., conducted EPA Stage 3 data validation on 100 percent (%) of the Q3 2020 sample data associated with the GWTS and well disinfection treatment samples. Analytical data validation was performed using the quality criteria specified in the following documents, analytical guidelines, and methods:

- Work Plan (includes QAPjP) (Kirtland AFB, 2017a), O&M Plan (Kirtland AFB, 2016, 2017b, 2018)
- DoD QSM for Environmental Laboratories, Version 5.1.1 (DoD, 2018)
- EPA Test Methods for Evaluating SW, Physical/Chemical Methods (SW 846, Third Edition and updates) (EPA, 1986)
- EPA Methods for Chemical Analysis of Water and Wastes (EPA, 1993)
- Determination of Perchlorate in Drinking Water by Liquid Chromatography Electrospray Ionization Mass Spectrometry (EPA, 2005)
- EPA Contract Laboratory Program, National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2014a)

- EPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review (EPA, 2014b).

The following QC criteria were included in the EPA Stage 3 validation as applicable to the analytical method:

- Sample preservation and extraction and analysis holding times
- Laboratory method blank contamination
- Surrogate spike recoveries (organic analyses)
- Laboratory control sample (LCS) and LCS duplicate (LCSD) recoveries
- Matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries
- Relative percent difference (RPD)
- Initial and continuing calibrations
- Inductively coupled plasma (ICP) interference check samples (metals)
- ICP serial dilutions (metals)
- Second column confirmation (for EDB analysis only)
- Trip and field blank results
- Field duplicate sample precision.

Analytical data were reviewed for all sampling events to evaluate precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity as defined below:

- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.
- *Accuracy (bias)* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. A comparison was made from the recovery of target analytes from fortified samples to the acceptance criteria defined in the QAPjP (Kirtland AFB, 2017a) and DoD QSM. When the acceptance criteria are not available in the QAPjP or DoD QSM, results are compared with the laboratory in-house control limits. When these criteria are not met, the data are qualified accordingly. Bias may be indicated as high or low.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and standard analytical method protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods and comparison of sample results to historical sample data.
- *Completeness* of data is evaluated based on contractual, analytical, and technical completeness for the quarterly data. Technical completeness of data is used to assess overall project completeness and is expressed as a percentage of the ratio of the number of usable data results to the total number of analytical data results. Only rejected data (R-qualified) are considered not usable to achieve project objectives.
- *Sensitivity* is determined by the ability to achieve the established method-specific reporting limits in accordance with DoD QSM requirements and includes establishing the detection limit (DL), limit of detection (LOD), and limit of quantitation (LOQ). For this project, the laboratory will

report positive results to the DL and results between the DL and LOQ will be flagged with a J-qualifier and reported as estimated data. Pre- and post-disinfection well data are not being reported per the DoD QSM since the analysis is being performed using drinking water methods. These analytical data are reported to the method detection limit (MDL) and positive results between the MDL and the method reporting limit (MRL) will be flagged with a J-qualifier and reported as estimated data. Sensitivity is evaluated based on comparison of the sample reporting limits to the project screening levels.

The following sections present the EPA Stage 3 data validation findings for the Q3 2020 sample data. Appendix I-4 – Table 2 presents the data qualification flags and reason codes to be applied to analytical data, if required.

1.1 DATA QUALITY FINDINGS

1.1.1 Sample Preservation and Sample Extraction and Analysis Holding Times (Reason Code HT)

The sample coolers and samples contained within the coolers were received intact at the laboratory below 6 degrees Celsius, per EPA guidelines. All samples were preserved appropriately per the requirements of EPA method guidelines, with no exceptions. Sample holding times were evaluated by comparing the (1) sample collection date to the sample extraction date, and (2) extraction date to the analysis date to determine if the method-specified holding times were exceeded. Q3 2020 sample extraction and analysis holding times were met for all samples with exception of one sample (GWTS-INF2-080520) for EDB, collected in August. This sample was extracted one day past the 14-day hold time. The EDB sample detection was qualified “J” signifying estimated data. Appendix I-4 – Table 3 summarizes Q3 2020 sample results qualified based on hold time.

1.1.2 Laboratory Method Blanks (Reason Code MB)

The GWTS sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch for each analytical method. Based on the DoD QSM requirements (2018), laboratory method blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. Analytical method-specific blank criteria were used for evaluation of the well disinfection analyses. No detections of analytes were reported in method blank samples that resulted in data qualification for the Q3 2020 samples.

1.1.3 Initial and Continuing Calibration Blanks (Reason Code CB/CCB)

Initial and continuing calibration blank criteria were reviewed to ensure that the instruments were free of contamination prior to sample analysis. Based on the DoD QSM requirements (2018), calibration blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. Analytical method-specific control criteria were used for the evaluation of the well disinfection analyses. Initial and continuing calibration blank data were within control criteria for the Q3 2020 sample analyses. All percent relative standard deviation and/or correlation coefficients and relative response factor criteria were within control limits and no data were qualified based on initial and continuing calibration blank criteria.

1.1.4 Surrogate Recoveries (Reason Code SURR)

Surrogate compounds are added to field and laboratory QC samples for organic analysis to evaluate the matrix effect and method performance on an individual sample basis. All surrogate compound recoveries for the Q3 2020 sample data were within method control criteria or did not result in data qualification since the recoveries were above the control limit and the associated sample results were non-detect.

1.1.5 Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries and Precision (Reason Codes LCS/RPD)

The LCS is an aliquot of an analyte-free matrix spiked with target analytes that are prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. All LCS recoveries for the Q3 2020 data were within method control limits with exception of the SVOC recoveries in SDG 410-12115-1 and the manganese recovery in SDG 410-9909-1. The associated detect or non-detect sample data were qualified “J or UJ”, respectively, signifying estimated data. Appendix I-4 – Table 3 summarizes Q3 2020 sample results qualified based on LCS recoveries.

1.1.6 Matrix Spike/Matrix Spike Duplicate Recoveries and Precision (Reason Codes MS/MSD and RPD)

The MS and MSD samples are a portion of a field sample or a standard reference material spiked with target analytes that are prepared with each analytical batch and method as appropriate. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch.

MS/MSD project-specific samples were collected for each of the monthly GWTS sampling events, achieving the QAPjP rate of one per 20 samples for the GWTS routine monitoring program. MS/MSD recoveries for the Q3 2020 sample data were within method control criteria with the exception of the MS/MSD recoveries for chloride in SDG 410-8628-1 and iron and manganese in SDG 410-13531-1. The associated detect and non-detect sample results were qualified “J and UJ”. Appendix I-4 – Table 3 summarizes Q3 2020 sample results qualified based on MS recoveries.

1.1.7 Initial and Continuing Calibration Verification (Reason Code CCV)

Instrument calibration is performed for all analyses in accordance with method requirements. The linear analytical range is established for each method by analysis of calibration standards prepared at increasing concentrations that cover the expected sample concentration range. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or coefficient. Routinely during sample analysis, the stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the instrument calibration range. The percent difference values between the relative response factor in the initial calibration and the relative response factor in the continuing calibration are reviewed to ensure instrument calibration criteria are within method control limits. All initial and continuing calibration verifications met the method-specific control criteria for the Q3 2020 analytical data with exception of two VOCs (tetrachloroethene and chloroethane) in SDG 410-8628-1. Associated non-detect sample data were “UJ” qualified. Appendix I-4 – Table 3 summarizes Q3 2020 sample results qualified based on continuing calibration verification.

1.1.8 Interference Check Sample (Reason Code ICS)

The interference check sample (ICS) verifies the inter-element and background correction factors for metals analysis using ICP instrumentation. The ICSs were analyzed at the required frequencies, and all ICS results are within the established control criteria for the ICP analytical methods for the Q3 2020 analytical data.

1.1.9 Inductively Coupled Plasma Serial Dilution (Reason Code SD)

The ICP serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. When the concentration of an analyte exceeds 50 times the DL for ICP and 100 times the DL for ICP mass spectrometry, the ICP serial dilution is performed and the results between the original analysis and the diluted analysis are compared. The results of the ICP serial dilution are deemed acceptable when a percent difference between the original analysis and the diluted analysis is less than or equal to 10%.

ICP serial dilution was performed based on the above criteria for the Q3 2020 samples as deemed appropriate. ICP serial dilution results were within the above criteria for all samples and analytes for the Q3 2020 data.

1.1.10 Sample Confirmation (Reason Code RPD)

As required by DoD and EPA analytical method guidance, sample detections for EDB require confirmation using a second column analysis. EDB sample detections for the Q3 2020 data analyzed using EPA Method SW8011 were confirmed by a second column analysis and reported from the primary column. Any detection of EDB on the second column is considered confirmed unless it appears to be associated with matrix interference. All sample results for Q3 2020 were reported from the primary column. No Q3 2020 sample results were qualified based on second column confirmation.

1.1.11 Field Blanks for Volatile Organic Compounds (Reason Code FB)

Field blanks serve as a check for possible VOCs, BTEX or EDB in air associated with a sampling location. The field blanks are prepared in the field during sampling by pouring ultra-pure water into EPA-certified clean sample containers and exposing the container to the environment at a particular sample location that may be associated with airborne VOC contaminants.

Field blanks for the Q3 2020 sampling events are collected as deemed necessary based on the site conditions at the time of sample collection. Three field blank samples were collected in association with the Q3 sampling events. One detection of acetone was reported in a Q3 2020 field blank sample collected in July. The associated sample result GWTS-INF2-072320 was “U” qualified signifying a non-detect result. Appendix I-4 – Table 3 summarizes sample results qualified based on field blank data for Q3 2020. Appendix I-4 – Table 4 presents the results for the field blank samples collected during the Q3 2020 sampling events.

1.1.12 Trip Blanks for Volatile Organic Compounds (Reason Code TB)

Trip blanks were prepared by the laboratory and stored with the groundwater samples collected for BTEX and EDB analysis. In accordance with the QAPjP requirements, trip blank samples are to be included at a rate of one per cooler when sampling groundwater samples for VOC analysis. A trip blank sample was included with each GWTS sample shipment. No detections of VOCs, BTEX or EDB were reported in trip

blank samples for Q3 sampling events. Appendix I-4 – Table 4 summarizes the results for trip blank samples for the Q3 2020 sampling events.

1.1.13 Equipment Rinse Blanks (Reason Code EB)

No equipment rinse blank samples are required to be collected in conjunction with the GWTS sampling since samples are collected directly from a designated sampling port using dedicated sampling equipment. In addition, equipment rinse blanks were not collected in association with the extraction well samples in Q3 2020.

1.1.14 Field Duplicate Samples

In accordance with the project QAPjP requirements (Kirtland AFB, 2017a), field duplicate samples are collected at a frequency of 10% of the total number of GWTS samples for each monthly sampling event. Field duplicate samples are not collected in association with the well disinfection samples. Three field duplicate samples were collected during the Q3 2020 sampling events in association with 30 GWTS samples (10%). This meets the 10% project requirement for the Q3 2020 event.

Field duplicate RPD was evaluated by calculating the RPD between the parent sample and the duplicate sample. The RPD was calculated using the following equation:

$$RPD = |(S-D)/[(S+D)/2]| \times 100$$

where

- S = Sample result.
- D = Duplicate result.

Acceptable precision control criteria are established at less than or equal to 35% for water samples. The RPD was calculated between pairs of field duplicate samples when both results are reported at or above the LOQ.

The results for the field duplicate samples collected during Q3 2020 are presented on Appendix I-4 – Table 5. The field duplicate results demonstrate acceptable overall field sampling procedures and analytical method precision.

1.1.15 Professional Judgement

Professional judgement may be applied by a third-party data validation subcontractor or the project chemist during the data review process to apply validation qualifiers based on site-specific and project-specific knowledge, historical data, comparability of data, and analytical expertise. Professional judgement was used during Q3 2020 to apply an “R” qualifier to the EDB result for sample GWTS-EFF2-090920, signifying rejected data. This was based on data comparability of the field duplicate and also the subsequent monthly sampling results for the same sample port. Appendix I-4 – Table 3 present the sample result qualified based on professional judgement.

1.2 COMPLETENESS

The following sections present a discussion of contractual, analytical, and technical completeness for the Q3 2020 monitoring analytical data. Completeness calculations were performed for the samples that are used for project decisions. Completeness results are presented in the following sections.

1.2.1 Contractual Completeness

Contractual completeness is a quantitative determination of the number of unqualified results compared to the total number of sample results expressed as a percentage, based on data qualified for QC outliers related to analytical method performance. These include data qualified for calibration or method blank contamination, missed holding times, sample receipt condition, LCS recovery, and/or precision. The contractual completeness goal is 95% per quarterly event. Contractual completeness was calculated as follows:

$$\text{Percent Contractual Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

For the Q3 2020 sampling events, 22 sample results were qualified during data validation based on contractual completeness criteria for holding time (one EDB result) and LCS recoveries (SVOC and manganese results). Contractual completeness (505 unqualified results/527 total results x 100) for the Q3 2020 events is 95.8%, achieving the 95% contractual completeness objective.

1.2.2 Analytical Completeness

Analytical completeness is a quantitative measure of the number of unqualified data results compared to the total number of results expressed as a percentage, based on the target analytes qualified for exceedances of QC requirements based on calibration, LCS, MS/MSD, surrogate, method precision, and laboratory method blank contamination results and professional judgement. The analytical completeness goal is 90% for the project. Analytical completeness was calculated as follows:

$$\text{Percent Analytical Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

For the Q3 2020 analytical results, 32 sample results were qualified “J, UJ, U, and R” based on the analytical completeness criteria. The analytical completeness for the Q3 sample data is 93.9% (495 qualified results/527 total results x 100). The 90% analytical completeness objective was achieved for the Q3 2020 sampling events.

1.2.3 Technical Completeness

Technical completeness is a quantitative measure of the data usability based on the number of rejected data compared to the total number of sample results. The technical completeness goal for each method is equal to or greater than 95%. The technical completeness calculation considers all data that are not rejected (R-qualified) to be usable data to achieve project objectives. The technical completeness was calculated as follows:

$$\text{Percent Technical Completeness} = \frac{\text{Number of Usable Results}}{\text{Total Number of Results}} \times 100$$

The project data quality objectives were achieved for all methods and samples for the Q3 2020 sampling events. The technical completeness for the Q3 2020 data is 99.8% (526 usable results/527 total results x 100) for all analytical parameters. Technical completeness is presented in Appendix I-4 – Table 6.

1.2.4 Data Analysis Completeness

As a part of the data review process, chain-of-custody forms and project data deliverables are reviewed against the project requirements in the Work Plan (Kirtland AFB, 2017a) and O&M Plan (Kirtland AFB, 2016, 2017b, 2018) to ensure compliance with the sampling plan and that analytical results were reported for all planned methods and samples. Data completeness for the Q3 data deliverables was determined to be 100% complete. Level 2 analytical data packages for Q3 2020 data are provided in Appendix I-5. Level 4 data reports are available upon request.

1.3 REPRESENTATIVENESS AND COMPARABILITY

Q3 2020 sampling was conducted in accordance with the sampling and analysis protocols and standard operating procedures documented in the O&M Plan (Kirtland AFB, 2016, 2017b, 2018). Approved procedures were used to collect, preserve, document, and ship samples to the ELLE and EC laboratories, thus ensuring the samples collected for the Q3 2020 sampling events were representative of the conditions.

Groundwater samples for VOCs, BTEX and EDB were collected in 40-milliliter volatile organic analysis (VOA) vials preserved with hydrochloric acid and shipped to ELLE at a temperature less than 6 degrees Celsius. Samples received in VOA vials were inspected to evaluate the presence or absence of any headspace (estimated in millimeters) and documented as sample condition on the laboratory sample receipt report. No VOA vials collected for Q3 2020 presented headspace greater than 6 millimeters upon receipt at the laboratory.

The project laboratory (ELLE) maintains current DoD Environmental Laboratory Accreditation Program certification and adhered to the analytical methods documented in the project QAPjP and DoD QSM requirements to prepare and analyze samples and report the data. This ensured the comparability of the analytical results between different samples and different sampling events. The EC project laboratories for the well disinfection sample analysis maintain state-specific drinking water certification. For the Q3 2020 GWTS data, an EPA Stage 3 validation was performed on 100% of the analytical data to verify that the laboratory complied with the DoD QSM, project QAPjP, and method requirements. QC results that exceeded method control criteria resulted in data qualification as presented in the previous sections. Based on a review of the completed sample collection logs, chain-of-custody forms, sample receipt forms, and laboratory data packages, the analytical data reported for the Q3 2020 sampling events achieved the project data representativeness and comparability requirements.

1.4 SENSITIVITY

Data sensitivity for the Q3 2020 analytical data was achieved by complying with the analytical method guidelines and reporting limits specified in the project QAPjP. The analytical methods used for sample analysis achieved the lower of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 (New Mexico Environment Department, 2010) and New Mexico Administrative Code Title 20.6.2.3103, Standards for Groundwater of 10,000 Milligrams per Liter Total Dissolved Solids Concentration or Less (New Mexico Administrative Code, 2018). Project screening levels are presented in the QAPjP, Attachment 1, Table 1-1. For the Q3 2020 analytical results, detections of target compounds reported below the LOQ and MRL are J-flagged as estimated values. Non-detect analytes are reported at the LOD

per the DoD QSM requirements unless as noted above and reported at the MRL for the well disinfection data.

1.5 CONCLUSIONS

The analytical data reported for the Q3 2020 GWTS and well disinfection samples have been reviewed for precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity. Data quality criteria exceedances were noted for 33 sample results based on 1) hold time, 2) LCS recovery, 3) MS/MSD recovery, 4) continuing calibration verification, 5) field blank detection, and 6) professional judgement. Associated sample data were qualified “J, UJ, U, and R” signifying estimated detect and non-detect data, non-detect result, and rejected sample result, respectively. All data are usable to achieve the project data quality objectives as qualified with exception of the one rejected EDB result. The 95% technical completeness goal was achieved for all analytical methods for the Q3 2020 sampling events.

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Table 1
Sample Collection Summary, Q3 2020

Well Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
GWTS-BFF-EFF1	GWTS-EFF1-072320	7/23/2020	410-8628-1	VOCs, EDB, Metals, Phenols, Anions, Nitrogen ^b	MS/MSD
GWTS-BFF-EFF2	GWTS-EFF2-072320	7/23/2020	410-8628-1	VOCs, EDB, Metals, Phenols, Anions, Nitrogen ^b	—
GWTS-BFF-EFF2	GWTS-EFF2DUP-072320	7/23/2020	410-8628-1	VOCs, EDB, Metals, Phenols, Anions, Nitrogen ^b	Field Duplicate
Field Blank	GWTS-FB01-072320	7/23/2020	410-8628-1	VOCs, EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-072320	7/23/2020	410-8628-1	BTEX, EDB, Metals	—
GWTS-BFF-GAC2	GWTS-GAC2-072320	7/23/2020	410-8628-1	BTEX, EDB, Metals	—
GWTS-BFF-INF1	GWTS-INF1-072320	7/23/2020	410-8628-1	VOCs, EDB, Metals, Phenols, Anions, Nitrogen ^b	—
GWTS-BFF-INF2	GWTS-INF2-072320	7/23/2020	410-8628-1	VOCs, EDB, Metals, Phenols, Anions, Nitrogen ^b	—
Trip Blank	GWTS-TB01-072320	7/23/2020	410-8628-1	VOCs, EDB	—
Trip Blank	GWTS-TB02-072320	7/23/2020	410-8628-1	VOCs, EDB	—
GWTS-BFF-EFF1	GWTS-EFF1-082620	8/26/2020	410-12115-1	SVOCs ^c	—
GWTS-BFF-INF1	GWTS-INF1-082620	8/26/2020	410-12115-1	SVOCs ^c	—
KAFB-106233	KAFB-106233	8/26/2020	410-12115-1	SVOCs ^c	—
KAFB-106234	KAFB-106234	8/26/2020	410-12115-1	SVOCs ^c	—
GWTS-BFF-EFF1	GWTS-EFF1-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	—
GWTS-BFF-EFF1	GWTS-EFF1DUP-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	Field Duplicate
GWTS-BFF-EFF2	GWTS-EFF2-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	MS/MSD
Field Blank	GWTS-FB02-080520	8/5/2020	410-9909-1	BTEX, EDB	
GWTS-BFF-GAC1	GWTS-GAC1-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	
GWTS-BFF-GAC2	GWTS-GAC2-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	
GWTS-BFF-INF1	GWTS-INF1-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	
GWTS-BFF-INF2	GWTS-INF2-080520	8/5/2020	410-9909-1	BTEX, EDB, Metals	
Trip Blank	GWTS-TB01-080520	8/5/2020	410-9909-1	BTEX, EDB	

Table 1
Sample Collection Summary, Q3 2020

Well Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
GWTS-BFF-GAC1	GWTS-GAC1-A1-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-A2-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-A3-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-B1-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-B2-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-B3-090120	9/1/2020	410-12727-1	EDB	—
GWTS-BFF-EFF1	GWTS-EFF1-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	MS/MSD
GWTS-BFF-EFF2	GWTS-EFF2-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	—
GWTS-BFF-EFF2	GWTS-EFF2DUP-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	Field Duplicate
Field Blank	GWTS-FB01-090920	9/9/2020	410-13531-1	BTEX, EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	—
GWTS-BFF-GAC2	GWTS-GAC2-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	—
GWTS-BFF-INF1	GWTS-INF1-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	—
GWTS-BFF-INF2	GWTS-INF2-090920	9/9/2020	410-13531-1	BTEX, EDB, Metals	—
Trip Blank	GWTS-TB01-090920	9/9/2020	410-13531-1	BTEX, EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-A1-090120	9/1/2020	410-12731-1	EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-A2-090120	9/1/2020	410-12731-1	EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-A3-090120	9/1/2020	410-12731-1	EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-B1-090120	9/1/2020	410-12731-1	EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-B2-090120	9/1/2020	410-12731-1	EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-B3-090120	9/1/2020	410-12731-1	EDB	—
Trip Blank	GWTS-TB01-090120	9/1/2020	410-12731-1	EDB	—
KAFB-106239	GW239-203-PreDis	9/10/2020	440-271675-1	Bromate, Chlorite, Perchlorate ^d	—
KAFB-106239	GW239-203-Post Dis	9/14/2020	440-271831-1	Bromate, Chlorite, Perchlorate ^d	—

Table 1
Sample Collection Summary, Q3 2020

^a Analytical methods include: Method SW8260C for VOCs/BTEX; Method SW8011 for EDB; Method SW6010C for dissolved iron and manganese.

^b Analytical methods include: Method SW8260C for VOCs/BTEX; Method SW8011 for EDB; Method SW6010C for dissolved iron and manganese; Method E300.0 for anions; Method E420.4 for phenols, and Method E353.2 for

^c Analytical method includes Method SW8270D for SVOCs (1-methylnaphthalene, 2-methylnaphthalene, bis(2-ethylhexyl) phthalate, naphthalene, and pyrene).

^d Analytical methods include: Method E300.1B for bromate and chlorite; Method E331.0 for perchlorate.

— = no comments

BTEX = benzene, toluene, ethylbenzene, xylenes

EDB = ethylene dibromide

ID = identification

MS = matrix spike

MSD = matrix spike duplicate

SVOCs = semivolatile organic compounds

VOCs = volatile organic compounds

Table 2
Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Data Validation	
Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Reason Codes for Data Validation	
Reason Code	Description
CB/CCB	Calibration blank or continuing calibration blank outside of control limits
CCV	Calibration verification outside of control limits
EB	Equipment rinse blank contamination
FB	Field blank contamination
FD	Field duplicate sample results out of control criteria
HT	Holding time exceedance
ICS	Interference check sample
LCS	Laboratory control sample recovery out of control criteria
MB	Method blank contamination
MS/MSD	Matrix spike/ matrix spike duplicate recovery outside of control criteria
RPD	Relative percent difference outside of control limits
SD	Inductively coupled plasma serial dilution out of control criteria
SURR	Surrogate recovery outside of control limits
TB	Trip blank contamination

Table 3
Qualified Sample Results, Q3 2020

Well Location ID	Sample Name	Sample Delivery Group	Collection Method	Sample Type	Analyte	Data Qualifier	Validation Reason Code
GWTS-BFF-EFF1	GWTS-EFF1-072320	410-8628-1	Grab	N	Chloride	J	MS/MSD - Percent recovery
GWTS-BFF-EFF2	GWTS-EFF2-072320	410-8628-1	Grab	N	Tetrachloroethene	UJ	Continuing Calibration Verification
GWTS-BFF-EFF2	GWTS-EFF2-072320	410-8628-1	Grab	N	Chloroethane	UJ	Continuing Calibration Verification
GWTS-BFF-EFF2	GWTS-EFF2DUP-072320	410-8628-1	Grab	FD	Tetrachloroethene	UJ	Continuing Calibration Verification
GWTS-BFF-EFF2	GWTS-EFF2DUP-072320	410-8628-1	Grab	FD	Chloroethane	UJ	Continuing Calibration Verification
GWTS-BFF-INF2	GWTS-INF2-072320	410-8628-1	Grab	N	Tetrachloroethene	UJ	Continuing Calibration Verification
GWTS-BFF-INF2	GWTS-INF2-072320	410-8628-1	Grab	N	Acetone	U	Field Blank
GWTS-BFF-INF2	GWTS-INF2-072320	410-8628-1	Grab	N	Chloroethane	UJ	Continuing Calibration Verification
GWTS-BFF-EFF1	GWTS-EFF1-082620	410-12115-1	Grab	N	Bis(2-ethylhexyl) phthalate	UJ	Laboratory Control Spike
GWTS-BFF-EFF1	GWTS-EFF1-082620	410-12115-1	Grab	N	Pyrene	UJ	Laboratory Control Spike
GWTS-BFF-EFF1	GWTS-EFF1-082620	410-12115-1	Grab	N	1-Methylnaphthalene	UJ	Laboratory Control Spike
GWTS-BFF-EFF1	GWTS-EFF1-082620	410-12115-1	Grab	N	Naphthalene	UJ	Laboratory Control Spike
GWTS-BFF-EFF1	GWTS-EFF1-082620	410-12115-1	Grab	N	2-Methylnaphthalene	UJ	Laboratory Control Spike
GWTS-BFF-INF1	GWTS-INF1-082620	410-12115-1	Grab	N	Bis(2-ethylhexyl) phthalate	UJ	Laboratory Control Spike
GWTS-BFF-INF1	GWTS-INF1-082620	410-12115-1	Grab	N	Pyrene	UJ	Laboratory Control Spike
GWTS-BFF-INF1	GWTS-INF1-082620	410-12115-1	Grab	N	1-Methylnaphthalene	UJ	Laboratory Control Spike
GWTS-BFF-INF1	GWTS-INF1-082620	410-12115-1	Grab	N	Naphthalene	UJ	Laboratory Control Spike
GWTS-BFF-INF1	GWTS-INF1-082620	410-12115-1	Grab	N	2-Methylnaphthalene	UJ	Laboratory Control Spike
KAFB-106233	KAFB-106233	410-12115-1	Grab	N	Bis(2-ethylhexyl) phthalate	UJ	Laboratory Control Spike
KAFB-106233	KAFB-106233	410-12115-1	Grab	N	Pyrene	UJ	Laboratory Control Spike
KAFB-106233	KAFB-106233	410-12115-1	Grab	N	1-Methylnaphthalene	UJ	Laboratory Control Spike
KAFB-106233	KAFB-106233	410-12115-1	Grab	N	Naphthalene	UJ	Laboratory Control Spike
KAFB-106233	KAFB-106233	410-12115-1	Grab	N	2-Methylnaphthalene	UJ	Laboratory Control Spike
KAFB-106234	KAFB-106234	410-12115-1	Grab	N	Bis(2-ethylhexyl) phthalate	UJ	Laboratory Control Spike

Table 3
Qualified Sample Results, Q3 2020

Well Location ID	Sample Name	Sample Delivery Group	Collection Method	Sample Type	Analyte	Data Qualifier	Validation Reason Code
KAFB-106234	KAFB-106234	410-12115-1	Grab	N	Pyrene	UJ	Laboratory Control Spike
KAFB-106234	KAFB-106234	410-12115-1	Grab	N	1-Methylnaphthalene	UJ	Laboratory Control Spike
KAFB-106234	KAFB-106234	410-12115-1	Grab	N	Naphthalene	UJ	Laboratory Control Spike
KAFB-106234	KAFB-106234	410-12115-1	Grab	N	2-Methylnaphthalene	UJ	Laboratory Control Spike
GWTS-BFF-EFF2	GWTS-EFF2-090920	410-13531-1	Grab	N	1,2-Dibromoethane	R	Data Anomaly
GWTS-BFF-INF2	GWTS-INF2-080520	410-9909-1	Grab	N	Manganese	J	Laboratory Control Spike
GWTS-BFF-INF2	GWTS-INF2-080520	410-9909-1	Grab	N	1,2-Dibromoethane	J	Hold Time
GWTS-BFF-EFF1	GWTS-EFF1-090920	410-13531-1	Grab	N	Iron	UJ	recovery
GWTS-BFF-EFF1	GWTS-EFF1-090920	410-13531-1	Grab	N	Manganese	UJ	recovery

Notes:

FD = Field duplicate

ID = identification

MS = Matrix spike

MSD = Matrix spike duplicate

N = Normal field sample

Qualifiers:

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

U = Qualifier denotes the analyte was analyzed for but was not detected above the detection limit.

R = Qualifier denotes the analyte was rejected based on professional judgement and subsequent sampling at the same location.

Table 4
Field Quality Control Sample Results, Q3 2020

Parameter	Analytical Method	Field Sample ID:	GWTS-FB01-072320			GWTS-TB01-072320			GWTS-TB02-072320			GWTS-TB01-080520			GWTS-FB02-080520			GWTS-TB01-090120			GWTS-TB01-090920			GWTS-FB01-090920		
		Sample Date:	7/23/2020			7/23/2020			7/23/2020			8/5/2020			8/5/2020			9/1/2020			9/9/2020			9/9/2020		
		Sample Type:	FB			TB			TB			TB			FB			TB			TB			FB		
		Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-Tetrachloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1,1-Trichloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1,2,2-Tetrachloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1,2-Trichloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1-Dichloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1-Dichloroethene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,1-Dichloropropene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2,3-Trichlorobenzene	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2,3-Trichloropropane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2,4-Trichlorobenzene	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2,4-Trimethylbenzene	ND	U	2	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2-Dibromo-3-chloropropane	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2-Dibromoethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2-Dichlorobenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2-Dichloroethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,2-Dichloropropane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,3,5-Trimethylbenzene	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,3-Dichlorobenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,3-Dichloropropane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1,4-Dichlorobenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		2,2-Dichloropropane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		2-Butanone	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		2-Chlorotoluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		2-Hexanone	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4-Chlorotoluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4-Isopropyltoluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4-Methyl-2-pentanone	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Acetone	1.1	J	2	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Acrolein	ND	U	5	ND	U	5	ND	U	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Acrylonitrile	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Benzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	ND	U	0.5	ND	U	0.5
		Bromobenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Bromochloromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Bromodichloromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Bromoform	ND	U	2	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Bromomethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Carbon disulfide	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Carbon tetrachloride	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Chlorobenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Chloroethane	ND	U	0.5	ND	U	0.5	ND	UJ	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Chloroform	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Chloromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Cis-1,2-Dichloroethene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Cis-1,3-dichloropropene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Dibromochloromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Dibromomethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 4
Field Quality Control Sample Results, Q3 2020

		Field Sample ID:	GWTS-FB01-072320			GWTS-TB01-072320			GWTS-TB02-072320			GWTS-TB01-080520			GWTS-FB02-080520			GWTS-TB01-090120			GWTS-TB01-090920			GWTS-FB01-090920			
		Sample Date:	7/23/2020			7/23/2020			7/23/2020			8/5/2020			8/5/2020			9/1/2020			9/9/2020			9/9/2020			
		Sample Type:	FB			TB			TB			TB			FB			TB			TB			FB			
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	
VOCs	Method SW8260C (µg/L)	Dichlorodifluoromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		Ethylbenzene	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	—	—	—	ND	U	0.8	ND	U	0.8	
		Hexachloro-1,3-butadiene	ND	U	4	ND	U	4	ND	U	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Isopropylbenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		m- & p-Xylenes	ND	U	2	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Methyl tert-butyl ether	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Methylene chloride	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	ND	U	2	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		n-Butylbenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		n-Propylbenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		o-Xylene	ND	U	0.8	ND	U	0.8	ND	U	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		sec-Butylbenzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Styrene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		tert-Butylbenzene	ND	U	1	ND	U	1	ND	U	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Tetrachloroethene	ND	U	0.5	ND	U	0.5	ND	UJ	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Toluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	ND	U	0.5	ND	U	0.5	—
		Trans-1,2-Dichloroethene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Trans-1,3-dichloropropene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Trichloroethene	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Trichlorofluoromethane	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Vinyl acetate	ND	U	2	ND	U	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Vinyl chloride	ND	U	0.5	ND	U	0.5	ND	U	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Xylenes, total	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2	—	—	—	ND	U	2	ND	U	2	—

Table 4
Field Quality Control Sample Results, Q3 2020

µg/L = microgram per liter.
EDB = ethylene dibromide (1,2-dibromoethane).
FB = field blank.
ID = identification.
LOD = limit of detection.
ND = not detected above the detection limit.
TB = trip blank.
Val Qual = validation qualifier.
VOC = volatile organic compound.
Shading = detected concentrations above the detection limit.
Qualifiers:
Val Qual based on independent data validation.
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-EFF2			GWTS-BFF-EFF2		
			Field Sample ID:				GWTS-EFF1-080520			GWTS-EFF1DUP-080520			GWTS-EFF2-072320			GWTS-EFF2DUP-072320		
			Sample Date:				8/5/2020			8/5/2020			7/23/2020			7/23/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate		
Parameter	Analytical Method	Analyte	NMAC NMWQCC	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.05	0.05	0.075	0.05	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	1,1,1,2-Tetrachloroethane	NS	NS	5.7	5.7	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1,1-Trichloroethane	60	200	8,000	60	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1,2,2-Tetrachloroethane	10	NS	0.76	10	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1,2-Trichloroethane	10	5	2.8	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1-Dichloroethane	25	NS	2.8	25	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1-Dichloroethene	5	7	280	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,1-Dichloropropene	NS	NS	NS	NS	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,2,3-Trichlorobenzene	NS	NS	7	7	—	—	—	—	—	—	ND	U	1	ND	U	1
		1,2,3-Trichloropropane	NS	NS	0.0075	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,2,4-Trichlorobenzene	NS	70	11	70	—	—	—	—	—	—	ND	U	1	ND	U	1
		1,2,4-Trimethylbenzene	NS	NS	56	56	—	—	—	—	—	—	ND	U	2	ND	U	2
		1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	—	—	—	—	—	—	ND	U	1	ND	U	1
		1,2-Dibromoethane	0.1	0.05	0.075	0.05	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,2-Dichlorobenzene	NS	600	300	600	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,2-Dichloroethane	10	5	1.7	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,2-Dichloropropane	NS	5	8.25	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,3,5-Trimethylbenzene	NS	NS	60	120	—	—	—	—	—	—	ND	U	1	ND	U	1
		1,3-Dichlorobenzene	NS	600	300	600	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,3-Dichloropropane	NS	NS	370	370	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		1,4-Dichlorobenzene	NS	75	4.8	75	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		2,2-Dichloropropane	NS	NS	NS	NS	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		2-Butanone	NS	NS	5,600	5,600	—	—	—	—	—	—	ND	U	1	ND	U	1
		2-Chlorotoluene	NS	NS	240	240	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		2-Hexanone	NS	NS	38	38	—	—	—	—	—	—	ND	U	1	ND	U	1
		4-Chlorotoluene	NS	NS	250	250	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		4-Isopropyltoluene	NS	NS	NS	NS	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		4-Methyl-2-pentanone	NS	NS	6,300	1,200	—	—	—	—	—	—	ND	U	1	ND	U	1
		Acetone	NS	NS	14,000	14,000	—	—	—	—	—	—	ND	U	2	ND	U	2
		Acrolein	NS	NS	0.042	100	—	—	—	—	—	—	ND	U	5	ND	U	5
		Acrylonitrile	NS	NS	0.52	20	—	—	—	—	—	—	ND	U	1	ND	U	1
		Benzene	10	5	4.5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Bromobenzene	NS	NS	62	62	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Bromochloromethane	NS	NS	83	83	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Bromodichloromethane	NS	80	1.3	80	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Bromoform	NS	80	33	80	—	—	—	—	—	—	ND	U	2	ND	U	2
		Bromomethane	NS	NS	7.5	7.5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Carbon disulfide	NS	NS	810	810	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Carbon tetrachloride	10	5	0.46	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Chlorobenzene	NS	100	78	100	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Chloroethane	NS	NS	21,000	21,000	—	—	—	—	—	—	ND	UJ	0.5	ND	UJ	0.5
		Chloroform	100	80	2.2	80	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5

Table 5
Field Duplicate Sample Results, Q3 2020

			Well Location ID:				GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-EFF2			GWTS-BFF-EFF2		
			Field Sample ID:				GWTS-EFF1-080520			GWTS-EFF1DUP-080520			GWTS-EFF2-072320			GWTS-EFF2DUP-072320		
			Sample Date:				8/5/2020			8/5/2020			7/23/2020			7/23/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate		
VOCs	Method SW8260C (µg/L)	Chloromethane	NS	NS	190	190	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Cis-1,2-Dichloroethene	NS	70	36	70	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Cis-1,3-dichloropropene	NS	NS	4.7	4.7	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Dibromochloromethane	NS	80	1.7	80	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Dibromomethane	NS	NS	8	8	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Dichlorodifluoromethane	NS	NS	200	200	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Ethylbenzene	750	700	15	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Hexachloro-1,3-butadiene	NS	NS	1.4	5	—	—	—	—	—	—	ND	U	4	ND	U	4
		Isopropylbenzene	NS	NS	450	450	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		m- & p-Xylenes	NS	NS	190	10,000	—	—	—	—	—	—	ND	U	2	ND	U	2
		Methyl tert-butyl ether	NS	NS	140	140	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Methylene chloride	100	5	110	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Naphthalene	30	NS	1.7	30	—	—	—	—	—	—	ND	U	2	ND	U	2
		N-butylbenzene	NS	NS	1,000	1,000	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		n-Propylbenzene	NS	NS	660	660	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		o-Xylene	NS	NS	190	10,000	—	—	—	—	—	—	ND	U	0.8	ND	U	0.8
		sec-Butylbenzene	NS	NS	2,000	2,000	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Styrene	NS	100	1,200	100	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		tert-Butylbenzene	NS	NS	690	690	—	—	—	—	—	—	ND	U	1	ND	U	1
		Tetrachloroethene	20	5	110	5	—	—	—	—	—	—	ND	UJ	0.5	ND	UJ	0.5
		Toluene	750	1,000	1,100	750	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Trans-1,2-Dichloroethene	NS	100	360	100	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Trans-1,3-dichloropropene	NS	NS	4.7	4.7	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Trichloroethene	100	5	4.9	5	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Trichlorofluoromethane	NS	NS	5,200	1,100	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Vinyl acetate	NS	NS	410	410	—	—	—	—	—	—	—	—	—	—	—	—
		Vinyl chloride	1	2	0.19	1	—	—	—	—	—	—	ND	U	0.5	ND	U	0.5
		Xylenes, total	620	10,000	190	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2
SVOCs	Method SW8270D (µg/L)	1-Methylnaphthalene	NS	NS	11	11	—	—	—	—	—	—	—	—	—	—	—	—
		2-Methylnaphthalene	NS	NS	36	36	—	—	—	—	—	—	—	—	—	—	—	—
		Bis(2-ethylhexyl) phthalate	NS	6	56	6	—	—	—	—	—	—	—	—	—	—	—	—
		Naphthalene	30	NS	1.2	30	—	—	—	—	—	—	—	—	—	—	—	—
		Pyrene	NS	NS	120	120	—	—	—	—	—	—	—	—	—	—	—	—
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052
Anions	Method E300.0 (mg/L)	Chloride	250	250	NS	250	—	—	—	—	—	—	20	--	1.5	19	--	1.5
		Sulfate	600	250	NS	250	—	—	—	—	—	—	36	--	4.5	35	--	4.5
	Method E353.2 (mg/L)	Nitrate/Nitrite Nitrogen	10	10	NS	10	—	—	—	—	—	—	0.19	--	0.09	0.17	--	0.09
Phenols	Method E420.4 (mg/L)	Phenols	0.005	NS	NS	0.005	—	—	—	—	—	—	ND	U	0.015	ND	U	0.015

Table 5
Field Duplicate Sample Results, Q3 2020

Well Location ID:					GWTS-BFF-EFF2			GWTS-BFF-EFF2		
Field Sample ID:					GWTS-EFF2-090920			GWTS-EFF2DUP-090920		
Sample Date:					9/9/2020			9/9/2020		
Sample Type:					REG			Field Duplicate		
Analyte	NMAC NMWQCC	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD
1,2-Dibromoethane	0.05	0.05	0.075	0.05	0.013	J	0.019	ND	U	0.019
1,1,1,2-Tetrachloroethane	NS	NS	5.7	5.7	—	—	—	—	—	—
1,1,1-Trichloroethane	60	200	8,000	60	—	—	—	—	—	—
1,1,2,2-Tetrachloroethane	10	NS	0.76	10	—	—	—	—	—	—
1,1,2-Trichloroethane	10	5	2.8	5	—	—	—	—	—	—
1,1-Dichloroethane	25	NS	2.8	25	—	—	—	—	—	—
1,1-Dichloroethene	5	7	280	5	—	—	—	—	—	—
1,1-Dichloropropene	NS	NS	NS	NS	—	—	—	—	—	—
1,2,3-Trichlorobenzene	NS	NS	7	7	—	—	—	—	—	—
1,2,3-Trichloropropane	NS	NS	0.0075	5	—	—	—	—	—	—
1,2,4-Trichlorobenzene	NS	70	11	70	—	—	—	—	—	—
1,2,4-Trimethylbenzene	NS	NS	56	56	—	—	—	—	—	—
1,2-Dibromo-3-chloropropane	NS	0.2	0.0033	5	—	—	—	—	—	—
1,2-Dibromoethane	0.1	0.05	0.075	0.05	—	—	—	—	—	—
1,2-Dichlorobenzene	NS	600	300	600	—	—	—	—	—	—
1,2-Dichloroethane	10	5	1.7	5	—	—	—	—	—	—
1,2-Dichloropropane	NS	5	8.25	5	—	—	—	—	—	—
1,3,5-Trimethylbenzene	NS	NS	60	120	—	—	—	—	—	—
1,3-Dichlorobenzene	NS	600	300	600	—	—	—	—	—	—
1,3-Dichloropropane	NS	NS	370	370	—	—	—	—	—	—
1,4-Dichlorobenzene	NS	75	4.8	75	—	—	—	—	—	—
2,2-Dichloropropane	NS	NS	NS	NS	—	—	—	—	—	—
2-Butanone	NS	NS	5,600	5,600	—	—	—	—	—	—
2-Chlorotoluene	NS	NS	240	240	—	—	—	—	—	—
2-Hexanone	NS	NS	38	38	—	—	—	—	—	—
4-Chlorotoluene	NS	NS	250	250	—	—	—	—	—	—
4-Isopropyltoluene	NS	NS	NS	NS	—	—	—	—	—	—
4-Methyl-2-pentanone	NS	NS	6,300	1,200	—	—	—	—	—	—
Acetone	NS	NS	14,000	14,000	—	—	—	—	—	—
Acrolein	NS	NS	0.042	100	—	—	—	—	—	—
Acrylonitrile	NS	NS	0.52	20	—	—	—	—	—	—
Benzene	10	5	4.5	5	ND	U	0.5	ND	U	0.5
Bromobenzene	NS	NS	62	62	—	—	—	—	—	—
Bromochloromethane	NS	NS	83	83	—	—	—	—	—	—
Bromodichloromethane	NS	80	1.3	80	—	—	—	—	—	—
Bromoform	NS	80	33	80	—	—	—	—	—	—
Bromomethane	NS	NS	7.5	7.5	—	—	—	—	—	—
Carbon disulfide	NS	NS	810	810	—	—	—	—	—	—
Carbon tetrachloride	10	5	0.46	5	—	—	—	—	—	—
Chlorobenzene	NS	100	78	100	—	—	—	—	—	—
Chloroethane	NS	NS	21,000	21,000	—	—	—	—	—	—
Chloroform	100	80	2.2	80	—	—	—	—	—	—

Table 5
Field Duplicate Sample Results, Q3 2020

	Well Location ID:				GWTS-BFF-EFF2			GWTS-BFF-EFF2		
	Field Sample ID:				GWTS-EFF2-090920			GWTS-EFF2DUP-090920		
	Sample Date:				9/9/2020			9/9/2020		
	Sample Type:				REG			Field Duplicate		
Chloromethane	NS	NS	190	190	—	—	—	—	—	—
Cis-1,2-Dichloroethene	NS	70	36	70	—	—	—	—	—	—
Cis-1,3-dichloropropene	NS	NS	4.7	4.7	—	—	—	—	—	—
Dibromochloromethane	NS	80	1.7	80	—	—	—	—	—	—
Dibromomethane	NS	NS	8	8	—	—	—	—	—	—
Dichlorodifluoromethane	NS	NS	200	200	—	—	—	—	—	—
Ethylbenzene	750	700	15	700	ND	U	0.8	ND	U	0.8
Hexachloro-1,3-butadiene	NS	NS	1.4	5	—	—	—	—	—	—
Isopropylbenzene	NS	NS	450	450	—	—	—	—	—	—
m- & p-Xylenes	NS	NS	190	10,000	—	—	—	—	—	—
Methyl tert-butyl ether	NS	NS	140	140	—	—	—	—	—	—
Methylene chloride	100	5	110	5	—	—	—	—	—	—
Naphthalene	30	NS	1.7	30	—	—	—	—	—	—
N-butylbenzene	NS	NS	1,000	1,000	—	—	—	—	—	—
n-Propylbenzene	NS	NS	660	660	—	—	—	—	—	—
o-Xylene	NS	NS	190	10,000	—	—	—	—	—	—
sec-Butylbenzene	NS	NS	2,000	2,000	—	—	—	—	—	—
Styrene	NS	100	1,200	100	—	—	—	—	—	—
tert-Butylbenzene	NS	NS	690	690	—	—	—	—	—	—
Tetrachloroethene	20	5	110	5	—	—	—	—	—	—
Toluene	750	1,000	1,100	750	ND	U	0.5	ND	U	0.5
Trans-1,2-Dichloroethene	NS	100	360	100	—	—	—	—	—	—
Trans-1,3-dichloropropene	NS	NS	4.7	4.7	—	—	—	—	—	—
Trichloroethene	100	5	4.9	5	—	—	—	—	—	—
Trichlorofluoromethane	NS	NS	5,200	1,100	—	—	—	—	—	—
Vinyl acetate	NS	NS	410	410	—	—	—	—	—	—
Vinyl chloride	1	2	0.19	1	—	—	—	—	—	—
Xylenes, total	620	10,000	190	620	ND	U	2	ND	U	2
1-Methylnaphthalene	NS	NS	11	11	—	—	—	—	—	—
2-Methylnaphthalene	NS	NS	36	36	—	—	—	—	—	—
Bis(2-ethylhexyl) phthalate	NS	6	56	6	—	—	—	—	—	—
Naphthalene	30	NS	1.2	30	—	—	—	—	—	—
Pyrene	NS	NS	120	120	—	—	—	—	—	—
Iron, dissolved	1.0	NS	NS	1.0	ND	U	0.1	ND	U	0.1
Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0052	ND	U	0.0052
Chloride	250	250	NS	250	—	—	—	—	—	—
Sulfate	600	250	NS	250	—	—	—	—	—	—
Nitrate/Nitrite Nitrogen	10	10	NS	10	—	—	—	—	—	—
Phenols	0.005	NS	NS	0.005	—	—	—	—	—	—

Table 5
Field Duplicate Sample Results, Q3 2020

^a NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC, 2018).
^b EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40CFR Part 141, 143 (May 2018).
^c EPA Region 6 RSL for Tapwater (May 2020) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.
^d The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

µg/L = microgram per liter
AFB = Air Force Base
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
ID = identification
LOD = limit of detection
MCL = maximum contaminant level
mg/L= milligram per liter
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
REG = normal field sample
RSL = regional screening level
SVOC = semivolatile organic compound
Val Qual = validation qualifier
VOC = volatile organic compound

Shading = detected concentrations above the detection limit

Val Quals based on independent data validation:
J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

Table 6
Technical Data Completeness, Q3 2020

Analytical Parameter	Field/Field Duplicate Sample Analytes	Quality Control Sample Analytes (TB and FB)	Qualified Analytes	Percent Technical Completeness^a
VOCs (SW8260C)	406	222	7	100
Ethylene dibromide (SW8011)	33	8	2	97
SVOCs (SW8270D)	20	0	20	100
Dissolved metals (SW6010C) ^b	42	0	3	100
Anions (E300.0) ^c	10	0	1	100
Anions (E300.1) ^d	4	0	0	100
Nitrogen (E353.2)	5	0	0	100
Phenols (E420.4)	5	0	0	100
Perchlorate (E331.0)	2	0	0	100

Notes:

^a Percent technical completeness including analytes qualified as estimated data and one rejected data result.

^b Dissolved metals (SW6010C) = dissolved iron, manganese for GWTS and well samples.

^c Anions (E300.0) = chloride and sulfate.

^d Anions (E300.1) = chlorite and bromate.

SVOCs = semivolatile organic compounds

VOCs = volatile organic compounds

FB = field blank

TB = trip blank



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-8628-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility
Revision: 2

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
9/24/2020 2:55:28 PM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Kay Hower
Principal Project Manager
9/24/2020 2:55:28 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC/MS VOA TICs

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Job ID: 410-8628-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-8628-1

Receipt

The samples were received on 7/24/2020 10:47 AM and 7/24/2020 10:48 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.7° C and 1.0° C.

Receipt Exceptions

The container count on the COC for sample GWTS-EFF1-072320 is 35, we received 33 containers for this sample.

GC/MS VOA

Method 8260C DOD: The continuing calibration verification (CCV) associated with batch 410-30082 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260C DOD: The response for Acetone in the initial calibration verification (ICV) marginally exceeds the DoD acceptance criteria on batch 410-30082. Due to the marginal nature of the outlier(s), the data is reported.

Method 8260C DOD: The response for Dichlorodifluoromethane and Vinyl chloride in the continuing calibration verification (CCV) marginally exceeds the DoD acceptance criteria on batch 410-30082. Due to the marginal nature of the outlier(s), the data is reported.

Method 8260C DOD: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 410-28284 was outside control limits due to laboratory error. The associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260C DOD: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid to pH <2 on analytical batch 410-30082 : GWTS-EFF1-072320 (410-8628-1), GWTS-TB01-072320 (410-8628-4) and GWTS-FB01-072320 (410-8628-5). The requested target analyte list includes Acrolein and Acrylonitrile.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 410-28585 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Job ID: 410-8628-1 (Continued)

Laboratory: Eurofins Lancaster Laboratories Env, LLC (Conti

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF1-072320

Lab Sample ID: 410-8628-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.25	J	0.50	0.20	0.10	ug/L	1		8270D	Total/NA
2-Methylnaphthalene	0.16	J	0.50	0.20	0.10	ug/L	1		8270D	Total/NA
Naphthalene	0.18	J M	0.50	0.20	0.10	ug/L	1		8270D	Total/NA
Pyrene	0.32	J	0.50	0.20	0.10	ug/L	1		8270D	Total/NA
Chloride	52	J J1 D M	80	60	40	mg/L	200		EPA 300.0 R2.1	Total/NA
Sulfate	80	J D	200	180	60	mg/L	200		EPA 300.0 R2.1	Total/NA
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L	1		353.2	Total/NA

Client Sample ID: GWTS-GAC1-072320

Lab Sample ID: 410-8628-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.010	J	0.029	0.019	0.0097	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	0.23	J	0.55	0.22	0.11	ug/L	1		8270D	Total/NA
2-Methylnaphthalene	0.20	J	0.55	0.22	0.11	ug/L	1		8270D	Total/NA
Naphthalene	0.21	J	0.55	0.22	0.11	ug/L	1		8270D	Total/NA
Pyrene	0.37	J	0.55	0.22	0.11	ug/L	1		8270D	Total/NA
Chloride	61	J D M	80	60	40	mg/L	200		EPA 300.0 R2.1	Total/NA
Sulfate	83	J D	200	180	60	mg/L	200		EPA 300.0 R2.1	Total/NA
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L	1		353.2	Total/NA

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

No Detections.

Client Sample ID: GWTS-FB01-072320

Lab Sample ID: 410-8628-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.1	J Q	20	2.0	0.70	ug/L	1		8260C DOD	Total/NA

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20	D M	2.0	1.5	1.0	mg/L	5		EPA 300.0 R2.1	Total/NA
Sulfate	36	D	5.0	4.5	1.5	mg/L	5		EPA 300.0 R2.1	Total/NA
Nitrate Nitrite as N	0.19		0.10	0.090	0.040	mg/L	1		353.2	Total/NA

Client Sample ID: GWTS-EFF2DUP-072320

Lab Sample ID: 410-8629-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19	D M	2.0	1.5	1.0	mg/L	5		EPA 300.0 R2.1	Total/NA
Sulfate	35	D	5.0	4.5	1.5	mg/L	5		EPA 300.0 R2.1	Total/NA
Nitrate Nitrite as N	0.17		0.10	0.090	0.040	mg/L	1		353.2	Total/NA

Client Sample ID: GWTS-GAC2-072320

Lab Sample ID: 410-8629-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.011	J	0.029	0.019	0.0096	ug/L	1		8011	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF2-072320

Lab Sample ID: 410-8629-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.5	J Q	20	2.0	0.70	ug/L	1		8260C DOD	Total/NA
Ethylene Dibromide (1C)	0.029		0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Chloride	20	D M	2.0	1.5	1.0	mg/L	5		EPA 300.0 R2.1	Total/NA
Sulfate	36	D	5.0	4.5	1.5	mg/L	5		EPA 300.0 R2.1	Total/NA
Manganese	0.0047	J	0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved
Nitrate Nitrite as N	0.20		0.10	0.090	0.040	mg/L	1		353.2	Total/NA

Client Sample ID: GWTS-TB02-072320

Lab Sample ID: 410-8629-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF1-072320

Lab Sample ID: 410-8628-1

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 05:08	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		08/06/20 05:08	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 05:08	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 05:08	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 05:08	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 05:08	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 05:08	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 05:08	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 05:08	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 05:08	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		08/06/20 05:08	1
Acetone	2.0	U Q	20	2.0	0.70	ug/L		08/06/20 05:08	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		08/06/20 05:08	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		08/06/20 05:08	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		08/06/20 05:08	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 05:08	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Dichlorodifluoromethane	0.50	U Q	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 05:08	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		08/06/20 05:08	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF1-072320

Lab Sample ID: 410-8628-1

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 05:08	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 05:08	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 05:08	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 05:08	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 05:08	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 05:08	1
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Vinyl acetate	2.0	U	10	2.0	0.70	ug/L		08/06/20 05:08	1
Vinyl chloride	0.50	U Q	1.0	0.50	0.20	ug/L		08/06/20 05:08	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/06/20 05:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/06/20 05:08	1
4-Bromofluorobenzene (Surr)	94		85 - 114		08/06/20 05:08	1
Dibromofluoromethane (Surr)	99		80 - 119		08/06/20 05:08	1
Toluene-d8 (Surr)	99		89 - 112		08/06/20 05:08	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.25	J	0.50	0.20	0.10	ug/L		07/30/20 12:04	1
2-Methylnaphthalene	0.16	J	0.50	0.20	0.10	ug/L		07/30/20 12:04	1
Naphthalene	0.18	J M	0.50	0.20	0.10	ug/L		07/30/20 12:04	1
Pyrene	0.32	J	0.50	0.20	0.10	ug/L		07/30/20 12:04	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.0	ug/L		07/30/20 12:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		43 - 140	07/29/20 16:09	07/30/20 12:04	1
2-Fluorobiphenyl (Surr)	64		44 - 119	07/29/20 16:09	07/30/20 12:04	1
2-Fluorophenol (Surr)	41		19 - 119	07/29/20 16:09	07/30/20 12:04	1
Nitrobenzene-d5 (Surr)	76		44 - 120	07/29/20 16:09	07/30/20 12:04	1
p-Terphenyl-d14 (Surr)	77		50 - 134	07/29/20 16:09	07/30/20 12:04	1
Phenol-d5 (Surr)	31		10 - 65	07/29/20 16:09	07/30/20 12:04	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0095	ug/L		08/03/20 22:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	61		46 - 136	07/29/20 01:41	08/03/20 22:32	1
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136	07/29/20 01:41	08/03/20 22:32	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF1-072320

Lab Sample ID: 410-8628-1

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	52	J J1 D M	80	60	40	mg/L		07/27/20 07:30	200
Sulfate	80	J D	200	180	60	mg/L		07/27/20 07:30	200

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U J1	0.21	0.10	0.041	mg/L		07/30/20 08:19	1
Manganese	0.0052	U J1	0.010	0.0052	0.0031	mg/L		07/30/20 08:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L		08/06/20 07:42	1
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/07/20 02:56	1

Client Sample ID: GWTS-GAC1-072320

Lab Sample ID: 410-8628-2

Date Collected: 07/23/20 09:37

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 06:58	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 06:58	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 06:58	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/06/20 06:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		08/06/20 06:58	1
4-Bromofluorobenzene (Surr)	94		85 - 114		08/06/20 06:58	1
Dibromofluoromethane (Surr)	98		80 - 119		08/06/20 06:58	1
Toluene-d8 (Surr)	99		89 - 112		08/06/20 06:58	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.010	J	0.029	0.019	0.0097	ug/L		08/03/20 23:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	57		46 - 136	07/29/20 01:47	08/03/20 23:23	1
1,1,2,2-Tetrachloroethane (2C)	61		46 - 136	07/29/20 01:47	08/03/20 23:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:38	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:38	1

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Date Collected: 07/23/20 09:51

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 07:20	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Date Collected: 07/23/20 09:51

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		08/06/20 07:20	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 07:20	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 07:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 07:20	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 07:20	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 07:20	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 07:20	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 07:20	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 07:20	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		08/06/20 07:20	1
Acetone	2.0	U Q	20	2.0	0.70	ug/L		08/06/20 07:20	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		08/06/20 07:20	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		08/06/20 07:20	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		08/06/20 07:20	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 07:20	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Dichlorodifluoromethane	0.50	U Q	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 07:20	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		08/06/20 07:20	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 07:20	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 07:20	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Date Collected: 07/23/20 09:51

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 07:20	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 07:20	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 07:20	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 07:20	1
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Vinyl acetate	2.0	U	10	2.0	0.70	ug/L		08/06/20 07:20	1
Vinyl chloride	0.50	U Q	1.0	0.50	0.20	ug/L		08/06/20 07:20	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/06/20 07:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/06/20 07:20	1
4-Bromofluorobenzene (Surr)	95		85 - 114		08/06/20 07:20	1
Dibromofluoromethane (Surr)	98		80 - 119		08/06/20 07:20	1
Toluene-d8 (Surr)	99		89 - 112		08/06/20 07:20	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.23	J	0.55	0.22	0.11	ug/L		07/30/20 13:36	1
2-Methylnaphthalene	0.20	J	0.55	0.22	0.11	ug/L		07/30/20 13:36	1
Naphthalene	0.21	J	0.55	0.22	0.11	ug/L		07/30/20 13:36	1
Pyrene	0.37	J	0.55	0.22	0.11	ug/L		07/30/20 13:36	1
Bis(2-ethylhexyl) phthalate	11	U	12	11	5.5	ug/L		07/30/20 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		43 - 140	07/29/20 16:09	07/30/20 13:36	1
2-Fluorobiphenyl (Surr)	64		44 - 119	07/29/20 16:09	07/30/20 13:36	1
2-Fluorophenol (Surr)	37		19 - 119	07/29/20 16:09	07/30/20 13:36	1
Nitrobenzene-d5 (Surr)	79		44 - 120	07/29/20 16:09	07/30/20 13:36	1
p-Terphenyl-d14 (Surr)	67		50 - 134	07/29/20 16:09	07/30/20 13:36	1
Phenol-d5 (Surr)	29		10 - 65	07/29/20 16:09	07/30/20 13:36	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.028	0.019	0.0095	ug/L		08/03/20 23:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136	07/29/20 01:47	08/03/20 23:57	1
1,1,2,2-Tetrachloroethane (2C)	57		46 - 136	07/29/20 01:47	08/03/20 23:57	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	61	J D M	80	60	40	mg/L		07/27/20 08:21	200

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Date Collected: 07/23/20 09:51

Matrix: Water

Date Received: 07/24/20 10:48

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	83	J D	200	180	60	mg/L		07/27/20 08:21	200

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:41	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	1.1		0.10	0.090	0.040	mg/L		08/06/20 07:33	1
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/08/20 00:33	1

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:22	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		08/06/20 00:22	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:22	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:22	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:22	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:22	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:22	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:22	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 00:22	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 00:22	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		08/06/20 00:22	1
Acetone	2.0	U Q	20	2.0	0.70	ug/L		08/06/20 00:22	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		08/06/20 00:22	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		08/06/20 00:22	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		08/06/20 00:22	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:22	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 00:22	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		08/06/20 00:22	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:22	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:22	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:22	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 00:22	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:22	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:22	1
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Vinyl acetate	2.0	U	10	2.0	0.70	ug/L		08/06/20 00:22	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:22	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/06/20 00:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		08/06/20 00:22	1
4-Bromofluorobenzene (Surr)	96		85 - 114		08/06/20 00:22	1
Dibromofluoromethane (Surr)	98		80 - 119		08/06/20 00:22	1
Toluene-d8 (Surr)	99		89 - 112		08/06/20 00:22	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M Q	0.029	0.019	0.0097	ug/L		07/31/20 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	55		46 - 136	07/29/20 01:47	07/31/20 16:07	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (2C)	53		46 - 136	07/29/20 01:47	07/31/20 16:07	1

Client Sample ID: GWTS-FB01-072320

Lab Sample ID: 410-8628-5

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:44	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		08/06/20 00:44	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:44	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:44	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:44	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:44	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:44	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:44	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 00:44	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		08/06/20 00:44	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		08/06/20 00:44	1
Acetone	1.1	J Q	20	2.0	0.70	ug/L		08/06/20 00:44	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		08/06/20 00:44	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		08/06/20 00:44	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		08/06/20 00:44	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:44	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-FB01-072320

Lab Sample ID: 410-8628-5

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 00:44	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		08/06/20 00:44	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:44	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		08/06/20 00:44	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		08/06/20 00:44	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		08/06/20 00:44	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		08/06/20 00:44	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/06/20 00:44	1
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Vinyl acetate	2.0	U	10	2.0	0.70	ug/L		08/06/20 00:44	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		08/06/20 00:44	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/06/20 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		08/06/20 00:44	1
4-Bromofluorobenzene (Surr)	95		85 - 114		08/06/20 00:44	1
Dibromofluoromethane (Surr)	98		80 - 119		08/06/20 00:44	1
Toluene-d8 (Surr)	99		89 - 112		08/06/20 00:44	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M Q	0.029	0.019	0.0096	ug/L		07/31/20 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	53		46 - 136	07/29/20 01:47	07/31/20 16:24	1
1,1,2,2-Tetrachloroethane (2C)	52		46 - 136	07/29/20 01:47	07/31/20 16:24	1

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:34	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		07/31/20 08:34	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:34	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:34	1
1,2-Dibromo-3-Chloropropane	1.0	U Q	5.0	1.0	0.30	ug/L		07/31/20 08:34	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:34	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:34	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 08:34	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
2-Hexanone	1.0	U Q	10	1.0	0.30	ug/L		07/31/20 08:34	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
4-Methyl-2-pentanone	1.0	U Q	10	1.0	0.50	ug/L		07/31/20 08:34	1
Acetone	2.0	U Q	20	2.0	0.70	ug/L		07/31/20 08:34	1
Acrolein	5.0	U Q	100	5.0	3.0	ug/L		07/31/20 08:34	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		07/31/20 08:34	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		07/31/20 08:34	1
Bromomethane	0.50	U Q	1.0	0.50	0.30	ug/L		07/31/20 08:34	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Chloroethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 08:34	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		07/31/20 08:34	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:34	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:34	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:34	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 08:34	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:34	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:34	1
Tetrachloroethene	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Trichlorofluoromethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:34	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 08:34	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Vinyl acetate (TIC)	1.0	U	ug/L			108-05-4		07/31/20 08:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/31/20 08:34	1
4-Bromofluorobenzene (Surr)	92		85 - 114		07/31/20 08:34	1
Dibromofluoromethane (Surr)	103		80 - 119		07/31/20 08:34	1
Toluene-d8 (Surr)	97		89 - 112		07/31/20 08:34	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U	0.52	0.21	0.10	ug/L		08/03/20 23:52	1
2-Methylnaphthalene	0.21	U	0.52	0.21	0.10	ug/L		08/03/20 23:52	1
Naphthalene	0.21	U	0.52	0.21	0.10	ug/L		08/03/20 23:52	1
Pyrene	0.21	U	0.52	0.21	0.10	ug/L		08/03/20 23:52	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.2	ug/L		08/03/20 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		43 - 140	07/30/20 09:45	08/03/20 23:52	1
2-Fluorobiphenyl (Surr)	65		44 - 119	07/30/20 09:45	08/03/20 23:52	1
2-Fluorophenol (Surr)	38		19 - 119	07/30/20 09:45	08/03/20 23:52	1
Nitrobenzene-d5 (Surr)	71		44 - 120	07/30/20 09:45	08/03/20 23:52	1
p-Terphenyl-d14 (Surr)	81		50 - 134	07/30/20 09:45	08/03/20 23:52	1
Phenol-d5 (Surr)	29		10 - 65	07/30/20 09:45	08/03/20 23:52	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	79	J1	46 - 136	07/29/20 01:47	07/31/20 17:33	1
1,1,2,2-Tetrachloroethane (2C)	50	J1	46 - 136	07/29/20 01:47	07/31/20 17:33	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	20	D M	2.0	1.5	1.0	mg/L		07/27/20 02:57	5
Sulfate	36	D	5.0	4.5	1.5	mg/L		07/27/20 02:57	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:51	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.19		0.10	0.090	0.040	mg/L		08/06/20 07:37	1
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/07/20 03:14	1

Client Sample ID: GWTS-EFF2DUP-072320

Lab Sample ID: 410-8629-2

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:56	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		07/31/20 08:56	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:56	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:56	1
1,2-Dibromo-3-Chloropropane	1.0	U Q	5.0	1.0	0.30	ug/L		07/31/20 08:56	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:56	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:56	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 08:56	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
2-Hexanone	1.0	U Q	10	1.0	0.30	ug/L		07/31/20 08:56	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
4-Methyl-2-pentanone	1.0	U Q	10	1.0	0.50	ug/L		07/31/20 08:56	1
Acetone	2.0	U Q	20	2.0	0.70	ug/L		07/31/20 08:56	1
Acrolein	5.0	U Q	100	5.0	3.0	ug/L		07/31/20 08:56	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		07/31/20 08:56	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF2DUP-072320

Lab Sample ID: 410-8629-2

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		07/31/20 08:56	1
Bromomethane	0.50	U Q	1.0	0.50	0.30	ug/L		07/31/20 08:56	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Chloroethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 08:56	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		07/31/20 08:56	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:56	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 08:56	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 08:56	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 08:56	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 08:56	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 08:56	1
Tetrachloroethene	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Trichlorofluoromethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 08:56	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 08:56	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Vinyl acetate (TIC)	1.0	U	ug/L			108-05-4		07/31/20 08:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118					07/31/20 08:56	1
4-Bromofluorobenzene (Surr)	91		85 - 114					07/31/20 08:56	1
Dibromofluoromethane (Surr)	104		80 - 119					07/31/20 08:56	1
Toluene-d8 (Surr)	98		89 - 112					07/31/20 08:56	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.22	U	0.56	0.22	0.11	ug/L		08/04/20 00:22	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF2DUP-072320

Lab Sample ID: 410-8629-2

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Methylnaphthalene	0.22	U	0.56	0.22	0.11	ug/L		08/04/20 00:22	1
Naphthalene	0.22	U	0.56	0.22	0.11	ug/L		08/04/20 00:22	1
Pyrene	0.22	U	0.56	0.22	0.11	ug/L		08/04/20 00:22	1
Bis(2-ethylhexyl) phthalate	11	U	12	11	5.6	ug/L		08/04/20 00:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		43 - 140	07/30/20 09:45	08/04/20 00:22	1
2-Fluorobiphenyl (Surr)	69		44 - 119	07/30/20 09:45	08/04/20 00:22	1
2-Fluorophenol (Surr)	44		19 - 119	07/30/20 09:45	08/04/20 00:22	1
Nitrobenzene-d5 (Surr)	77		44 - 120	07/30/20 09:45	08/04/20 00:22	1
p-Terphenyl-d14 (Surr)	81		50 - 134	07/30/20 09:45	08/04/20 00:22	1
Phenol-d5 (Surr)	32		10 - 65	07/30/20 09:45	08/04/20 00:22	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	85	J1	46 - 136	07/29/20 01:47	07/31/20 17:50	1
1,1,2,2-Tetrachloroethane (2C)	56	J1	46 - 136	07/29/20 01:47	07/31/20 17:50	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	19	D M	2.0	1.5	1.0	mg/L		07/27/20 03:31	5
Sulfate	35	D	5.0	4.5	1.5	mg/L		07/27/20 03:31	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:54	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.17		0.10	0.090	0.040	mg/L		08/06/20 07:38	1
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/08/20 00:30	1

Client Sample ID: GWTS-GAC2-072320

Lab Sample ID: 410-8629-3

Date Collected: 07/23/20 11:05

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:18	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 09:18	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:18	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 09:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/31/20 09:18	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/31/20 09:18	1
Dibromofluoromethane (Surr)	103		80 - 119		07/31/20 09:18	1
Toluene-d8 (Surr)	100		89 - 112		07/31/20 09:18	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-GAC2-072320

Lab Sample ID: 410-8629-3

Date Collected: 07/23/20 11:05

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.011	J	0.029	0.019	0.0096	ug/L		07/31/20 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	58		46 - 136	07/29/20 01:47	07/31/20 18:07	1
1,1,2,2-Tetrachloroethane (2C)	59		46 - 136	07/29/20 01:47	07/31/20 18:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:57	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:57	1

Client Sample ID: GWTS-INF2-072320

Lab Sample ID: 410-8629-4

Date Collected: 07/23/20 11:18

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 09:40	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		07/31/20 09:40	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 09:40	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 09:40	1
1,2-Dibromo-3-Chloropropane	1.0	U Q	5.0	1.0	0.30	ug/L		07/31/20 09:40	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 09:40	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 09:40	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 09:40	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 09:40	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
2-Hexanone	1.0	U Q	10	1.0	0.30	ug/L		07/31/20 09:40	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
4-Methyl-2-pentanone	1.0	U Q	10	1.0	0.50	ug/L		07/31/20 09:40	1
Acetone	1.5	J Q	20	2.0	0.70	ug/L		07/31/20 09:40	1
Acrolein	5.0	U Q	100	5.0	3.0	ug/L		07/31/20 09:40	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		07/31/20 09:40	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF2-072320

Lab Sample ID: 410-8629-4

Date Collected: 07/23/20 11:18

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		07/31/20 09:40	1
Bromomethane	0.50	U Q	1.0	0.50	0.30	ug/L		07/31/20 09:40	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Chloroethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 09:40	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		07/31/20 09:40	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 09:40	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 09:40	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 09:40	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 09:40	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 09:40	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 09:40	1
Tetrachloroethene	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Trichlorofluoromethane	0.50	U Q	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 09:40	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 09:40	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Vinyl acetate (TIC)	1.0	U	ug/L			108-05-4		07/31/20 09:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		07/31/20 09:40	1
4-Bromofluorobenzene (Surr)	93		85 - 114		07/31/20 09:40	1
Dibromofluoromethane (Surr)	105		80 - 119		07/31/20 09:40	1
Toluene-d8 (Surr)	99		89 - 112		07/31/20 09:40	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.24	U	0.60	0.24	0.12	ug/L		08/04/20 00:51	1
2-Methylnaphthalene	0.24	U	0.60	0.24	0.12	ug/L		08/04/20 00:51	1
Naphthalene	0.24	U	0.60	0.24	0.12	ug/L		08/04/20 00:51	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-INF2-072320

Lab Sample ID: 410-8629-4

Date Collected: 07/23/20 11:18

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Pyrene	0.24	U	0.60	0.24	0.12	ug/L		08/04/20 00:51	1
Bis(2-ethylhexyl) phthalate	12	U	13	12	6.0	ug/L		08/04/20 00:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		43 - 140				07/30/20 09:45	08/04/20 00:51	1
2-Fluorobiphenyl (Surr)	77		44 - 119				07/30/20 09:45	08/04/20 00:51	1
2-Fluorophenol (Surr)	42		19 - 119				07/30/20 09:45	08/04/20 00:51	1
Nitrobenzene-d5 (Surr)	84		44 - 120				07/30/20 09:45	08/04/20 00:51	1
p-Terphenyl-d14 (Surr)	88		50 - 134				07/30/20 09:45	08/04/20 00:51	1
Phenol-d5 (Surr)	29		10 - 65				07/30/20 09:45	08/04/20 00:51	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.029		0.029	0.019	0.0096	ug/L		07/31/20 18:24	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	50		46 - 136					07/29/20 01:47	07/31/20 18:24	1
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136					07/29/20 01:47	07/31/20 18:24	1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	20	D M	2.0	1.5	1.0	mg/L		07/27/20 04:05	5
Sulfate	36	D	5.0	4.5	1.5	mg/L		07/27/20 04:05	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 09:00	1
Manganese	0.0047	J	0.010	0.0052	0.0031	mg/L		07/30/20 18:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.20		0.10	0.090	0.040	mg/L		08/06/20 07:39	1
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/07/20 03:11	1

Client Sample ID: GWTS-TB02-072320

Lab Sample ID: 410-8629-5

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 01:58	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		07/31/20 01:58	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 01:58	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 01:58	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-TB02-072320

Lab Sample ID: 410-8629-5

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 01:58	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 01:58	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 01:58	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 01:58	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 01:58	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 01:58	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		07/31/20 01:58	1
Acetone	2.0	U	20	2.0	0.70	ug/L		07/31/20 01:58	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		07/31/20 01:58	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		07/31/20 01:58	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		07/31/20 01:58	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 01:58	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 01:58	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		07/31/20 01:58	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 01:58	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 01:58	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 01:58	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 01:58	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 01:58	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 01:58	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-TB02-072320

Lab Sample ID: 410-8629-5

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Toluene	0.50	U M	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 01:58	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 01:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Vinyl acetate (TIC)	1.0	U	ug/L			108-05-4		07/31/20 01:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		07/31/20 01:58	1
4-Bromofluorobenzene (Surr)	91		85 - 114		07/31/20 01:58	1
Dibromofluoromethane (Surr)	103		80 - 119		07/31/20 01:58	1
Toluene-d8 (Surr)	99		89 - 112		07/31/20 01:58	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M	0.029	0.019	0.0096	ug/L		07/31/20 18:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	54		46 - 136	07/29/20 01:47	07/31/20 18:41	1
1,1,2,2-Tetrachloroethane (2C)	52		46 - 136	07/29/20 01:47	07/31/20 18:41	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-8628-1	GWTS-EFF1-072320	101	94	99	99
410-8628-1 MS	GWTS-EFF1-072320	97	100	98	100
410-8628-1 MS	GWTS-EFF1-072320	99	95	95	99
410-8628-1 MSD	GWTS-EFF1-072320	98	100	98	100
410-8628-1 MSD	GWTS-EFF1-072320	99	94	97	99
410-8628-2	GWTS-GAC1-072320	98	94	98	99
410-8628-3	GWTS-INF1-072320	101	95	98	99
410-8628-4	GWTS-TB01-072320	99	96	98	99
410-8628-5	GWTS-FB01-072320	99	95	98	99
410-8629-1	GWTS-EFF2-072320	102	92	103	97
410-8629-2	GWTS-EFF2DUP-072320	101	91	104	98
410-8629-3	GWTS-GAC2-072320	102	93	103	100
410-8629-4	GWTS-INF2-072320	101	93	105	99
410-8629-5	GWTS-TB02-072320	99	91	103	99
LCS 410-28284/4	Lab Control Sample	100	99	100	101
LCS 410-30082/5	Lab Control Sample	98	102	99	100
LCS 410-30082/6	Lab Control Sample	98	97	97	101
MB 410-28284/6	Method Blank	102	91	103	99
MB 410-30082/8	Method Blank	99	96	98	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (43-140)	FBP (44-119)	2FP (19-119)	NBZ (44-120)	TPHd14 (50-134)	PHL (10-65)
410-8628-1	GWTS-EFF1-072320	90	64	41	76	77	31
410-8628-1 MS	GWTS-EFF1-072320	94	75	54	95	81	42
410-8628-1 MSD	GWTS-EFF1-072320	96	78	47	97	80	38
410-8628-3	GWTS-INF1-072320	73	64	37	79	67	29
410-8629-1	GWTS-EFF2-072320	88	65	38	71	81	29
410-8629-2	GWTS-EFF2DUP-072320	92	69	44	77	81	32
410-8629-4	GWTS-INF2-072320	93	77	42	84	88	29
LCS 410-27686/2-A	Lab Control Sample	87	75	58	90	77	47
LCS 410-27869/2-A	Lab Control Sample	102	77	60	87	75	45
MB 410-27686/1-A	Method Blank	79	68	40	91	77	33
MB 410-27869/1-A	Method Blank	98	77	50	91	92	36

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-8628-1	GWTS-EFF1-072320	61	63
410-8628-1 MS	GWTS-EFF1-072320	61	63
410-8628-1 MSD	GWTS-EFF1-072320	56	57
410-8628-2	GWTS-GAC1-072320	57	61
410-8628-2 MS	GWTS-GAC1-072320	93 J1	61 J1
410-8628-3	GWTS-INF1-072320	56	57
410-8628-3 DU	GWTS-INF1-072320	57	56
410-8628-4	GWTS-TB01-072320	55	53
410-8628-5	GWTS-FB01-072320	53	52
410-8629-1	GWTS-EFF2-072320	79 J1	50 J1
410-8629-2	GWTS-EFF2DUP-072320	85 J1	56 J1
410-8629-3	GWTS-GAC2-072320	58	59
410-8629-4	GWTS-INF2-072320	50	63
410-8629-5	GWTS-TB02-072320	54	52
LCS 410-27361/2-A	Lab Control Sample	58	55
LCS 410-27362/2-A	Lab Control Sample	56	51
LCSD 410-27361/3-A	Lab Control Sample Dup	59	56
LCSD 410-27362/3-A	Lab Control Sample Dup	57	53
MB 410-27361/1-A	Method Blank	54	51
MB 410-27362/1-A	Method Blank	52	51

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-28284/6

Matrix: Water

Analysis Batch: 28284

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 00:29	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		07/31/20 00:29	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 00:29	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 00:29	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 00:29	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 00:29	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 00:29	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 00:29	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 00:29	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		07/31/20 00:29	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		07/31/20 00:29	1
Acetone	2.0	U	20	2.0	0.70	ug/L		07/31/20 00:29	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		07/31/20 00:29	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		07/31/20 00:29	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		07/31/20 00:29	1
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 00:29	1
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Chloroform	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 00:29	1
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L		07/31/20 00:29	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-28284/6

Matrix: Water

Analysis Batch: 28284

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 00:29	1
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L		07/31/20 00:29	1
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L		07/31/20 00:29	1
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L		07/31/20 00:29	1
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
Styrene	0.50	U	5.0	0.50	0.20	ug/L		07/31/20 00:29	1
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L		07/31/20 00:29	1
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		07/31/20 00:29	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		07/31/20 00:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		07/31/20 00:29	1
4-Bromofluorobenzene (Surr)	91		85 - 114		07/31/20 00:29	1
Dibromofluoromethane (Surr)	103		80 - 119		07/31/20 00:29	1
Toluene-d8 (Surr)	99		89 - 112		07/31/20 00:29	1

Lab Sample ID: LCS 410-28284/4

Matrix: Water

Analysis Batch: 28284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	19.9		ug/L		100	78 - 124
1,1,1-Trichloroethane	20.0	18.8		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	20.0	20.5		ug/L		102	71 - 121
1,1,2-Trichloroethane	20.0	20.0		ug/L		100	80 - 119
1,1-Dichloroethane	20.0	19.5		ug/L		98	77 - 125
1,1-Dichloroethene	20.0	18.2		ug/L		91	71 - 131
1,1-Dichloropropene	20.0	18.3		ug/L		92	79 - 125
1,2,3-Trichlorobenzene	20.0	20.9		ug/L		105	69 - 129
1,2,3-Trichloropropane	20.0	21.2		ug/L		106	73 - 122
1,2,4-Trichlorobenzene	20.0	19.2		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	20.0	19.4		ug/L		97	76 - 124
1,2-Dibromo-3-Chloropropane	20.0	20.0		ug/L		100	62 - 128
1,2-Dibromoethane	20.0	19.6		ug/L		98	77 - 121
1,2-Dichlorobenzene	20.0	20.7		ug/L		104	80 - 119
1,2-Dichloroethane	20.0	22.3		ug/L		112	73 - 128
1,2-Dichloropropane	20.0	19.8		ug/L		99	78 - 122

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-28284/4

Matrix: Water

Analysis Batch: 28284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	20.0	19.2		ug/L		96	75 - 124
1,3-Dichlorobenzene	20.0	20.6		ug/L		103	80 - 119
1,3-Dichloropropane	20.0	19.8		ug/L		99	80 - 119
1,4-Dichlorobenzene	20.0	20.5		ug/L		103	79 - 118
2,2-Dichloropropane	20.0	19.4		ug/L		97	60 - 139
2-Butanone	150	179		ug/L		120	56 - 143
2-Chlorotoluene	20.0	19.8		ug/L		99	79 - 122
2-Hexanone	100	115		ug/L		115	57 - 139
4-Chlorotoluene	20.0	20.0		ug/L		100	78 - 122
4-Methyl-2-pentanone	100	108		ug/L		108	67 - 130
Acetone	150	219		ug/L		146	39 - 160
Acrolein	150	145		ug/L		97	39 - 155
Acrylonitrile	100	95.5		ug/L		96	63 - 135
Benzene	20.0	18.8		ug/L		94	42 - 138
Bromobenzene	20.0	20.3		ug/L		102	80 - 120
Bromochloromethane	20.0	19.2		ug/L		96	78 - 123
Bromodichloromethane	20.0	19.5		ug/L		97	79 - 125
Bromoform	20.0	17.5		ug/L		87	66 - 130
Bromomethane	20.0	19.5		ug/L		98	53 - 141
Carbon disulfide	20.0	17.7		ug/L		89	64 - 133
Carbon tetrachloride	20.0	19.1		ug/L		96	72 - 136
Chlorobenzene	20.0	19.8		ug/L		99	82 - 118
Chloroethane	20.0	19.7		ug/L		98	60 - 138
Chloroform	20.0	20.1		ug/L		100	79 - 124
Chloromethane	20.0	16.2		ug/L		81	50 - 139
cis-1,2-Dichloroethene	20.0	19.7		ug/L		98	78 - 123
cis-1,3-Dichloropropene	20.0	18.2		ug/L		91	75 - 124
Dibromochloromethane	20.0	19.6		ug/L		98	74 - 126
Dibromomethane	20.0	20.4		ug/L		102	79 - 123
Dichlorodifluoromethane	20.0	13.5		ug/L		68	32 - 152
Ethylbenzene	20.0	19.6		ug/L		98	79 - 121
Hexachlorobutadiene	20.0	18.8		ug/L		94	66 - 134
Isopropylbenzene	20.0	18.5		ug/L		92	72 - 131
m&p-Xylene	40.0	40.6		ug/L		102	80 - 121
Methyl tertiary butyl ether	20.0	17.6		ug/L		88	71 - 124
Methylene Chloride	20.0	19.3		ug/L		96	74 - 124
Naphthalene	20.0	18.4		ug/L		92	61 - 128
n-Butylbenzene	20.0	21.0		ug/L		105	75 - 128
N-Propylbenzene	20.0	20.3		ug/L		101	76 - 126
o-Xylene	20.0	19.5		ug/L		98	78 - 122
p-Isopropyltoluene	20.0	19.8		ug/L		99	77 - 127
sec-Butylbenzene	20.0	19.2		ug/L		96	77 - 126
Styrene	20.0	19.6		ug/L		98	78 - 123
tert-Butylbenzene	20.0	18.8		ug/L		94	78 - 124
Tetrachloroethene	20.0	21.0		ug/L		105	74 - 129
Toluene	20.0	19.2		ug/L		96	80 - 121
trans-1,2-Dichloroethene	20.0	18.5		ug/L		93	75 - 124
trans-1,3-Dichloropropene	20.0	18.7		ug/L		94	73 - 127
Trichloroethene	20.0	18.7		ug/L		94	79 - 123

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-28284/4

Matrix: Water

Analysis Batch: 28284

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	20.0	20.2		ug/L		101	65 - 141
Vinyl chloride	20.0	16.4		ug/L		82	58 - 137
Xylenes, Total	60.0	60.1		ug/L		100	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: MB 410-30082/8

Matrix: Water

Analysis Batch: 30082

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/05/20 23:42	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,1-Dichloroethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,1-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,1-Dichloropropene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,2,3-Trichlorobenzene	1.0	U	5.0	1.0	0.40	ug/L		08/05/20 23:42	1
1,2,3-Trichloropropane	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		08/05/20 23:42	1
1,2,4-Trimethylbenzene	2.0	U	5.0	2.0	1.0	ug/L		08/05/20 23:42	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		08/05/20 23:42	1
1,2-Dibromoethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,2-Dichloroethane	0.50	U	1.0	0.50	0.30	ug/L		08/05/20 23:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,3,5-Trimethylbenzene	1.0	U	5.0	1.0	0.30	ug/L		08/05/20 23:42	1
1,3-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,3-Dichloropropane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
1,4-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
2,2-Dichloropropane	0.50	U	1.0	0.50	0.30	ug/L		08/05/20 23:42	1
2-Butanone	1.0	U	10	1.0	0.30	ug/L		08/05/20 23:42	1
2-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
2-Hexanone	1.0	U	10	1.0	0.30	ug/L		08/05/20 23:42	1
4-Chlorotoluene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		08/05/20 23:42	1
Acetone	2.0	U	20	2.0	0.70	ug/L		08/05/20 23:42	1
Acrolein	5.0	U	100	5.0	3.0	ug/L		08/05/20 23:42	1
Acrylonitrile	1.0	U	20	1.0	0.30	ug/L		08/05/20 23:42	1
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1
Bromobenzene	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
Bromochloromethane	0.50	U	5.0	0.50	0.20	ug/L		08/05/20 23:42	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		08/05/20 23:42	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-30082/8

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 30082

Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Bromoform	2.0	U	4.0	2.0	1.0	ug/L	08/05/20 23:42	1	
Bromomethane	0.50	U	1.0	0.50	0.30	ug/L	08/05/20 23:42	1	
Carbon disulfide	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Carbon tetrachloride	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Chlorobenzene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Chloroform	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Chloromethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Dibromomethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L	08/05/20 23:42	1	
Hexachlorobutadiene	4.0	U	5.0	4.0	2.0	ug/L	08/05/20 23:42	1	
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
m&p-Xylene	2.0	U	5.0	2.0	1.0	ug/L	08/05/20 23:42	1	
Methyl tertiary butyl ether	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Methylene Chloride	0.50	U	1.0	0.50	0.30	ug/L	08/05/20 23:42	1	
Naphthalene	2.0	U	5.0	2.0	1.0	ug/L	08/05/20 23:42	1	
n-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
N-Propylbenzene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
o-Xylene	0.80	U	1.0	0.80	0.40	ug/L	08/05/20 23:42	1	
p-Isopropyltoluene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
sec-Butylbenzene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Styrene	0.50	U	5.0	0.50	0.20	ug/L	08/05/20 23:42	1	
tert-Butylbenzene	1.0	U	5.0	1.0	0.30	ug/L	08/05/20 23:42	1	
Tetrachloroethene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Toluene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Vinyl acetate	2.0	U	10	2.0	0.70	ug/L	08/05/20 23:42	1	
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L	08/05/20 23:42	1	
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L	08/05/20 23:42	1	

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		08/05/20 23:42	1
4-Bromofluorobenzene (Surr)	96		85 - 114		08/05/20 23:42	1
Dibromofluoromethane (Surr)	98		80 - 119		08/05/20 23:42	1
Toluene-d8 (Surr)	99		89 - 112		08/05/20 23:42	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-30082/5

Matrix: Water

Analysis Batch: 30082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	21.2		ug/L		106	78 - 124
1,1,1-Trichloroethane	20.0	20.9		ug/L		104	74 - 131
1,1,2,2-Tetrachloroethane	20.0	21.3		ug/L		106	71 - 121
1,1,2-Trichloroethane	20.0	22.4		ug/L		112	80 - 119
1,1-Dichloroethane	20.0	20.3		ug/L		102	77 - 125
1,1-Dichloroethene	20.0	22.5		ug/L		113	71 - 131
1,1-Dichloropropene	20.0	20.8		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	20.0	21.9		ug/L		109	69 - 129
1,2,3-Trichloropropane	20.0	21.1		ug/L		105	73 - 122
1,2,4-Trichlorobenzene	20.0	22.1		ug/L		111	69 - 130
1,2,4-Trimethylbenzene	20.0	21.1		ug/L		105	76 - 124
1,2-Dibromo-3-Chloropropane	20.0	24.3		ug/L		122	62 - 128
1,2-Dibromoethane	20.0	21.7		ug/L		109	77 - 121
1,2-Dichlorobenzene	20.0	21.8		ug/L		109	80 - 119
1,2-Dichloroethane	20.0	20.3		ug/L		101	73 - 128
1,2-Dichloropropane	20.0	20.5		ug/L		103	78 - 122
1,3,5-Trimethylbenzene	20.0	20.9		ug/L		105	75 - 124
1,3-Dichlorobenzene	20.0	21.4		ug/L		107	80 - 119
1,3-Dichloropropane	20.0	21.2		ug/L		106	80 - 119
1,4-Dichlorobenzene	20.0	21.5		ug/L		107	79 - 118
2,2-Dichloropropane	20.0	20.5		ug/L		102	60 - 139
2-Butanone	150	135		ug/L		90	56 - 143
2-Chlorotoluene	20.0	21.2		ug/L		106	79 - 122
2-Hexanone	100	93.4		ug/L		93	57 - 139
4-Chlorotoluene	20.0	21.0		ug/L		105	78 - 122
4-Methyl-2-pentanone	100	93.8		ug/L		94	67 - 130
Acetone	150	145		ug/L		97	39 - 160
Acrolein	150	119		ug/L		79	39 - 155
Acrylonitrile	100	93.0		ug/L		93	63 - 135
Benzene	20.0	21.2		ug/L		106	42 - 138
Bromobenzene	20.0	19.9		ug/L		100	80 - 120
Bromochloromethane	20.0	18.0		ug/L		90	78 - 123
Bromodichloromethane	20.0	20.5		ug/L		102	79 - 125
Bromoform	20.0	19.4		ug/L		97	66 - 130
Bromomethane	20.0	13.1		ug/L		65	53 - 141
Carbon disulfide	20.0	21.7		ug/L		109	64 - 133
Carbon tetrachloride	20.0	20.5		ug/L		103	72 - 136
Chlorobenzene	20.0	21.6		ug/L		108	82 - 118
Chloroethane	20.0	14.4		ug/L		72	60 - 138
Chloroform	20.0	21.0		ug/L		105	79 - 124
Chloromethane	20.0	14.6		ug/L		73	50 - 139
cis-1,2-Dichloroethene	20.0	22.0		ug/L		110	78 - 123
cis-1,3-Dichloropropene	20.0	20.6		ug/L		103	75 - 124
Dibromochloromethane	20.0	21.4		ug/L		107	74 - 126
Dibromomethane	20.0	21.3		ug/L		106	79 - 123
Dichlorodifluoromethane	20.0	10.8		ug/L		54	32 - 152
Ethylbenzene	20.0	20.9		ug/L		104	79 - 121
Hexachlorobutadiene	20.0	20.7		ug/L		103	66 - 134

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-30082/5

Matrix: Water

Analysis Batch: 30082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	20.0	21.9		ug/L		110	72 - 131
m&p-Xylene	40.0	42.3		ug/L		106	80 - 121
Methyl tertiary butyl ether	20.0	18.9		ug/L		94	71 - 124
Methylene Chloride	20.0	21.2		ug/L		106	74 - 124
Naphthalene	20.0	23.5		ug/L		118	61 - 128
n-Butylbenzene	20.0	21.0		ug/L		105	75 - 128
N-Propylbenzene	20.0	21.3		ug/L		106	76 - 126
o-Xylene	20.0	20.7		ug/L		103	78 - 122
p-Isopropyltoluene	20.0	22.0		ug/L		110	77 - 127
sec-Butylbenzene	20.0	22.0		ug/L		110	77 - 126
Styrene	20.0	21.5		ug/L		108	78 - 123
tert-Butylbenzene	20.0	21.4		ug/L		107	78 - 124
Tetrachloroethene	20.0	19.1		ug/L		95	74 - 129
Toluene	20.0	21.3		ug/L		107	80 - 121
trans-1,2-Dichloroethene	20.0	21.3		ug/L		107	75 - 124
trans-1,3-Dichloropropene	20.0	19.7		ug/L		98	73 - 127
Trichloroethene	20.0	21.0		ug/L		105	79 - 123
Trichlorofluoromethane	20.0	16.1		ug/L		80	65 - 141
Vinyl chloride	20.0	13.9		ug/L		70	58 - 137
Xylenes, Total	60.0	63.0		ug/L		105	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	102		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	100		89 - 112

Lab Sample ID: LCS 410-30082/6

Matrix: Water

Analysis Batch: 30082

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	100	102		ug/L		102	54 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	97		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.50	U	20.0	22.2		ug/L		111	78 - 124
1,1,1-Trichloroethane	0.50	U	20.0	23.2		ug/L		116	74 - 131
1,1,2,2-Tetrachloroethane	0.50	U	20.0	21.7		ug/L		109	71 - 121

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	0.50	U	20.0	22.8		ug/L		114	80 - 119
1,1-Dichloroethane	0.50	U	20.0	22.5		ug/L		113	77 - 125
1,1-Dichloroethene	0.50	U	20.0	25.1		ug/L		125	71 - 131
1,1-Dichloropropene	0.50	U	20.0	23.5		ug/L		117	79 - 125
1,2,3-Trichlorobenzene	1.0	U	20.0	22.0		ug/L		110	69 - 129
1,2,3-Trichloropropane	0.50	U	20.0	21.5		ug/L		108	73 - 122
1,2,4-Trichlorobenzene	1.0	U	20.0	21.9		ug/L		109	69 - 130
1,2,4-Trimethylbenzene	2.0	U	20.0	22.4		ug/L		112	76 - 124
1,2-Dibromo-3-Chloropropane	1.0	U	20.0	20.9		ug/L		104	62 - 128
1,2-Dibromoethane	0.50	U	20.0	21.9		ug/L		110	77 - 121
1,2-Dichlorobenzene	0.50	U	20.0	22.5		ug/L		112	80 - 119
1,2-Dichloroethane	0.50	U	20.0	21.5		ug/L		107	73 - 128
1,2-Dichloropropane	0.50	U	20.0	22.1		ug/L		111	78 - 122
1,3,5-Trimethylbenzene	1.0	U	20.0	22.8		ug/L		114	75 - 124
1,3-Dichlorobenzene	0.50	U	20.0	22.2		ug/L		111	80 - 119
1,3-Dichloropropane	0.50	U	20.0	21.6		ug/L		108	80 - 119
1,4-Dichlorobenzene	0.50	U	20.0	22.4		ug/L		112	79 - 118
2,2-Dichloropropane	0.50	U	20.0	23.1		ug/L		116	60 - 139
2-Butanone	1.0	U	150	143		ug/L		95	56 - 143
2-Chlorotoluene	0.50	U	20.0	22.9		ug/L		115	79 - 122
2-Hexanone	1.0	U	100	96.8		ug/L		97	57 - 139
4-Chlorotoluene	0.50	U	20.0	22.9		ug/L		115	78 - 122
4-Methyl-2-pentanone	1.0	U	100	94.4		ug/L		94	67 - 130
Acetone	2.0	U Q	150	145		ug/L		97	39 - 160
Acrolein	5.0	U	150	121		ug/L		81	39 - 155
Acrylonitrile	1.0	U	100	95.6		ug/L		96	63 - 135
Benzene	0.50	U	20.0	23.1		ug/L		116	42 - 138
Bromobenzene	0.50	U	20.0	21.5		ug/L		108	80 - 120
Bromochloromethane	0.50	U	20.0	19.4		ug/L		97	78 - 123
Bromodichloromethane	0.50	U	20.0	22.0		ug/L		110	79 - 125
Bromoform	2.0	U	20.0	19.1		ug/L		95	66 - 130
Bromomethane	0.50	U	20.0	17.1		ug/L		86	53 - 141
Carbon disulfide	0.50	U	20.0	24.1		ug/L		121	64 - 133
Carbon tetrachloride	0.50	U	20.0	23.6		ug/L		118	72 - 136
Chlorobenzene	0.50	U	20.0	23.2		ug/L		116	82 - 118
Chloroethane	0.50	U	20.0	17.8		ug/L		89	60 - 138
Chloroform	0.50	U	20.0	22.9		ug/L		114	79 - 124
Chloromethane	0.50	U	20.0	16.4		ug/L		82	50 - 139
cis-1,2-Dichloroethene	0.50	U	20.0	23.9		ug/L		119	78 - 123
cis-1,3-Dichloropropene	0.50	U	20.0	21.1		ug/L		106	75 - 124
Dibromochloromethane	0.50	U	20.0	22.1		ug/L		110	74 - 126
Dibromomethane	0.50	U	20.0	22.1		ug/L		110	79 - 123
Dichlorodifluoromethane	0.50	U Q	20.0	13.9		ug/L		69	32 - 152
Ethylbenzene	0.80	U	20.0	22.8		ug/L		114	79 - 121
Hexachlorobutadiene	4.0	U	20.0	22.4		ug/L		112	66 - 134
Isopropylbenzene	0.50	U	20.0	23.4		ug/L		117	72 - 131
m&p-Xylene	2.0	U	40.0	45.7		ug/L		114	80 - 121
Methyl tertiary butyl ether	0.50	U	20.0	19.1		ug/L		96	71 - 124
Methylene Chloride	0.50	U	20.0	22.4		ug/L		112	74 - 124

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	2.0	U	20.0	22.0		ug/L		110	61 - 128
n-Butylbenzene	0.50	U	20.0	22.6		ug/L		113	75 - 128
N-Propylbenzene	0.50	U	20.0	23.9		ug/L		119	76 - 126
o-Xylene	0.80	U	20.0	21.9		ug/L		109	78 - 122
p-Isopropyltoluene	0.50	U	20.0	22.9		ug/L		114	77 - 127
sec-Butylbenzene	0.50	U	20.0	23.7		ug/L		119	77 - 126
Styrene	0.50	U	20.0	22.0		ug/L		110	78 - 123
tert-Butylbenzene	1.0	U	20.0	22.7		ug/L		114	78 - 124
Tetrachloroethene	0.50	U	20.0	19.9		ug/L		100	74 - 129
Toluene	0.50	U	20.0	23.2		ug/L		116	80 - 121
trans-1,2-Dichloroethene	0.50	U	20.0	23.7		ug/L		118	75 - 124
trans-1,3-Dichloropropene	0.50	U	20.0	20.6		ug/L		103	73 - 127
Trichloroethene	0.50	U	20.0	23.4		ug/L		117	79 - 123
Trichlorofluoromethane	0.50	U	20.0	20.2		ug/L		101	65 - 141
Vinyl chloride	0.50	U Q	20.0	16.5		ug/L		82	58 - 137
Xylenes, Total	2.0	U	60.0	67.6		ug/L		113	79 - 121
Surrogate									
	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	97		81 - 118						
4-Bromofluorobenzene (Surr)	100		85 - 114						
Dibromofluoromethane (Surr)	98		80 - 119						
Toluene-d8 (Surr)	100		89 - 112						

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	2.0	U	100	103		ug/L		103	54 - 146
Surrogate									
	%Recovery	MS Qualifier	MS Limits						
1,2-Dichloroethane-d4 (Surr)	99		81 - 118						
4-Bromofluorobenzene (Surr)	95		85 - 114						
Dibromofluoromethane (Surr)	95		80 - 119						
Toluene-d8 (Surr)	99		89 - 112						

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.50	U	20.0	21.8		ug/L		109	78 - 124	2	20
1,1,1-Trichloroethane	0.50	U	20.0	22.9		ug/L		114	74 - 131	1	20
1,1,2,2-Tetrachloroethane	0.50	U	20.0	21.7		ug/L		108	71 - 121	0	20
1,1,2-Trichloroethane	0.50	U	20.0	22.5		ug/L		113	80 - 119	1	20
1,1-Dichloroethane	0.50	U	20.0	22.2		ug/L		111	77 - 125	2	20
1,1-Dichloroethene	0.50	U	20.0	25.1		ug/L		126	71 - 131	0	20
1,1-Dichloropropene	0.50	U	20.0	23.0		ug/L		115	79 - 125	2	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichlorobenzene	1.0	U	20.0	21.9		ug/L		109	69 - 129	1	20
1,2,3-Trichloropropane	0.50	U	20.0	21.4		ug/L		107	73 - 122	1	20
1,2,4-Trichlorobenzene	1.0	U	20.0	21.7		ug/L		109	69 - 130	1	20
1,2,4-Trimethylbenzene	2.0	U	20.0	22.1		ug/L		111	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	1.0	U	20.0	20.8		ug/L		104	62 - 128	1	20
1,2-Dibromoethane	0.50	U	20.0	21.7		ug/L		108	77 - 121	1	20
1,2-Dichlorobenzene	0.50	U	20.0	22.2		ug/L		111	80 - 119	1	20
1,2-Dichloroethane	0.50	U	20.0	21.0		ug/L		105	73 - 128	2	20
1,2-Dichloropropane	0.50	U	20.0	21.8		ug/L		109	78 - 122	1	20
1,3,5-Trimethylbenzene	1.0	U	20.0	22.6		ug/L		113	75 - 124	1	20
1,3-Dichlorobenzene	0.50	U	20.0	22.0		ug/L		110	80 - 119	1	20
1,3-Dichloropropane	0.50	U	20.0	21.6		ug/L		108	80 - 119	0	20
1,4-Dichlorobenzene	0.50	U	20.0	22.1		ug/L		111	79 - 118	1	20
2,2-Dichloropropane	0.50	U	20.0	22.9		ug/L		114	60 - 139	1	20
2-Butanone	1.0	U	150	142		ug/L		95	56 - 143	1	20
2-Chlorotoluene	0.50	U	20.0	22.6		ug/L		113	79 - 122	1	20
2-Hexanone	1.0	U	100	96.1		ug/L		96	57 - 139	1	20
4-Chlorotoluene	0.50	U	20.0	22.8		ug/L		114	78 - 122	1	20
4-Methyl-2-pentanone	1.0	U	100	92.7		ug/L		93	67 - 130	2	20
Acetone	2.0	U Q	150	142		ug/L		95	39 - 160	2	20
Acrolein	5.0	U	150	120		ug/L		80	39 - 155	1	20
Acrylonitrile	1.0	U	100	95.6		ug/L		96	63 - 135	0	20
Benzene	0.50	U	20.0	22.7		ug/L		113	42 - 138	2	20
Bromobenzene	0.50	U	20.0	21.1		ug/L		106	80 - 120	2	20
Bromochloromethane	0.50	U	20.0	19.1		ug/L		95	78 - 123	2	20
Bromodichloromethane	0.50	U	20.0	21.5		ug/L		107	79 - 125	2	20
Bromoform	2.0	U	20.0	19.0		ug/L		95	66 - 130	0	20
Bromomethane	0.50	U	20.0	16.9		ug/L		84	53 - 141	2	20
Carbon disulfide	0.50	U	20.0	24.2		ug/L		121	64 - 133	0	20
Carbon tetrachloride	0.50	U	20.0	23.2		ug/L		116	72 - 136	1	20
Chlorobenzene	0.50	U	20.0	22.8		ug/L		114	82 - 118	2	20
Chloroethane	0.50	U	20.0	17.6		ug/L		88	60 - 138	1	20
Chloroform	0.50	U	20.0	22.6		ug/L		113	79 - 124	1	20
Chloromethane	0.50	U	20.0	16.0		ug/L		80	50 - 139	2	20
cis-1,2-Dichloroethene	0.50	U	20.0	23.6		ug/L		118	78 - 123	1	20
cis-1,3-Dichloropropene	0.50	U	20.0	20.8		ug/L		104	75 - 124	1	20
Dibromochloromethane	0.50	U	20.0	22.0		ug/L		110	74 - 126	0	20
Dibromomethane	0.50	U	20.0	21.8		ug/L		109	79 - 123	1	20
Dichlorodifluoromethane	0.50	U Q	20.0	13.7		ug/L		68	32 - 152	2	20
Ethylbenzene	0.80	U	20.0	22.4		ug/L		112	79 - 121	2	20
Hexachlorobutadiene	4.0	U	20.0	22.8		ug/L		114	66 - 134	2	20
Isopropylbenzene	0.50	U	20.0	22.9		ug/L		114	72 - 131	2	20
m&p-Xylene	2.0	U	40.0	44.9		ug/L		112	80 - 121	2	20
Methyl tertiary butyl ether	0.50	U	20.0	19.1		ug/L		96	71 - 124	0	20
Methylene Chloride	0.50	U	20.0	22.2		ug/L		111	74 - 124	1	20
Naphthalene	2.0	U	20.0	22.1		ug/L		110	61 - 128	0	20
n-Butylbenzene	0.50	U	20.0	22.3		ug/L		112	75 - 128	1	20
N-Propylbenzene	0.50	U	20.0	23.8		ug/L		119	76 - 126	1	20
o-Xylene	0.80	U	20.0	21.5		ug/L		108	78 - 122	2	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
p-Isopropyltoluene	0.50	U	20.0	22.8		ug/L		114	77 - 127	0	20
sec-Butylbenzene	0.50	U	20.0	23.6		ug/L		118	77 - 126	1	20
Styrene	0.50	U	20.0	21.6		ug/L		108	78 - 123	2	20
tert-Butylbenzene	1.0	U	20.0	22.5		ug/L		113	78 - 124	1	20
Tetrachloroethene	0.50	U	20.0	19.7		ug/L		99	74 - 129	1	20
Toluene	0.50	U	20.0	22.9		ug/L		115	80 - 121	1	20
trans-1,2-Dichloroethene	0.50	U	20.0	23.0		ug/L		115	75 - 124	3	20
trans-1,3-Dichloropropene	0.50	U	20.0	20.9		ug/L		104	73 - 127	1	20
Trichloroethene	0.50	U	20.0	22.9		ug/L		114	79 - 123	2	20
Trichlorofluoromethane	0.50	U	20.0	19.5		ug/L		98	65 - 141	3	20
Vinyl chloride	0.50	U Q	20.0	16.5		ug/L		83	58 - 137	0	20
Xylenes, Total	2.0	U	60.0	66.4		ug/L		111	79 - 121	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	100		89 - 112

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30082

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl acetate	2.0	U	100	104		ug/L		104	54 - 146	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	94		85 - 114
Dibromofluoromethane (Surr)	97		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-27686/1-A

Matrix: Water

Analysis Batch: 27913

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27686

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.20	U M	0.50	0.20	0.10	ug/L		07/30/20 11:02	1
2-Methylnaphthalene	0.20	U M	0.50	0.20	0.10	ug/L		07/30/20 11:02	1
Naphthalene	0.20	U M	0.50	0.20	0.10	ug/L		07/30/20 11:02	1
Pyrene	0.20	U M	0.50	0.20	0.10	ug/L		07/30/20 11:02	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.0	ug/L		07/30/20 11:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		43 - 140	07/29/20 16:09	07/30/20 11:02	1
2-Fluorobiphenyl (Surr)	68		44 - 119	07/29/20 16:09	07/30/20 11:02	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-27686/1-A

Matrix: Water

Analysis Batch: 27913

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27686

Surrogate	MB MB %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	40		19 - 119	07/29/20 16:09	07/30/20 11:02	1
Nitrobenzene-d5 (Surr)	91		44 - 120	07/29/20 16:09	07/30/20 11:02	1
p-Terphenyl-d14 (Surr)	77		50 - 134	07/29/20 16:09	07/30/20 11:02	1
Phenol-d5 (Surr)	33		10 - 65	07/29/20 16:09	07/30/20 11:02	1

Lab Sample ID: LCS 410-27686/2-A

Matrix: Water

Analysis Batch: 27913

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27686

Analyte	Spike Added	LCS LCS Result Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	50.0	39.2	ug/L		78	41 - 119
2-Methylnaphthalene	50.0	40.9	ug/L		82	40 - 121
Naphthalene	50.4	39.3	ug/L		78	40 - 121
Pyrene	50.4	43.2	ug/L		86	57 - 126
Bis(2-ethylhexyl) phthalate	50.3	40.6	ug/L		81	55 - 135

Surrogate	LCS LCS %Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	87		43 - 140
2-Fluorobiphenyl (Surr)	75		44 - 119
2-Fluorophenol (Surr)	58		19 - 119
Nitrobenzene-d5 (Surr)	90		44 - 120
p-Terphenyl-d14 (Surr)	77		50 - 134
Phenol-d5 (Surr)	47		10 - 65

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 27913

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Prep Batch: 27686

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS Result Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.25	J	53.2	44.2	ug/L		83	41 - 119
2-Methylnaphthalene	0.16	J	53.2	47.8	ug/L		89	40 - 121
Naphthalene	0.18	J M	53.6	44.0	ug/L		82	40 - 121
Pyrene	0.32	J	53.6	47.0	ug/L		87	57 - 126
Bis(2-ethylhexyl) phthalate	10	U	53.5	43.5	ug/L		81	55 - 135

Surrogate	MS MS %Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		43 - 140
2-Fluorobiphenyl (Surr)	75		44 - 119
2-Fluorophenol (Surr)	54		19 - 119
Nitrobenzene-d5 (Surr)	95		44 - 120
p-Terphenyl-d14 (Surr)	81		50 - 134
Phenol-d5 (Surr)	42		10 - 65

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 27913

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Prep Batch: 27686

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	0.25	J	51.9	43.1		ug/L		83	41 - 119	2	20
2-Methylnaphthalene	0.16	J	51.9	46.4		ug/L		89	40 - 121	3	20
Naphthalene	0.18	J M	52.2	44.1		ug/L		84	40 - 121	0	20
Pyrene	0.32	J	52.3	48.5		ug/L		92	57 - 126	3	20
Bis(2-ethylhexyl) phthalate	10	U	52.2	45.0		ug/L		86	55 - 135	3	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
2,4,6-Tribromophenol (Surr)	96		43 - 140
2-Fluorobiphenyl (Surr)	78		44 - 119
2-Fluorophenol (Surr)	47		19 - 119
Nitrobenzene-d5 (Surr)	97		44 - 120
p-Terphenyl-d14 (Surr)	80		50 - 134
Phenol-d5 (Surr)	38		10 - 65

Lab Sample ID: MB 410-27869/1-A

Matrix: Water

Analysis Batch: 29175

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27869

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		08/03/20 22:54	1
2-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		08/03/20 22:54	1
Naphthalene	0.20	U	0.50	0.20	0.10	ug/L		08/03/20 22:54	1
Pyrene	0.20	U	0.50	0.20	0.10	ug/L		08/03/20 22:54	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.0	ug/L		08/03/20 22:54	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		43 - 140	07/30/20 09:45	08/03/20 22:54	1
2-Fluorobiphenyl (Surr)	77		44 - 119	07/30/20 09:45	08/03/20 22:54	1
2-Fluorophenol (Surr)	50		19 - 119	07/30/20 09:45	08/03/20 22:54	1
Nitrobenzene-d5 (Surr)	91		44 - 120	07/30/20 09:45	08/03/20 22:54	1
p-Terphenyl-d14 (Surr)	92		50 - 134	07/30/20 09:45	08/03/20 22:54	1
Phenol-d5 (Surr)	36		10 - 65	07/30/20 09:45	08/03/20 22:54	1

Lab Sample ID: LCS 410-27869/2-A

Matrix: Water

Analysis Batch: 29175

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	50.0	39.9		ug/L		80	41 - 119
2-Methylnaphthalene	50.0	40.8		ug/L		82	40 - 121
Naphthalene	50.4	39.2		ug/L		78	40 - 121
Pyrene	50.4	43.6		ug/L		86	57 - 126
Bis(2-ethylhexyl) phthalate	50.3	39.6		ug/L		79	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
2,4,6-Tribromophenol (Surr)	102		43 - 140
2-Fluorobiphenyl (Surr)	77		44 - 119

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-27869/2-A

Matrix: Water

Analysis Batch: 29175

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27869

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	60		19 - 119
Nitrobenzene-d5 (Surr)	87		44 - 120
p-Terphenyl-d14 (Surr)	75		50 - 134
Phenol-d5 (Surr)	45		10 - 65

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-27361/1-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27361

	MB	MB								
Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/30/20 22:53	1	
Surrogate	%Recovery	Qualifier	Limits					Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	54		46 - 136					07/29/20 01:41	07/30/20 22:53	1
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136					07/29/20 01:41	07/30/20 22:53	1

Lab Sample ID: LCS 410-27361/2-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27361

		Spike	LCS	LCS				%Rec.		
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylene Dibromide (1C)		0.128	0.163		ug/L		127	60 - 140		
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
1,1,2,2-Tetrachloroethane (1C)	58		46 - 136							
1,1,2,2-Tetrachloroethane (2C)	55		46 - 136							

Lab Sample ID: LCSD 410-27361/3-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27361

		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ethylene Dibromide (1C)		0.128	0.163		ug/L		127	60 - 140	0	20
Surrogate	LCSD	LCSD								
	%Recovery	Qualifier	Limits							
1,1,2,2-Tetrachloroethane (1C)	59		46 - 136							
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136							

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 29152

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Prep Batch: 27361

	Sample	Sample	Spike	MS	MS			%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylene Dibromide (1C)	0.019	U M	0.122	0.171		ug/L		139	60 - 140	

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 29152

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Prep Batch: 27361

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	61		46 - 136
1,1,2,2-Tetrachloroethane (2C)	63		46 - 136

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 29152

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Prep Batch: 27361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.019	U M	0.123	0.161		ug/L		131	60 - 140	6	20
Surrogate	MSD	MSD									
	%Recovery	Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136								
1,1,2,2-Tetrachloroethane (2C)	57		46 - 136								

Lab Sample ID: MB 410-27362/1-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27362

Print Date: 1/26/20										
Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac	
	Result	Qualifier								
Ethylene Dibromide (1C)	0.020	U M	0.030	0.020	0.010	ug/L		07/30/20 23:44	1	
Print Date: 1/26/20										
Surrogate	MB MB		Limits					Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier								
1,1,2,2-Tetrachloroethane (1C)	52		46 - 136					07/29/20 01:47	07/30/20 23:44	1
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136					07/29/20 01:47	07/30/20 23:44	1

Lab Sample ID: LCS 410-27362/2-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.159		ug/L		124	60 - 140
Surrogate	LCS	LCS					
	%Recovery	Qualifier	Limits				
1,1,2,2-Tetrachloroethane (1C)	56		46 - 136				
1,1,2,2-Tetrachloroethane (2C)	51		46 - 136				

Lab Sample ID: LCSD 410-27362/3-A

Matrix: Water

Analysis Batch: 28585

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.159		ug/L		124	60 - 140	0	20
Surrogate	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	57		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	53		46 - 136						

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-8628-2 MS

Matrix: Water

Analysis Batch: 29152

Client Sample ID: GWTS-GAC1-072320

Prep Type: Total/NA

Prep Batch: 27362

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.010	J	0.123	0.171		ug/L		130	60 - 140
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
1,1,2,2-Tetrachloroethane (1C)	93	J1	46 - 136						
1,1,2,2-Tetrachloroethane (2C)	61	J1	46 - 136						

Lab Sample ID: 410-8628-3 DU

Matrix: Water

Analysis Batch: 29152

Client Sample ID: GWTS-INF1-072320

Prep Type: Total/NA

Prep Batch: 27362

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ethylene Dibromide (2C)	0.019	U	0.019	U	ug/L		NC	30
Surrogate	DU %Recovery	DU Qualifier	DU Limits					
1,1,2,2-Tetrachloroethane (1C)	57		46 - 136					
1,1,2,2-Tetrachloroethane (2C)	56		46 - 136					

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 410-26464/34

Matrix: Water

Analysis Batch: 26464

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	0.30	U	0.40	0.30	0.20	mg/L		07/27/20 00:57	1
Sulfate	0.90	U	1.0	0.90	0.30	mg/L		07/27/20 00:57	1

Lab Sample ID: LCS 410-26464/33

Matrix: Water

Analysis Batch: 26464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.00	2.72	M	mg/L		91	90 - 110
Sulfate	7.50	7.75		mg/L		103	90 - 110

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 26464

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	52	J1 D M	400	401	J1 D M	mg/L		87	90 - 110
Sulfate	80	J D	1000	1100	D	mg/L		102	90 - 110

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 26464

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	52	J1 D M	400	407	D M J1	mg/L		89	90 - 110	1	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 26464

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	80	J D	1000	1100	D	mg/L		102	90 - 110	0	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-26355/1-A

Matrix: Water

Analysis Batch: 28057

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26355

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		07/30/20 08:13	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		07/30/20 08:13	1

Lab Sample ID: LCS 410-26355/2-A

Matrix: Water

Analysis Batch: 28273

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26355

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.447		mg/L		111	87 - 115
Manganese	0.0200	0.0221		mg/L		111	90 - 114

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 28057

Client Sample ID: GWTS-EFF1-072320

Prep Type: Dissolved

Prep Batch: 26355

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U J1	0.402	0.489	J1	mg/L		122	87 - 115
Manganese	0.0052	U J1	0.0200	0.0246	J1	mg/L		123	90 - 114

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 28057

Client Sample ID: GWTS-EFF1-072320

Prep Type: Dissolved

Prep Batch: 26355

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U J1	0.402	0.500	J1	mg/L		124	87 - 115	2	20
Manganese	0.0052	U J1	0.0200	0.0242	J1	mg/L		121	90 - 114	2	20

Lab Sample ID: 410-8628-1 DU

Matrix: Water

Analysis Batch: 28057

Client Sample ID: GWTS-EFF1-072320

Prep Type: Dissolved

Prep Batch: 26355

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	0.10	U J1	0.10	U Q	mg/L		NC	20
Manganese	0.0052	U J1	0.0052	U Q	mg/L		NC	20

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-30268/58

Matrix: Water

Analysis Batch: 30268

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		08/06/20 07:22	1

Lab Sample ID: LCS 410-30268/59

Matrix: Water

Analysis Batch: 30268

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	2.50	2.55		mg/L		102	90 - 110

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30268

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.1		1.00	2.10		mg/L		98	90 - 110

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30268

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.1		1.00	2.10		mg/L		99	90 - 110	0	20

Lab Sample ID: 410-8628-1 DU

Matrix: Water

Analysis Batch: 30268

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate Nitrite as N	1.1		1.09		mg/L		3	10

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 410-30622/138

Matrix: Water

Analysis Batch: 30622

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/07/20 02:53	1

Lab Sample ID: MB 410-30622/27

Matrix: Water

Analysis Batch: 30622

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/06/20 21:19	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method: 420.4 - Phenolics, Total Recoverable (Continued)

Lab Sample ID: LCS 410-30622/137

Matrix: Water

Analysis Batch: 30622

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.250	0.244		mg/L		98	90 - 110

Lab Sample ID: LCS 410-30622/26

Matrix: Water

Analysis Batch: 30622

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.250	0.244		mg/L		98	90 - 110

Lab Sample ID: 410-8628-1 MS

Matrix: Water

Analysis Batch: 30622

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.015	U	0.200	0.198		mg/L		99	90 - 110

Lab Sample ID: 410-8628-1 MSD

Matrix: Water

Analysis Batch: 30622

Client Sample ID: GWTS-EFF1-072320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenols, Total	0.015	U	0.200	0.202		mg/L		101	90 - 110	2	6

Lab Sample ID: MB 410-30944/78

Matrix: Water

Analysis Batch: 30944

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenols, Total	0.015	U	0.020	0.015	0.010	mg/L		08/07/20 23:57	1

Lab Sample ID: LCS 410-30944/77

Matrix: Water

Analysis Batch: 30944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.250	0.247		mg/L		99	90 - 110

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

GC/MS VOA

Analysis Batch: 28284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	8260C DOD	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	8260C DOD	
410-8629-3	GWTS-GAC2-072320	Total/NA	Water	8260C DOD	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	8260C DOD	
410-8629-5	GWTS-TB02-072320	Total/NA	Water	8260C DOD	
MB 410-28284/6	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-28284/4	Lab Control Sample	Total/NA	Water	8260C DOD	

Analysis Batch: 30082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	8260C DOD	
410-8628-2	GWTS-GAC1-072320	Total/NA	Water	8260C DOD	
410-8628-3	GWTS-INF1-072320	Total/NA	Water	8260C DOD	
410-8628-4	GWTS-TB01-072320	Total/NA	Water	8260C DOD	
410-8628-5	GWTS-FB01-072320	Total/NA	Water	8260C DOD	
MB 410-30082/8	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-30082/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCS 410-30082/6	Lab Control Sample	Total/NA	Water	8260C DOD	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	8260C DOD	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	8260C DOD	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	8260C DOD	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	8260C DOD	

GC/MS Semi VOA

Prep Batch: 27686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	3510C	
410-8628-3	GWTS-INF1-072320	Total/NA	Water	3510C	
MB 410-27686/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-27686/2-A	Lab Control Sample	Total/NA	Water	3510C	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	3510C	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	3510C	

Prep Batch: 27869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	3510C	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	3510C	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	3510C	
MB 410-27869/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-27869/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 27913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	8270D	27686
410-8628-3	GWTS-INF1-072320	Total/NA	Water	8270D	27686
MB 410-27686/1-A	Method Blank	Total/NA	Water	8270D	27686
LCS 410-27686/2-A	Lab Control Sample	Total/NA	Water	8270D	27686
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	8270D	27686
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	8270D	27686

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

GC/MS Semi VOA

Analysis Batch: 29175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	8270D	27869
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	8270D	27869
410-8629-4	GWTS-INF2-072320	Total/NA	Water	8270D	27869
MB 410-27869/1-A	Method Blank	Total/NA	Water	8270D	27869
LCS 410-27869/2-A	Lab Control Sample	Total/NA	Water	8270D	27869

GC Semi VOA

Prep Batch: 27361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	8011	
MB 410-27361/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-27361/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-27361/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	8011	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	8011	

Prep Batch: 27362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-2	GWTS-GAC1-072320	Total/NA	Water	8011	
410-8628-3	GWTS-INF1-072320	Total/NA	Water	8011	
410-8628-4	GWTS-TB01-072320	Total/NA	Water	8011	
410-8628-5	GWTS-FB01-072320	Total/NA	Water	8011	
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	8011	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	8011	
410-8629-3	GWTS-GAC2-072320	Total/NA	Water	8011	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	8011	
410-8629-5	GWTS-TB02-072320	Total/NA	Water	8011	
MB 410-27362/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-27362/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-27362/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-8628-2 MS	GWTS-GAC1-072320	Total/NA	Water	8011	
410-8628-3 DU	GWTS-INF1-072320	Total/NA	Water	8011	

Analysis Batch: 28585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-4	GWTS-TB01-072320	Total/NA	Water	8011	27362
410-8628-5	GWTS-FB01-072320	Total/NA	Water	8011	27362
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	8011	27362
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	8011	27362
410-8629-3	GWTS-GAC2-072320	Total/NA	Water	8011	27362
410-8629-4	GWTS-INF2-072320	Total/NA	Water	8011	27362
410-8629-5	GWTS-TB02-072320	Total/NA	Water	8011	27362
MB 410-27361/1-A	Method Blank	Total/NA	Water	8011	27361
MB 410-27362/1-A	Method Blank	Total/NA	Water	8011	27362
LCS 410-27361/2-A	Lab Control Sample	Total/NA	Water	8011	27361
LCS 410-27362/2-A	Lab Control Sample	Total/NA	Water	8011	27362
LCSD 410-27361/3-A	Lab Control Sample Dup	Total/NA	Water	8011	27361
LCSD 410-27362/3-A	Lab Control Sample Dup	Total/NA	Water	8011	27362

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

GC Semi VOA

Analysis Batch: 29152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	8011	27361
410-8628-2	GWTS-GAC1-072320	Total/NA	Water	8011	27362
410-8628-3	GWTS-INF1-072320	Total/NA	Water	8011	27362
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	8011	27361
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	8011	27361
410-8628-2 MS	GWTS-GAC1-072320	Total/NA	Water	8011	27362
410-8628-3 DU	GWTS-INF1-072320	Total/NA	Water	8011	27362

HPLC/IC

Analysis Batch: 26464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	EPA 300.0 R2.1	
410-8628-3	GWTS-INF1-072320	Total/NA	Water	EPA 300.0 R2.1	
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	EPA 300.0 R2.1	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	EPA 300.0 R2.1	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	EPA 300.0 R2.1	
MB 410-26464/34	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-26464/33	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	EPA 300.0 R2.1	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 26355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Dissolved	Water	Non-Digest Prep	
410-8628-2	GWTS-GAC1-072320	Dissolved	Water	Non-Digest Prep	
410-8628-3	GWTS-INF1-072320	Dissolved	Water	Non-Digest Prep	
410-8629-1	GWTS-EFF2-072320	Dissolved	Water	Non-Digest Prep	
410-8629-2	GWTS-EFF2DUP-072320	Dissolved	Water	Non-Digest Prep	
410-8629-3	GWTS-GAC2-072320	Dissolved	Water	Non-Digest Prep	
410-8629-4	GWTS-INF2-072320	Dissolved	Water	Non-Digest Prep	
MB 410-26355/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-26355/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-8628-1 MS	GWTS-EFF1-072320	Dissolved	Water	Non-Digest Prep	
410-8628-1 MSD	GWTS-EFF1-072320	Dissolved	Water	Non-Digest Prep	
410-8628-1 DU	GWTS-EFF1-072320	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 28057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Dissolved	Water	6010C	26355
410-8628-2	GWTS-GAC1-072320	Dissolved	Water	6010C	26355
410-8628-3	GWTS-INF1-072320	Dissolved	Water	6010C	26355
410-8629-1	GWTS-EFF2-072320	Dissolved	Water	6010C	26355
410-8629-2	GWTS-EFF2DUP-072320	Dissolved	Water	6010C	26355
410-8629-3	GWTS-GAC2-072320	Dissolved	Water	6010C	26355
410-8629-4	GWTS-INF2-072320	Dissolved	Water	6010C	26355
MB 410-26355/1-A	Method Blank	Total/NA	Water	6010C	26355
410-8628-1 MS	GWTS-EFF1-072320	Dissolved	Water	6010C	26355
410-8628-1 MSD	GWTS-EFF1-072320	Dissolved	Water	6010C	26355
410-8628-1 DU	GWTS-EFF1-072320	Dissolved	Water	6010C	26355

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Metals

Analysis Batch: 28273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8629-4	GWTS-INF2-072320	Dissolved	Water	6010C	26355
LCS 410-26355/2-A	Lab Control Sample	Total/NA	Water	6010C	26355

General Chemistry

Analysis Batch: 30268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	353.2	
410-8628-3	GWTS-INF1-072320	Total/NA	Water	353.2	
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	353.2	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	353.2	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	353.2	
MB 410-30268/58	Method Blank	Total/NA	Water	353.2	
LCS 410-30268/59	Lab Control Sample	Total/NA	Water	353.2	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	353.2	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	353.2	
410-8628-1 DU	GWTS-EFF1-072320	Total/NA	Water	353.2	

Analysis Batch: 30622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-1	GWTS-EFF1-072320	Total/NA	Water	420.4	
410-8629-1	GWTS-EFF2-072320	Total/NA	Water	420.4	
410-8629-4	GWTS-INF2-072320	Total/NA	Water	420.4	
MB 410-30622/138	Method Blank	Total/NA	Water	420.4	
MB 410-30622/27	Method Blank	Total/NA	Water	420.4	
LCS 410-30622/137	Lab Control Sample	Total/NA	Water	420.4	
LCS 410-30622/26	Lab Control Sample	Total/NA	Water	420.4	
410-8628-1 MS	GWTS-EFF1-072320	Total/NA	Water	420.4	
410-8628-1 MSD	GWTS-EFF1-072320	Total/NA	Water	420.4	

Analysis Batch: 30944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-8628-3	GWTS-INF1-072320	Total/NA	Water	420.4	
410-8629-2	GWTS-EFF2DUP-072320	Total/NA	Water	420.4	
MB 410-30944/78	Method Blank	Total/NA	Water	420.4	
LCS 410-30944/77	Lab Control Sample	Total/NA	Water	420.4	

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-EFF1-072320

Lab Sample ID: 410-8628-1

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	30082	08/06/20 05:08	TQ4J	ELLE
Total/NA	Prep	3510C			27686	07/29/20 16:09	DFX4	ELLE
Total/NA	Analysis	8270D		1	27913	07/30/20 12:04	LW6J	ELLE
Total/NA	Prep	8011			27361	07/29/20 01:41	K2IL	ELLE
Total/NA	Analysis	8011		1	29152	08/03/20 22:32	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		200	26464	07/27/20 07:30	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:19	ULJC	ELLE
Total/NA	Analysis	353.2		1	30268	08/06/20 07:42	P684	ELLE
Total/NA	Analysis	420.4		1	30622	08/07/20 02:56	QU5I	ELLE

Client Sample ID: GWTS-GAC1-072320

Lab Sample ID: 410-8628-2

Date Collected: 07/23/20 09:37

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	30082	08/06/20 06:58	TQ4J	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	29152	08/03/20 23:23	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:38	ULJC	ELLE

Client Sample ID: GWTS-INF1-072320

Lab Sample ID: 410-8628-3

Date Collected: 07/23/20 09:51

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	30082	08/06/20 07:20	TQ4J	ELLE
Total/NA	Prep	3510C			27686	07/29/20 16:09	DFX4	ELLE
Total/NA	Analysis	8270D		1	27913	07/30/20 13:36	LW6J	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	29152	08/03/20 23:57	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		200	26464	07/27/20 08:21	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:41	ULJC	ELLE
Total/NA	Analysis	353.2		1	30268	08/06/20 07:33	P684	ELLE
Total/NA	Analysis	420.4		1	30944	08/08/20 00:33	QU5I	ELLE

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	30082	08/06/20 00:22	TQ4J	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-TB01-072320

Lab Sample ID: 410-8628-4

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 16:07	AC3T	ELLE

Client Sample ID: GWTS-FB01-072320

Lab Sample ID: 410-8628-5

Date Collected: 07/23/20 08:50

Matrix: Water

Date Received: 07/24/20 10:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	30082	08/06/20 00:44	TQ4J	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 16:24	AC3T	ELLE

Client Sample ID: GWTS-EFF2-072320

Lab Sample ID: 410-8629-1

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	28284	07/31/20 08:34	ULCP	ELLE
Total/NA	Prep	3510C			27869	07/30/20 09:45	R9CT	ELLE
Total/NA	Analysis	8270D		1	29175	08/03/20 23:52	ULM3	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 17:33	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	26464	07/27/20 02:57	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:51	ULJC	ELLE
Total/NA	Analysis	353.2		1	30268	08/06/20 07:37	P684	ELLE
Total/NA	Analysis	420.4		1	30622	08/07/20 03:14	QU5I	ELLE

Client Sample ID: GWTS-EFF2DUP-072320

Lab Sample ID: 410-8629-2

Date Collected: 07/23/20 10:32

Matrix: Water

Date Received: 07/24/20 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	28284	07/31/20 08:56	ULCP	ELLE
Total/NA	Prep	3510C			27869	07/30/20 09:45	R9CT	ELLE
Total/NA	Analysis	8270D		1	29175	08/04/20 00:22	ULM3	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 17:50	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	26464	07/27/20 03:31	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:54	ULJC	ELLE
Total/NA	Analysis	353.2		1	30268	08/06/20 07:38	P684	ELLE
Total/NA	Analysis	420.4		1	30944	08/08/20 00:30	QU5I	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Client Sample ID: GWTS-GAC2-072320

Lab Sample ID: 410-8629-3

Date Collected: 07/23/20 11:05

Matrix: Water

Date Received: 07/24/20 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	28284	07/31/20 09:18	ULCP	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 18:07	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 08:57	ULJC	ELLE

Client Sample ID: GWTS-INF2-072320

Lab Sample ID: 410-8629-4

Date Collected: 07/23/20 11:18

Matrix: Water

Date Received: 07/24/20 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	28284	07/31/20 09:40	ULCP	ELLE
Total/NA	Prep	3510C			27869	07/30/20 09:45	R9CT	ELLE
Total/NA	Analysis	8270D		1	29175	08/04/20 00:51	ULM3	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 18:24	AC3T	ELLE
Total/NA	Analysis	EPA 300.0 R2.1		5	26464	07/27/20 04:05	GJ35	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28057	07/30/20 09:00	ULJC	ELLE
Dissolved	Prep	Non-Digest Prep			26355	07/25/20 14:37	UJLA	ELLE
Dissolved	Analysis	6010C		1	28273	07/30/20 18:55	UCIG	ELLE
Total/NA	Analysis	353.2		1	30268	08/06/20 07:39	P684	ELLE
Total/NA	Analysis	420.4		1	30622	08/07/20 03:11	QU5I	ELLE

Client Sample ID: GWTS-TB02-072320

Lab Sample ID: 410-8629-5

Date Collected: 07/23/20 11:30

Matrix: Water

Date Received: 07/24/20 10:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	28284	07/31/20 01:58	ULCP	ELLE
Total/NA	Prep	8011			27362	07/29/20 01:47	K2IL	ELLE
Total/NA	Analysis	8011		1	28585	07/31/20 18:41	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
420.4		Water	Phenols, Total

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE
6010C	Metals (ICP)	SW846	ELLE
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	ELLE
420.4	Phenolics, Total Recoverable	MCAWW	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-8628-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-8628-1	GWTS-EFF1-072320	Water	07/23/20 08:50	07/24/20 10:48	
410-8628-2	GWTS-GAC1-072320	Water	07/23/20 09:37	07/24/20 10:48	
410-8628-3	GWTS-INF1-072320	Water	07/23/20 09:51	07/24/20 10:48	
410-8628-4	GWTS-TB01-072320	Water	07/23/20 11:30	07/24/20 10:48	
410-8628-5	GWTS-FB01-072320	Water	07/23/20 08:50	07/24/20 10:48	
410-8629-1	GWTS-EFF2-072320	Water	07/23/20 10:32	07/24/20 10:47	
410-8629-2	GWTS-EFF2DUP-072320	Water	07/23/20 10:32	07/24/20 10:47	
410-8629-3	GWTS-GAC2-072320	Water	07/23/20 11:05	07/24/20 10:47	
410-8629-4	GWTS-INF2-072320	Water	07/23/20 11:18	07/24/20 10:47	
410-8629-5	GWTS-TB02-072320	Water	07/23/20 11:30	07/24/20 10:47	

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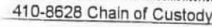
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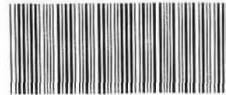
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Eurofins Lancaster Laboratories Env, LLC



qcm



410-8629 Chain of Custody

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD								COC NUMBER COC-GWTS2-072320	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q3			
PROJECT SITE AND PHASE: ST106/SS110		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258									
ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	SVOCs (8270D)	EDB (8011)	Dissolved Fe, Mn (5010C/6020A)	Chloride, Sulfate (300.0)	Nitrate-Nitrite (353.2)	Total Phenol (420.4)	COMMENTS	
1	GWTS-EFF2-072320	07/23/2020	1032	11	3	2	2	1*	1	1	1		
2	GWTS-EFF2DUP-072320	07/23/2020	1032	11	3	2	2	1*	1	1	1		
3	GWTS-GAC2-072320	07/23/2020	1105	6	3**	--	2	1*	--	--	--		
4	GWTS-INF2-072320	07/23/2020	1118	4	3	2	2	1*	1	1	1		
5	GWTS-TB02-072320	07/23/2020	1130	4	2	--	2	--	--	--			
6													
COMMENTS: *Dissolved Metals aliquot was field filtered. **Please analyze GWTS-GAC2-072320 VOCs samples for BTEX only.													
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8156 5978 2995									
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME		
Printed Name and Signature: J Livingston				7/23/2020	1300	Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature:							
Printed Name and Signature:						Printed Name and Signature: Nicole Reiff				7/24/20	1047		

QEM

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-8628-1

Login Number: 8628**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-8628-1

Login Number: 8629**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Colon Martinez, Jessenia C**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-9909-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

9/12/2020 9:41:35 AM

Jennifer Pursel, Operations Support Specialist
(717)556-7262

jenniferpursel@eurofinsus.com

Designee for

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Jennifer Pursel
Operations Support Specialist
9/12/2020 9:41:35 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

Eurofins Lancaster Laboratories Env, LLC

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Job ID: 410-9909-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-9909-1

Receipt

The samples were received on 8/6/2020 10:52 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.4° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 33382 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8011: The surrogate recovery for the blank associated with prep batch 33073 was outside the lower control limits. The samples was re-prepared outside of the method holding time. The first trial is reported.

Method 8011: The 1,1,2,2-Tetrachloroethane surrogate recovery for the following samples was outside acceptance limits (low biased) on the primary column: GWTS-EFF1-080520 (410-9909-1). The recovery is within acceptance limits on the second column, indicating that the extraction process was in control.

Method 8011: The following sample was prepped and analyzed outside of the holding time due to laboratory error: GWTS-INF2-080520 (410-9909-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 6010C: The laboratory control sample (LCS) for preparation batch 410-31496 and analytical batch 410-31648 recovered above the control limits for the following analytes: Manganese. The data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-EFF1-080520

Lab Sample ID: 410-9909-1

☐ No Detections.

Client Sample ID: GWTS-EFF1DUP-080520

Lab Sample ID: 410-9909-2

☐ No Detections.

Client Sample ID: GWTS-GAC1-080520

Lab Sample ID: 410-9909-3

☐ No Detections.

Client Sample ID: GWTS-INF1-080520

Lab Sample ID: 410-9909-4

☐ No Detections.

Client Sample ID: GWTS-TB01-080520

Lab Sample ID: 410-9909-5

☐ No Detections.

Client Sample ID: GWTS-EFF2-080520

Lab Sample ID: 410-9909-6

☐ No Detections.

Client Sample ID: GWTS-GAC2-080520

Lab Sample ID: 410-9909-7

☐ No Detections.

Client Sample ID: GWTS-INF2-080520

Lab Sample ID: 410-9909-8

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.028	J H	0.029	0.019	0.0096	ug/L	1		8011	Total/NA
Manganese	0.0050	J Q	0.010	0.0052	0.0031	mg/L	1		6010C	Dissolved

Client Sample ID: GWTS-FB02-080520

Lab Sample ID: 410-9909-9

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-EFF1-080520

Lab Sample ID: 410-9909-1

Date Collected: 08/05/20 09:49

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 18:57	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 18:57	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 18:57	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 18:57	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 18:57	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 18:57	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 18:57	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (2C)	0.019	U Q	0.029	0.019	0.0095	ug/L		08/15/20 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	8	Q J1	46 - 136	08/13/20 23:24	08/15/20 00:37	1
1,1,2,2-Tetrachloroethane (2C)	55	Q J1	46 - 136	08/13/20 23:24	08/15/20 00:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/10/20 23:55	1
Manganese	0.0052	U Q	0.010	0.0052	0.0031	mg/L		08/10/20 23:55	1

Client Sample ID: GWTS-EFF1DUP-080520

Lab Sample ID: 410-9909-2

Date Collected: 08/05/20 09:49

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 19:19	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 19:19	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 19:19	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 19:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 19:19	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 19:19	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 19:19	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 19:19	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0097	ug/L		08/15/20 00:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	53		46 - 136	08/13/20 23:24	08/15/20 00:54	1
1,1,2,2-Tetrachloroethane (2C)	52	Q	46 - 136	08/13/20 23:24	08/15/20 00:54	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/10/20 23:58	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-EFF1DUP-080520

Lab Sample ID: 410-9909-2

Date Collected: 08/05/20 09:49

Matrix: Water

Date Received: 08/06/20 10:52

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Manganese	0.0052	U Q	0.010	0.0052	0.0031	mg/L		08/10/20 23:58	1

Client Sample ID: GWTS-GAC1-080520

Lab Sample ID: 410-9909-3

Date Collected: 08/05/20 10:00

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 19:41	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 19:41	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 19:41	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 19:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 19:41	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 19:41	1
Dibromofluoromethane (Surr)	99		80 - 119		08/18/20 19:41	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 19:41	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.028	0.019	0.0095	ug/L		08/15/20 01:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136	08/13/20 23:24	08/15/20 01:11	1
1,1,2,2-Tetrachloroethane (2C)	53	Q	46 - 136	08/13/20 23:24	08/15/20 01:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/12/20 16:57	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		08/12/20 16:57	1

Client Sample ID: GWTS-INF1-080520

Lab Sample ID: 410-9909-4

Date Collected: 08/05/20 10:08

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:03	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 20:03	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:03	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		08/18/20 20:03	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 20:03	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 20:03	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 20:03	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (2C)	0.019	U Q	0.029	0.019	0.0096	ug/L		08/15/20 01:28	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-INF1-080520

Lab Sample ID: 410-9909-4

Date Collected: 08/05/20 10:08

Matrix: Water

Date Received: 08/06/20 10:52

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	51		46 - 136	08/13/20 23:24	08/15/20 01:28	1
1,1,2,2-Tetrachloroethane (2C)	52	Q	46 - 136	08/13/20 23:24	08/15/20 01:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/12/20 16:16	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		08/12/20 16:16	1

Client Sample ID: GWTS-TB01-080520

Lab Sample ID: 410-9909-5

Date Collected: 08/05/20 10:11

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:07	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 17:07	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:07	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 17:07	1
4-Bromofluorobenzene (Surr)	91		85 - 114		08/18/20 17:07	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 17:07	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 17:07	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0095	ug/L		08/15/20 01:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	53		46 - 136	08/13/20 23:24	08/15/20 01:45	1
1,1,2,2-Tetrachloroethane (2C)	54	Q	46 - 136	08/13/20 23:24	08/15/20 01:45	1

Client Sample ID: GWTS-EFF2-080520

Lab Sample ID: 410-9909-6

Date Collected: 08/05/20 09:11

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:51	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 17:51	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:51	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 17:51	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 17:51	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 17:51	1
Toluene-d8 (Surr)	98		89 - 112		08/18/20 17:51	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-EFF2-080520

Lab Sample ID: 410-9909-6

Date Collected: 08/05/20 09:11

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M J1 Q	0.029	0.019	0.0097	ug/L		08/15/20 02:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	88	J1	46 - 136				08/13/20 23:24	08/15/20 02:02	1
1,1,2,2-Tetrachloroethane (2C)	51	J1 Q	46 - 136				08/13/20 23:24	08/15/20 02:02	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U J1	0.21	0.10	0.041	mg/L		08/10/20 22:28	1
Manganese	0.0052	U J1 Q	0.010	0.0052	0.0031	mg/L		08/10/20 22:28	1

Client Sample ID: GWTS-GAC2-080520

Lab Sample ID: 410-9909-7

Date Collected: 08/05/20 09:26

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:25	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 20:25	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:25	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118					08/18/20 20:25	1
4-Bromofluorobenzene (Surr)	89		85 - 114					08/18/20 20:25	1
Dibromofluoromethane (Surr)	100		80 - 119					08/18/20 20:25	1
Toluene-d8 (Surr)	99		89 - 112					08/18/20 20:25	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U M Q	0.029	0.019	0.0096	ug/L		08/15/20 03:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	51	Q	46 - 136				08/13/20 23:24	08/15/20 03:27	1
1,1,2,2-Tetrachloroethane (2C)	53	Q	46 - 136				08/13/20 23:24	08/15/20 03:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/10/20 23:45	1
Manganese	0.0052	U Q	0.010	0.0052	0.0031	mg/L		08/10/20 23:45	1

Client Sample ID: GWTS-INF2-080520

Lab Sample ID: 410-9909-8

Date Collected: 08/05/20 09:36

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:47	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 20:47	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 20:47	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 20:47	1

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-INF2-080520

Lab Sample ID: 410-9909-8

Date Collected: 08/05/20 09:36

Matrix: Water

Date Received: 08/06/20 10:52

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		08/18/20 20:47	1
4-Bromofluorobenzene (Surr)	92		85 - 114		08/18/20 20:47	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 20:47	1
Toluene-d8 (Surr)	98		89 - 112		08/18/20 20:47	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.028	J H	0.029	0.019	0.0096	ug/L		08/21/20 22:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	88		46 - 136	08/20/20 23:03	08/21/20 22:17	1
1,1,2,2-Tetrachloroethane (2C)	89		46 - 136	08/20/20 23:03	08/21/20 22:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/10/20 23:52	1
Manganese	0.0050	J Q	0.010	0.0052	0.0031	mg/L		08/10/20 23:52	1

Client Sample ID: GWTS-FB02-080520

Lab Sample ID: 410-9909-9

Date Collected: 08/05/20 09:11

Matrix: Water

Date Received: 08/06/20 10:52

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:29	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 17:29	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 17:29	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 17:29	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 17:29	1
Dibromofluoromethane (Surr)	100		80 - 119		08/18/20 17:29	1
Toluene-d8 (Surr)	99		89 - 112		08/18/20 17:29	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0096	ug/L		08/15/20 04:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	49	Q	46 - 136	08/13/20 23:24	08/15/20 04:01	1
1,1,2,2-Tetrachloroethane (2C)	51	Q	46 - 136	08/13/20 23:24	08/15/20 04:01	1

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Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-9909-1	GWTS-EFF1-080520	101	90	100	99
410-9909-2	GWTS-EFF1DUP-080520	101	90	100	99
410-9909-3	GWTS-GAC1-080520	101	90	99	99
410-9909-4	GWTS-INF1-080520	102	90	100	99
410-9909-5	GWTS-TB01-080520	101	91	100	99
410-9909-6	GWTS-EFF2-080520	101	90	100	98
410-9909-6 MS	GWTS-EFF2-080520	101	96	99	99
410-9909-6 MSD	GWTS-EFF2-080520	101	98	99	100
410-9909-7	GWTS-GAC2-080520	102	89	100	99
410-9909-8	GWTS-INF2-080520	102	92	100	98
410-9909-9	GWTS-FB02-080520	101	90	100	99
LCS 410-34418/6	Lab Control Sample	101	98	99	101
LCSD 410-34418/8	Lab Control Sample Dup	102	98	99	101
MB 410-34418/39	Method Blank	101	90	99	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-9909-1	GWTS-EFF1-080520	8 Q J1	55 Q J1
410-9909-2	GWTS-EFF1DUP-080520	53	52 Q
410-9909-3	GWTS-GAC1-080520	51	53 Q
410-9909-4	GWTS-INF1-080520	51	52 Q
410-9909-5	GWTS-TB01-080520	53	54 Q
410-9909-6	GWTS-EFF2-080520	88 J1	51 J1 Q
410-9909-6 MS	GWTS-EFF2-080520	88 J1	56 J1
410-9909-6 MSD	GWTS-EFF2-080520	84	57
410-9909-7	GWTS-GAC2-080520	51 Q	53 Q
410-9909-8	GWTS-INF2-080520	88	89
410-9909-9	GWTS-FB02-080520	49 Q	51 Q
LCS 410-33073/2-A	Lab Control Sample	52	53
LCS 410-35654/2-A	Lab Control Sample	91	83
LCSD 410-33073/3-A	Lab Control Sample Dup	48 M	47
LCSD 410-35654/3-A	Lab Control Sample Dup	83	77
MB 410-33073/1-A	Method Blank	37 Q	42 Q
MB 410-35654/1-A	Method Blank	90	78

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-34418/39

Matrix: Water

Analysis Batch: 34418

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		08/18/20 15:16	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		08/18/20 15:16	1
Toluene	0.366	J	1.0	0.50	0.20	ug/L		08/18/20 15:16	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		08/18/20 15:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		08/18/20 15:16	1
4-Bromofluorobenzene (Surr)	90		85 - 114		08/18/20 15:16	1
Dibromofluoromethane (Surr)	99		80 - 119		08/18/20 15:16	1
Toluene-d8 (Surr)	98		89 - 112		08/18/20 15:16	1

Lab Sample ID: LCS 410-34418/6

Matrix: Water

Analysis Batch: 34418

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	21.3		ug/L		107	42 - 138
Ethylbenzene	20.0	21.0		ug/L		105	79 - 121
Toluene	20.0	22.0		ug/L		110	80 - 121
Xylenes, Total	60.0	63.5		ug/L		106	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	101		89 - 112

Lab Sample ID: LCSD 410-34418/8

Matrix: Water

Analysis Batch: 34418

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	21.0		ug/L		105	42 - 138	2	20
Ethylbenzene	20.0	20.6		ug/L		103	79 - 121	2	20
Toluene	20.0	21.5		ug/L		108	80 - 121	2	20
Xylenes, Total	60.0	62.2		ug/L		104	79 - 121	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	101		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-9909-6 MS

Matrix: Water

Analysis Batch: 34418

Client Sample ID: GWTS-EFF2-080520

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.50	U	20.0	23.4		ug/L		117	42 - 138
Ethylbenzene	0.80	U	20.0	23.2		ug/L		116	79 - 121
Toluene	0.50	U	20.0	23.5		ug/L		117	80 - 121
Xylenes, Total	2.0	U	60.0	69.2		ug/L		115	79 - 121

Surrogate	MS %Recovery	MS Qualifier	MS Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	96		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Lab Sample ID: 410-9909-6 MSD

Matrix: Water

Analysis Batch: 34418

Client Sample ID: GWTS-EFF2-080520

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.50	U	20.0	22.0		ug/L		110	42 - 138	6	20
Ethylbenzene	0.80	U	20.0	21.8		ug/L		109	79 - 121	6	20
Toluene	0.50	U	20.0	22.5		ug/L		112	80 - 121	4	20
Xylenes, Total	2.0	U	60.0	64.8		ug/L		108	79 - 121	7	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	100		89 - 112

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-33073/1-A

Matrix: Water

Analysis Batch: 33382

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 33073

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		08/14/20 18:05	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	37	Q	46 - 136	08/13/20 23:24	08/14/20 18:05	1
1,1,2,2-Tetrachloroethane (2C)	42	Q	46 - 136	08/13/20 23:24	08/14/20 18:05	1

Lab Sample ID: LCS 410-33073/2-A

Matrix: Water

Analysis Batch: 33382

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 33073

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.178		ug/L		139	60 - 140

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-33073/2-A

Matrix: Water

Analysis Batch: 33382

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 33073

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	52		46 - 136
1,1,2,2-Tetrachloroethane (2C)	53		46 - 136

Lab Sample ID: LCSD 410-33073/3-A

Matrix: Water

Analysis Batch: 33382

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 33073

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.169	M	ug/L		132	60 - 140	5	20
Surrogate	%Recovery	LCSD	LCSD Qualifier	Limits					
1,1,2,2-Tetrachloroethane (1C)	48	M		46 - 136					
1,1,2,2-Tetrachloroethane (2C)	47			46 - 136					

Lab Sample ID: 410-9909-6 MS

Matrix: Water

Analysis Batch: 33382

Client Sample ID: GWTS-EFF2-080520

Prep Type: Total/NA

Prep Batch: 33073

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.019	U M J1 Q	0.124	0.191	J1	ug/L		154	60 - 140		
Surrogate	%Recovery	MS	MS Qualifier	Limits							
1,1,2,2-Tetrachloroethane (1C)	88	J1		46 - 136							
1,1,2,2-Tetrachloroethane (2C)	56	J1		46 - 136							

Lab Sample ID: 410-9909-6 MSD

Matrix: Water

Analysis Batch: 33382

Client Sample ID: GWTS-EFF2-080520

Prep Type: Total/NA

Prep Batch: 33073

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.019	U M J1 Q	0.123	0.187	J1	ug/L		152	60 - 140	2	20
Surrogate	%Recovery	MSD	MSD Qualifier	Limits							
1,1,2,2-Tetrachloroethane (1C)	84			46 - 136							
1,1,2,2-Tetrachloroethane (2C)	57			46 - 136							

Lab Sample ID: MB 410-35654/1-A

Matrix: Water

Analysis Batch: 35964

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 35654

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		08/21/20 17:31	1
Surrogate	%Recovery	MB	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1,1,2,2-Tetrachloroethane (1C)	90			46 - 136	08/20/20 23:03	08/21/20 17:31	1		
1,1,2,2-Tetrachloroethane (2C)	78			46 - 136	08/20/20 23:03	08/21/20 17:31	1		

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-35654/2-A
Matrix: Water
Analysis Batch: 35964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 35654

			Spike	LCS	LCS			%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylene Dibromide (1C)			0.128	0.178	M	ug/L		139	60 - 140	
Surrogate	LCS	LCS								
	%Recovery	Qualifier	Limits							
	1,1,2,2-Tetrachloroethane (1C)	91	46 - 136							
	1,1,2,2-Tetrachloroethane (2C)	83	46 - 136							

Lab Sample ID: LCSD 410-35654/3-A
Matrix: Water
Analysis Batch: 35964

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 35654

Top Data: 0606											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)			0.128	0.153	M	ug/L		120	60 - 140	15	20
Bottom Data: 0606											
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	83		46 - 136								
1,1,2,2-Tetrachloroethane (2C)	77		46 - 136								

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-31496/1-A
Matrix: Water
Analysis Batch: 31648

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31496

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/10/20 22:22	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		08/10/20 22:22	1

Lab Sample ID: LCS 410-31496/2-A
Matrix: Water
Analysis Batch: 31648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.459		mg/L		114	87 - 115
Manganese	0.0200	0.0233	Q	mg/L		117	90 - 114

Lab Sample ID: MB 410-31654/1-A
Matrix: Water
Analysis Batch: 32539

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31654

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		08/12/20 16:10	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		08/12/20 16:10	1

Lab Sample ID: LCS 410-31654/2-A
Matrix: Water
Analysis Batch: 32539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.427		mg/L		106	87 - 115

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-31654/2-A

Matrix: Water

Analysis Batch: 32539

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.0200	0.0214		mg/L		107	90 - 114

Lab Sample ID: 410-9909-6 MS

Matrix: Water

Analysis Batch: 31648

Client Sample ID: GWTS-EFF2-080520

Prep Type: Dissolved

Prep Batch: 31496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U J1	0.402	0.466	J1	mg/L		116	87 - 115
Manganese	0.0052	U J1 Q	0.0200	0.0239	J1	mg/L		120	90 - 114

Lab Sample ID: 410-9909-6 MSD

Matrix: Water

Analysis Batch: 31648

Client Sample ID: GWTS-EFF2-080520

Prep Type: Dissolved

Prep Batch: 31496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U J1	0.402	0.469	J1	mg/L		116	87 - 115	1	20
Manganese	0.0052	U J1 Q	0.0200	0.0238	J1	mg/L		119	90 - 114	1	20

Lab Sample ID: 410-9909-6 DU

Matrix: Water

Analysis Batch: 31648

Client Sample ID: GWTS-EFF2-080520

Prep Type: Dissolved

Prep Batch: 31496

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U J1	0.10	U	mg/L				NC	20
Manganese	0.0052	U J1 Q	0.0052	U Q	mg/L				NC	20

Lab Sample ID: 410-9909-3 MS

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-GAC1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U	0.402	0.444		mg/L		110	87 - 115
Manganese	0.0052	U	0.0200	0.0214		mg/L		107	90 - 114

Lab Sample ID: 410-9909-3 MSD

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-GAC1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.10	U	0.402	0.438		mg/L		109	87 - 115	1	20
Manganese	0.0052	U	0.0200	0.0216		mg/L		108	90 - 114	1	20

Lab Sample ID: 410-9909-4 MS

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-INF1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U	0.402	0.422		mg/L		105	87 - 115
Manganese	0.0052	U	0.0200	0.0210		mg/L		105	90 - 114

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 410-9909-4 MSD

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-INF1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Iron	0.10	U	0.402	0.426		mg/L		106	87 - 115	1	20
Manganese	0.0052	U	0.0200	0.0211		mg/L		106	90 - 114	0	20

Lab Sample ID: 410-9909-3 DU

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-GAC1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	0.10	U	0.10	U	mg/L		NC	20
Manganese	0.0052	U	0.0052	U	mg/L		NC	20

Lab Sample ID: 410-9909-4 DU

Matrix: Water

Analysis Batch: 32539

Client Sample ID: GWTS-INF1-080520

Prep Type: Dissolved

Prep Batch: 31654

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	0.10	U	0.10	U	mg/L		NC	20
Manganese	0.0052	U	0.0052	U	mg/L		NC	20

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

GC/MS VOA

Analysis Batch: 34418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-1	GWTS-EFF1-080520	Total/NA	Water	8260C DOD	
410-9909-2	GWTS-EFF1DUP-080520	Total/NA	Water	8260C DOD	
410-9909-3	GWTS-GAC1-080520	Total/NA	Water	8260C DOD	
410-9909-4	GWTS-INF1-080520	Total/NA	Water	8260C DOD	
410-9909-5	GWTS-TB01-080520	Total/NA	Water	8260C DOD	
410-9909-6	GWTS-EFF2-080520	Total/NA	Water	8260C DOD	
410-9909-7	GWTS-GAC2-080520	Total/NA	Water	8260C DOD	
410-9909-8	GWTS-INF2-080520	Total/NA	Water	8260C DOD	
410-9909-9	GWTS-FB02-080520	Total/NA	Water	8260C DOD	
MB 410-34418/39	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-34418/6	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-34418/8	Lab Control Sample Dup	Total/NA	Water	8260C DOD	
410-9909-6 MS	GWTS-EFF2-080520	Total/NA	Water	8260C DOD	
410-9909-6 MSD	GWTS-EFF2-080520	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 33073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-1	GWTS-EFF1-080520	Total/NA	Water	8011	
410-9909-2	GWTS-EFF1DUP-080520	Total/NA	Water	8011	
410-9909-3	GWTS-GAC1-080520	Total/NA	Water	8011	
410-9909-4	GWTS-INF1-080520	Total/NA	Water	8011	
410-9909-5	GWTS-TB01-080520	Total/NA	Water	8011	
410-9909-6	GWTS-EFF2-080520	Total/NA	Water	8011	
410-9909-7	GWTS-GAC2-080520	Total/NA	Water	8011	
410-9909-9	GWTS-FB02-080520	Total/NA	Water	8011	
MB 410-33073/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-33073/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-33073/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-9909-6 MS	GWTS-EFF2-080520	Total/NA	Water	8011	
410-9909-6 MSD	GWTS-EFF2-080520	Total/NA	Water	8011	

Analysis Batch: 33382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-1	GWTS-EFF1-080520	Total/NA	Water	8011	33073
410-9909-2	GWTS-EFF1DUP-080520	Total/NA	Water	8011	33073
410-9909-3	GWTS-GAC1-080520	Total/NA	Water	8011	33073
410-9909-4	GWTS-INF1-080520	Total/NA	Water	8011	33073
410-9909-5	GWTS-TB01-080520	Total/NA	Water	8011	33073
410-9909-6	GWTS-EFF2-080520	Total/NA	Water	8011	33073
410-9909-7	GWTS-GAC2-080520	Total/NA	Water	8011	33073
410-9909-9	GWTS-FB02-080520	Total/NA	Water	8011	33073
MB 410-33073/1-A	Method Blank	Total/NA	Water	8011	33073
LCS 410-33073/2-A	Lab Control Sample	Total/NA	Water	8011	33073
LCSD 410-33073/3-A	Lab Control Sample Dup	Total/NA	Water	8011	33073
410-9909-6 MS	GWTS-EFF2-080520	Total/NA	Water	8011	33073
410-9909-6 MSD	GWTS-EFF2-080520	Total/NA	Water	8011	33073

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

GC Semi VOA

Prep Batch: 35654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-8	GWTS-INF2-080520	Total/NA	Water	8011	
MB 410-35654/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-35654/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-35654/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 35964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-8	GWTS-INF2-080520	Total/NA	Water	8011	35654
MB 410-35654/1-A	Method Blank	Total/NA	Water	8011	35654
LCS 410-35654/2-A	Lab Control Sample	Total/NA	Water	8011	35654
LCSD 410-35654/3-A	Lab Control Sample Dup	Total/NA	Water	8011	35654

Metals

Prep Batch: 31496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-1	GWTS-EFF1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-2	GWTS-EFF1DUP-080520	Dissolved	Water	Non-Digest Prep	
410-9909-6	GWTS-EFF2-080520	Dissolved	Water	Non-Digest Prep	
410-9909-7	GWTS-GAC2-080520	Dissolved	Water	Non-Digest Prep	
410-9909-8	GWTS-INF2-080520	Dissolved	Water	Non-Digest Prep	
MB 410-31496/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-31496/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-9909-6 MS	GWTS-EFF2-080520	Dissolved	Water	Non-Digest Prep	
410-9909-6 MSD	GWTS-EFF2-080520	Dissolved	Water	Non-Digest Prep	
410-9909-6 DU	GWTS-EFF2-080520	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 31648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-1	GWTS-EFF1-080520	Dissolved	Water	6010C	31496
410-9909-2	GWTS-EFF1DUP-080520	Dissolved	Water	6010C	31496
410-9909-6	GWTS-EFF2-080520	Dissolved	Water	6010C	31496
410-9909-7	GWTS-GAC2-080520	Dissolved	Water	6010C	31496
410-9909-8	GWTS-INF2-080520	Dissolved	Water	6010C	31496
MB 410-31496/1-A	Method Blank	Total/NA	Water	6010C	31496
LCS 410-31496/2-A	Lab Control Sample	Total/NA	Water	6010C	31496
410-9909-6 MS	GWTS-EFF2-080520	Dissolved	Water	6010C	31496
410-9909-6 MSD	GWTS-EFF2-080520	Dissolved	Water	6010C	31496
410-9909-6 DU	GWTS-EFF2-080520	Dissolved	Water	6010C	31496

Prep Batch: 31654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-3	GWTS-GAC1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-4	GWTS-INF1-080520	Dissolved	Water	Non-Digest Prep	
MB 410-31654/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-31654/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-9909-3 MS	GWTS-GAC1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-3 MSD	GWTS-GAC1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-4 MS	GWTS-INF1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-4 MSD	GWTS-INF1-080520	Dissolved	Water	Non-Digest Prep	
410-9909-3 DU	GWTS-GAC1-080520	Dissolved	Water	Non-Digest Prep	

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Metals (Continued)

Prep Batch: 31654 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-4 DU	GWTS-INF1-080520	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 32539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-9909-3	GWTS-GAC1-080520	Dissolved	Water	6010C	31654
410-9909-4	GWTS-INF1-080520	Dissolved	Water	6010C	31654
MB 410-31654/1-A	Method Blank	Total/NA	Water	6010C	31654
LCS 410-31654/2-A	Lab Control Sample	Total/NA	Water	6010C	31654
410-9909-3 MS	GWTS-GAC1-080520	Dissolved	Water	6010C	31654
410-9909-3 MSD	GWTS-GAC1-080520	Dissolved	Water	6010C	31654
410-9909-4 MS	GWTS-INF1-080520	Dissolved	Water	6010C	31654
410-9909-4 MSD	GWTS-INF1-080520	Dissolved	Water	6010C	31654
410-9909-3 DU	GWTS-GAC1-080520	Dissolved	Water	6010C	31654
410-9909-4 DU	GWTS-INF1-080520	Dissolved	Water	6010C	31654

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-EFF1-080520

Lab Sample ID: 410-9909-1

Date Collected: 08/05/20 09:49

Matrix: Water

Date Received: 08/06/20 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 18:57	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 00:37	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31496	08/10/20 17:14	UJLA	ELLE
Dissolved	Analysis	6010C		1	31648	08/10/20 23:55	LR7D	ELLE

Client Sample ID: GWTS-EFF1DUP-080520

Lab Sample ID: 410-9909-2

Date Collected: 08/05/20 09:49

Matrix: Water

Date Received: 08/06/20 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 19:19	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 00:54	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31496	08/10/20 17:14	UJLA	ELLE
Dissolved	Analysis	6010C		1	31648	08/10/20 23:58	LR7D	ELLE

Client Sample ID: GWTS-GAC1-080520

Lab Sample ID: 410-9909-3

Date Collected: 08/05/20 10:00

Matrix: Water

Date Received: 08/06/20 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 19:41	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 01:11	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31654	08/11/20 06:30	UJL8	ELLE
Dissolved	Analysis	6010C		1	32539	08/12/20 16:57	UCIG	ELLE

Client Sample ID: GWTS-INF1-080520

Lab Sample ID: 410-9909-4

Date Collected: 08/05/20 10:08

Matrix: Water

Date Received: 08/06/20 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 20:03	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 01:28	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31654	08/11/20 06:30	UJL8	ELLE
Dissolved	Analysis	6010C		1	32539	08/12/20 16:16	UCIG	ELLE

Client Sample ID: GWTS-TB01-080520

Lab Sample ID: 410-9909-5

Date Collected: 08/05/20 10:11

Matrix: Water

Date Received: 08/06/20 10:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 17:07	NSK7	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Client Sample ID: GWTS-TB01-080520**Lab Sample ID: 410-9909-5****Date Collected: 08/05/20 10:11****Matrix: Water****Date Received: 08/06/20 10:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 01:45	AC3T	ELLE

Client Sample ID: GWTS-EFF2-080520**Lab Sample ID: 410-9909-6****Date Collected: 08/05/20 09:11****Matrix: Water****Date Received: 08/06/20 10:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 17:51	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 02:02	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31496	08/10/20 17:14	UJLA	ELLE
Dissolved	Analysis	6010C		1	31648	08/10/20 22:28	LR7D	ELLE

Client Sample ID: GWTS-GAC2-080520**Lab Sample ID: 410-9909-7****Date Collected: 08/05/20 09:26****Matrix: Water****Date Received: 08/06/20 10:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 20:25	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 03:27	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31496	08/10/20 17:14	UJLA	ELLE
Dissolved	Analysis	6010C		1	31648	08/10/20 23:45	LR7D	ELLE

Client Sample ID: GWTS-INF2-080520**Lab Sample ID: 410-9909-8****Date Collected: 08/05/20 09:36****Matrix: Water****Date Received: 08/06/20 10:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 20:47	NSK7	ELLE
Total/NA	Prep	8011			35654	08/20/20 23:03	K2IL	ELLE
Total/NA	Analysis	8011		1	35964	08/21/20 22:17	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			31496	08/10/20 17:14	UJLA	ELLE
Dissolved	Analysis	6010C		1	31648	08/10/20 23:52	LR7D	ELLE

Client Sample ID: GWTS-FB02-080520**Lab Sample ID: 410-9909-9****Date Collected: 08/05/20 09:11****Matrix: Water****Date Received: 08/06/20 10:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	34418	08/18/20 17:29	NSK7	ELLE
Total/NA	Prep	8011			33073	08/13/20 23:24	K2IL	ELLE
Total/NA	Analysis	8011		1	33382	08/15/20 04:01	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
6010C	Metals (ICP)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-9909-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-9909-1	GWTS-EFF1-080520	Water	08/05/20 09:49	08/06/20 10:52	
410-9909-2	GWTS-EFF1DUP-080520	Water	08/05/20 09:49	08/06/20 10:52	
410-9909-3	GWTS-GAC1-080520	Water	08/05/20 10:00	08/06/20 10:52	
410-9909-4	GWTS-INF1-080520	Water	08/05/20 10:08	08/06/20 10:52	
410-9909-5	GWTS-TB01-080520	Water	08/05/20 10:11	08/06/20 10:52	
410-9909-6	GWTS-EFF2-080520	Water	08/05/20 09:11	08/06/20 10:52	
410-9909-7	GWTS-GAC2-080520	Water	08/05/20 09:26	08/06/20 10:52	
410-9909-8	GWTS-INF2-080520	Water	08/05/20 09:36	08/06/20 10:52	
410-9909-9	GWTS-FB02-080520	Water	08/05/20 09:11	08/06/20 10:52	

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Eurofins Lancaster Laboratories Env, LLC



410-9909 Chain of Custody

225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-080520				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: Q3				
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTXN (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/8010C)	Disolved Fe, Mn (6010C)	Chloride, Bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM2320B)	COMMENTS
1	GWTS-EFF1-080520	08/05/2020	0949	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF1DUP-080520	08/05/2020	0949	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC1-080520	08/05/2020	1000	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF1-080520	08/05/2020	1008	6	--	3	--	2	--	1*	--	--	--	--	--	
5	GWTS-TB01-080520	08/05/2020	1011	4	--	2	--	2	--	--	--	--	--	--	--	
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8160 95415369												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: J Livingston				8/5/2020		1100		Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
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Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								

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 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1525		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-080520				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q3				
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS
				Total Number of Bottles	VOCs	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	(BTEX)	
1	GWTS-EFF2-080520	08/05/2020	0911 18	--	9	--	6	--	3*	--	--	--	--	--	Additional Volume Provided for MSMSD	
2	GWTS-GAC2-080520	08/05/2020	0926 6	--	3	--	2	--	1*	--	--	--	--	--		
3	GWTS-INF2-080520	08/05/2020	0936 6	--	3	--	2	--	1*	--	--	--	--	--		
4	GWTS-FB02-080520	08/05/2020	0911 5	--	3	--	2	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-080520	
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8160 9541 5369												
RELINQUISHED BY: DATE TIME				RECEIVED BY: DATE TIME												
Printed Name and Signature: J Livingston 207 L 8/5/2020 1100				Printed Name and Signature:												
Printed Name and Signature:				Printed Name and Signature:												
Printed Name and Signature:				Printed Name and Signature:												
Printed Name and Signature:				Printed Name and Signature:												
Printed Name and Signature:				Printed Name and Signature: Nicole Reiff 9/6/20 1052												

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Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-9909-1

Login Number: 9909**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Sanchez, Melvin E**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-12115-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:
9/8/2020 10:23:47 AM

Kay Hower, Principal Project Manager
(717)556-7364
kayhower@eurofinsus.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Kay Hower
Principal Project Manager
9/8/2020 10:23:47 AM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Job ID: 410-12115-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-12115-1

Receipt

The samples were received on 8/27/2020 11:10 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.8° C.

GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) analyzed in analytical batch 410-40021 was outside the method criteria for the following analyte(s): Bis(2-ethylhexyl) phthalate. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The laboratory control sample (LCS) for preparation batch 410-39539 recovered outside control limits for the following analytes: 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene, Pyrene and Bis(2-ethylhexyl) phthalate. The associated sample(s) was re-prepared and/or re-analyzed outside holding time with acceptable results. Both sets of data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Client Sample ID: GWTS-EFF1-082620	Lab Sample ID: 410-12115-1
---	-----------------------------------

No Detections.

Client Sample ID: GWTS-INF1-082620	Lab Sample ID: 410-12115-2
---	-----------------------------------

No Detections.

Client Sample ID: KAFB-106233	Lab Sample ID: 410-12115-3
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No Detections.

Client Sample ID: KAFB-106234	Lab Sample ID: 410-12115-4
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No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Client Sample ID: GWTS-EFF1-082620

Lab Sample ID: 410-12115-1

Date Collected: 08/26/20 09:34

Matrix: Water

Date Received: 08/27/20 11:10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 14:17	1
2-Methylnaphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 14:17	1
Naphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 14:17	1
Pyrene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 14:17	1
Bis(2-ethylhexyl) phthalate	11	U Q	12	11	5.3	ug/L		09/02/20 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		43 - 140	09/01/20 09:00	09/02/20 14:17	1
2-Fluorobiphenyl (Surr)	86		44 - 119	09/01/20 09:00	09/02/20 14:17	1
2-Fluorophenol (Surr)	55		19 - 119	09/01/20 09:00	09/02/20 14:17	1
Nitrobenzene-d5 (Surr)	88		44 - 120	09/01/20 09:00	09/02/20 14:17	1
p-Terphenyl-d14 (Surr)	83		50 - 134	09/01/20 09:00	09/02/20 14:17	1
Phenol-d5 (Surr)	41		10 - 67	09/01/20 09:00	09/02/20 14:17	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 00:53	1
2-Methylnaphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 00:53	1
Naphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 00:53	1
Pyrene	0.21	U M H	0.52	0.21	0.10	ug/L		09/04/20 00:53	1
Bis(2-ethylhexyl) phthalate	10	U H	12	10	5.2	ug/L		09/04/20 00:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		43 - 140	09/03/20 13:50	09/04/20 00:53	1
2-Fluorobiphenyl (Surr)	85		44 - 119	09/03/20 13:50	09/04/20 00:53	1
2-Fluorophenol (Surr)	50		19 - 119	09/03/20 13:50	09/04/20 00:53	1
Nitrobenzene-d5 (Surr)	83		44 - 120	09/03/20 13:50	09/04/20 00:53	1
p-Terphenyl-d14 (Surr)	86		50 - 134	09/03/20 13:50	09/04/20 00:53	1
Phenol-d5 (Surr)	34		10 - 67	09/03/20 13:50	09/04/20 00:53	1

Client Sample ID: GWTS-INF1-082620

Lab Sample ID: 410-12115-2

Date Collected: 08/26/20 09:40

Matrix: Water

Date Received: 08/27/20 11:10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U Q	0.52	0.21	0.10	ug/L		09/02/20 14:47	1
2-Methylnaphthalene	0.21	U Q	0.52	0.21	0.10	ug/L		09/02/20 14:47	1
Naphthalene	0.21	U Q	0.52	0.21	0.10	ug/L		09/02/20 14:47	1
Pyrene	0.21	U Q	0.52	0.21	0.10	ug/L		09/02/20 14:47	1
Bis(2-ethylhexyl) phthalate	10	U Q	11	10	5.2	ug/L		09/02/20 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		43 - 140	09/01/20 09:00	09/02/20 14:47	1
2-Fluorobiphenyl (Surr)	81		44 - 119	09/01/20 09:00	09/02/20 14:47	1
2-Fluorophenol (Surr)	49		19 - 119	09/01/20 09:00	09/02/20 14:47	1
Nitrobenzene-d5 (Surr)	82		44 - 120	09/01/20 09:00	09/02/20 14:47	1
p-Terphenyl-d14 (Surr)	88		50 - 134	09/01/20 09:00	09/02/20 14:47	1
Phenol-d5 (Surr)	36		10 - 67	09/01/20 09:00	09/02/20 14:47	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Client Sample ID: GWTS-INF1-082620

Lab Sample ID: 410-12115-2

Date Collected: 08/26/20 09:40

Matrix: Water

Date Received: 08/27/20 11:10

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 01:22	1
2-Methylnaphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 01:22	1
Naphthalene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 01:22	1
Pyrene	0.21	U H	0.52	0.21	0.10	ug/L		09/04/20 01:22	1
Bis(2-ethylhexyl) phthalate	10	U H	11	10	5.2	ug/L		09/04/20 01:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	95		43 - 140	09/03/20 13:50	09/04/20 01:22	1
2-Fluorobiphenyl (Surr)	87		44 - 119	09/03/20 13:50	09/04/20 01:22	1
2-Fluorophenol (Surr)	50		19 - 119	09/03/20 13:50	09/04/20 01:22	1
Nitrobenzene-d5 (Surr)	81		44 - 120	09/03/20 13:50	09/04/20 01:22	1
p-Terphenyl-d14 (Surr)	87		50 - 134	09/03/20 13:50	09/04/20 01:22	1
Phenol-d5 (Surr)	34		10 - 67	09/03/20 13:50	09/04/20 01:22	1

Client Sample ID: KAFB-106233

Lab Sample ID: 410-12115-3

Date Collected: 08/26/20 10:00

Matrix: Water

Date Received: 08/27/20 11:10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 15:16	1
2-Methylnaphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 15:16	1
Naphthalene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 15:16	1
Pyrene	0.21	U Q	0.53	0.21	0.11	ug/L		09/02/20 15:16	1
Bis(2-ethylhexyl) phthalate	11	U Q	12	11	5.3	ug/L		09/02/20 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		43 - 140	09/01/20 09:00	09/02/20 15:16	1
2-Fluorobiphenyl (Surr)	82		44 - 119	09/01/20 09:00	09/02/20 15:16	1
2-Fluorophenol (Surr)	52		19 - 119	09/01/20 09:00	09/02/20 15:16	1
Nitrobenzene-d5 (Surr)	89		44 - 120	09/01/20 09:00	09/02/20 15:16	1
p-Terphenyl-d14 (Surr)	85		50 - 134	09/01/20 09:00	09/02/20 15:16	1
Phenol-d5 (Surr)	37		10 - 67	09/01/20 09:00	09/02/20 15:16	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.22	U H	0.55	0.22	0.11	ug/L		09/04/20 01:52	1
2-Methylnaphthalene	0.22	U H	0.55	0.22	0.11	ug/L		09/04/20 01:52	1
Naphthalene	0.22	U H	0.55	0.22	0.11	ug/L		09/04/20 01:52	1
Pyrene	0.22	U H	0.55	0.22	0.11	ug/L		09/04/20 01:52	1
Bis(2-ethylhexyl) phthalate	11	U H	12	11	5.5	ug/L		09/04/20 01:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		43 - 140	09/03/20 13:50	09/04/20 01:52	1
2-Fluorobiphenyl (Surr)	85		44 - 119	09/03/20 13:50	09/04/20 01:52	1
2-Fluorophenol (Surr)	50		19 - 119	09/03/20 13:50	09/04/20 01:52	1
Nitrobenzene-d5 (Surr)	82		44 - 120	09/03/20 13:50	09/04/20 01:52	1
p-Terphenyl-d14 (Surr)	87		50 - 134	09/03/20 13:50	09/04/20 01:52	1
Phenol-d5 (Surr)	35		10 - 67	09/03/20 13:50	09/04/20 01:52	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Client Sample ID: KAFB-106234

Lab Sample ID: 410-12115-4

Date Collected: 08/26/20 10:05

Matrix: Water

Date Received: 08/27/20 11:10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.20	U Q	0.51	0.20	0.10	ug/L		09/02/20 15:46	1
2-Methylnaphthalene	0.20	U Q	0.51	0.20	0.10	ug/L		09/02/20 15:46	1
Naphthalene	0.20	U Q	0.51	0.20	0.10	ug/L		09/02/20 15:46	1
Pyrene	0.20	U Q	0.51	0.20	0.10	ug/L		09/02/20 15:46	1
Bis(2-ethylhexyl) phthalate	10	U Q	11	10	5.1	ug/L		09/02/20 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		43 - 140	09/01/20 09:00	09/02/20 15:46	1
2-Fluorobiphenyl (Surr)	73		44 - 119	09/01/20 09:00	09/02/20 15:46	1
2-Fluorophenol (Surr)	45		19 - 119	09/01/20 09:00	09/02/20 15:46	1
Nitrobenzene-d5 (Surr)	76		44 - 120	09/01/20 09:00	09/02/20 15:46	1
p-Terphenyl-d14 (Surr)	72		50 - 134	09/01/20 09:00	09/02/20 15:46	1
Phenol-d5 (Surr)	33		10 - 67	09/01/20 09:00	09/02/20 15:46	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.21	U H	0.53	0.21	0.11	ug/L		09/04/20 02:21	1
2-Methylnaphthalene	0.21	U H	0.53	0.21	0.11	ug/L		09/04/20 02:21	1
Naphthalene	0.21	U H	0.53	0.21	0.11	ug/L		09/04/20 02:21	1
Pyrene	0.21	U H	0.53	0.21	0.11	ug/L		09/04/20 02:21	1
Bis(2-ethylhexyl) phthalate	11	U H	12	11	5.3	ug/L		09/04/20 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		43 - 140	09/03/20 13:50	09/04/20 02:21	1
2-Fluorobiphenyl (Surr)	84		44 - 119	09/03/20 13:50	09/04/20 02:21	1
2-Fluorophenol (Surr)	45		19 - 119	09/03/20 13:50	09/04/20 02:21	1
Nitrobenzene-d5 (Surr)	80		44 - 120	09/03/20 13:50	09/04/20 02:21	1
p-Terphenyl-d14 (Surr)	78		50 - 134	09/03/20 13:50	09/04/20 02:21	1
Phenol-d5 (Surr)	31		10 - 67	09/03/20 13:50	09/04/20 02:21	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (43-140)	FBP (44-119)	2FP (19-119)	NBZ (44-120)	TPHd14 (50-134)	PHL (10-67)
410-12115-1	GWTS-EFF1-082620	101	86	55	88	83	41
410-12115-1 - RE	GWTS-EFF1-082620	96	85	50	83	86	34
410-12115-2	GWTS-INF1-082620	96	81	49	82	88	36
410-12115-2 - RE	GWTS-INF1-082620	95	87	50	81	87	34
410-12115-3	KAFB-106233	96	82	52	89	85	37
410-12115-3 - RE	KAFB-106233	90	85	50	82	87	35
410-12115-4	KAFB-106234	89	73	45	76	72	33
410-12115-4 - RE	KAFB-106234	82	84	45	80	78	31
LCS 410-39539/2-A	Lab Control Sample	59	44	28	41 Q	47 Q	23
LCS 410-40723/2-A	Lab Control Sample	109	93	60	86	88	45
LCSD 410-39539/3-A	Lab Control Sample Dup	3 Q	0.1 Q	0.3 Q	0.2 Q	34 Q	0 Q
LCSD 410-40723/3-A	Lab Control Sample Dup	97	84	57	79	64	43
MB 410-39539/1-A	Method Blank	88	73	46	84	74	31
MB 410-40723/1-A	Method Blank	95	89	56	86	87	39

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-39539/1-A
Matrix: Water
Analysis Batch: 40021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 39539

Analyte	Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		09/02/20 11:18	1
2-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		09/02/20 11:18	1
Naphthalene	0.20	U	0.50	0.20	0.10	ug/L		09/02/20 11:18	1
Pyrene	0.20	U M	0.50	0.20	0.10	ug/L		09/02/20 11:18	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.0	ug/L		09/02/20 11:18	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		43 - 140	09/01/20 09:00	09/02/20 11:18	1
2-Fluorobiphenyl (Surr)	73		44 - 119	09/01/20 09:00	09/02/20 11:18	1
2-Fluorophenol (Surr)	46		19 - 119	09/01/20 09:00	09/02/20 11:18	1
Nitrobenzene-d5 (Surr)	84		44 - 120	09/01/20 09:00	09/02/20 11:18	1
p-Terphenyl-d14 (Surr)	74		50 - 134	09/01/20 09:00	09/02/20 11:18	1
Phenol-d5 (Surr)	31		10 - 67	09/01/20 09:00	09/02/20 11:18	1

Lab Sample ID: LCS 410-39539/2-A
Matrix: Water
Analysis Batch: 40021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 39539

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	50.0	18.3	Q	ug/L		37	41 - 119
2-Methylnaphthalene	50.0	19.2	Q	ug/L		38	40 - 121
Naphthalene	50.4	18.2	Q	ug/L		36	40 - 121
Pyrene	50.4	25.8	Q	ug/L		51	57 - 126
Bis(2-ethylhexyl) phthalate	50.3	23.1	Q	ug/L		46	55 - 135

Surrogate	%Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	59		43 - 140
2-Fluorobiphenyl (Surr)	44		44 - 119
2-Fluorophenol (Surr)	28		19 - 119
Nitrobenzene-d5 (Surr)	41	Q	44 - 120
p-Terphenyl-d14 (Surr)	47	Q	50 - 134
Phenol-d5 (Surr)	23		10 - 67

Lab Sample ID: LCSD 410-39539/3-A
Matrix: Water
Analysis Batch: 40021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 39539

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	50.0	0.20	U Q	ug/L		0	41 - 119	200	20
2-Methylnaphthalene	50.0	0.20	U Q	ug/L		0.1	40 - 121	199	20
Naphthalene	50.4	0.20	U Q	ug/L		0.1	40 - 121	199	20
Pyrene	50.4	14.8	Q	ug/L		29	57 - 126	54	20
Bis(2-ethylhexyl) phthalate	50.3	22.7	Q	ug/L		45	55 - 135	2	20

Surrogate	%Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	3	Q	43 - 140
2-Fluorobiphenyl (Surr)	0.1	Q	44 - 119

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 410-39539/3-A

Matrix: Water

Analysis Batch: 40021

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39539

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	0.3	Q	19 - 119
Nitrobenzene-d5 (Surr)	0.2	Q	44 - 120
p-Terphenyl-d14 (Surr)	34	Q	50 - 134
Phenol-d5 (Surr)	0	Q	10 - 67

Lab Sample ID: MB 410-40723/1-A

Matrix: Water

Analysis Batch: 40784

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 40723

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		09/03/20 21:55	1
2-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		09/03/20 21:55	1
Naphthalene	0.20	U M	0.50	0.20	0.10	ug/L		09/03/20 21:55	1
Pyrene	0.20	U	0.50	0.20	0.10	ug/L		09/03/20 21:55	1
Bis(2-ethylhexyl) phthalate	10	U	11	10	5.0	ug/L		09/03/20 21:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	95		43 - 140	09/03/20 13:50	09/03/20 21:55	1
2-Fluorobiphenyl (Surr)	89		44 - 119	09/03/20 13:50	09/03/20 21:55	1
2-Fluorophenol (Surr)	56		19 - 119	09/03/20 13:50	09/03/20 21:55	1
Nitrobenzene-d5 (Surr)	86		44 - 120	09/03/20 13:50	09/03/20 21:55	1
p-Terphenyl-d14 (Surr)	87		50 - 134	09/03/20 13:50	09/03/20 21:55	1
Phenol-d5 (Surr)	39		10 - 67	09/03/20 13:50	09/03/20 21:55	1

Lab Sample ID: LCS 410-40723/2-A

Matrix: Water

Analysis Batch: 40784

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 40723

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	50.0	37.1		ug/L		74	41 - 119
2-Methylnaphthalene	50.0	37.7		ug/L		75	40 - 121
Naphthalene	50.4	38.2		ug/L		76	40 - 121
Pyrene	50.4	46.0		ug/L		91	57 - 126
Bis(2-ethylhexyl) phthalate	50.3	43.5		ug/L		86	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	109		43 - 140
2-Fluorobiphenyl (Surr)	93		44 - 119
2-Fluorophenol (Surr)	60		19 - 119
Nitrobenzene-d5 (Surr)	86		44 - 120
p-Terphenyl-d14 (Surr)	88		50 - 134
Phenol-d5 (Surr)	45		10 - 67

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 410-40723/3-A

Matrix: Water

Analysis Batch: 40784

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 40723

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	50.0	35.0		ug/L		70	41 - 119	6	20
2-Methylnaphthalene	50.0	35.6		ug/L		71	40 - 121	6	20
Naphthalene	50.4	36.2		ug/L		72	40 - 121	5	20
Pyrene	50.4	41.9		ug/L		83	57 - 126	9	20
Bis(2-ethylhexyl) phthalate	50.3	40.0		ug/L		79	55 - 135	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	97		43 - 140
2-Fluorobiphenyl (Surr)	84		44 - 119
2-Fluorophenol (Surr)	57		19 - 119
Nitrobenzene-d5 (Surr)	79		44 - 120
p-Terphenyl-d14 (Surr)	64		50 - 134
Phenol-d5 (Surr)	43		10 - 67

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

GC/MS Semi VOA

Prep Batch: 39539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12115-1	GWTS-EFF1-082620	Total/NA	Water	3510C	
410-12115-2	GWTS-INF1-082620	Total/NA	Water	3510C	
410-12115-3	KAFB-106233	Total/NA	Water	3510C	
410-12115-4	KAFB-106234	Total/NA	Water	3510C	
MB 410-39539/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-39539/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-39539/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 40021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12115-1	GWTS-EFF1-082620	Total/NA	Water	8270D	39539
410-12115-2	GWTS-INF1-082620	Total/NA	Water	8270D	39539
410-12115-3	KAFB-106233	Total/NA	Water	8270D	39539
410-12115-4	KAFB-106234	Total/NA	Water	8270D	39539
MB 410-39539/1-A	Method Blank	Total/NA	Water	8270D	39539
LCS 410-39539/2-A	Lab Control Sample	Total/NA	Water	8270D	39539
LCSD 410-39539/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	39539

Prep Batch: 40723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12115-1 - RE	GWTS-EFF1-082620	Total/NA	Water	3510C	
410-12115-2 - RE	GWTS-INF1-082620	Total/NA	Water	3510C	
410-12115-3 - RE	KAFB-106233	Total/NA	Water	3510C	
410-12115-4 - RE	KAFB-106234	Total/NA	Water	3510C	
MB 410-40723/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-40723/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-40723/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 40784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12115-1 - RE	GWTS-EFF1-082620	Total/NA	Water	8270D	40723
410-12115-2 - RE	GWTS-INF1-082620	Total/NA	Water	8270D	40723
410-12115-3 - RE	KAFB-106233	Total/NA	Water	8270D	40723
410-12115-4 - RE	KAFB-106234	Total/NA	Water	8270D	40723
MB 410-40723/1-A	Method Blank	Total/NA	Water	8270D	40723
LCS 410-40723/2-A	Lab Control Sample	Total/NA	Water	8270D	40723
LCSD 410-40723/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	40723

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Client Sample ID: GWTS-EFF1-082620

Date Collected: 08/26/20 09:34

Date Received: 08/27/20 11:10

Lab Sample ID: 410-12115-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			39539	09/01/20 09:00	R9CT	ELLE
Total/NA	Analysis	8270D		1	40021	09/02/20 14:17	UWHS	ELLE
Total/NA	Prep	3510C	RE		40723	09/03/20 13:50	R9CT	ELLE
Total/NA	Analysis	8270D	RE	1	40784	09/04/20 00:53	UWHS	ELLE

Client Sample ID: GWTS-INF1-082620

Date Collected: 08/26/20 09:40

Date Received: 08/27/20 11:10

Lab Sample ID: 410-12115-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			39539	09/01/20 09:00	R9CT	ELLE
Total/NA	Analysis	8270D		1	40021	09/02/20 14:47	UWHS	ELLE
Total/NA	Prep	3510C	RE		40723	09/03/20 13:50	R9CT	ELLE
Total/NA	Analysis	8270D	RE	1	40784	09/04/20 01:22	UWHS	ELLE

Client Sample ID: KAFB-106233

Date Collected: 08/26/20 10:00

Date Received: 08/27/20 11:10

Lab Sample ID: 410-12115-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			39539	09/01/20 09:00	R9CT	ELLE
Total/NA	Analysis	8270D		1	40021	09/02/20 15:16	UWHS	ELLE
Total/NA	Prep	3510C	RE		40723	09/03/20 13:50	R9CT	ELLE
Total/NA	Analysis	8270D	RE	1	40784	09/04/20 01:52	UWHS	ELLE

Client Sample ID: KAFB-106234

Date Collected: 08/26/20 10:05

Date Received: 08/27/20 11:10

Lab Sample ID: 410-12115-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			39539	09/01/20 09:00	R9CT	ELLE
Total/NA	Analysis	8270D		1	40021	09/02/20 15:46	UWHS	ELLE
Total/NA	Prep	3510C	RE		40723	09/03/20 13:50	R9CT	ELLE
Total/NA	Analysis	8270D	RE	1	40784	09/04/20 02:21	UWHS	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12115-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-12115-1	GWTS-EFF1-082620	Water	08/26/20 09:34	08/27/20 11:10	
410-12115-2	GWTS-INF1-082620	Water	08/26/20 09:40	08/27/20 11:10	
410-12115-3	KAFB-106233	Water	08/26/20 10:00	08/27/20 11:10	
410-12115-4	KAFB-106234	Water	08/26/20 10:05	08/27/20 11:10	

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Eurofins Lancaster Laboratories Env, LLC



410-12115 Chain of Custody

EA		225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-082620	
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020			
PROJECT SITE AND PHASE: ST106/SS110		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KeyHower@eurofinsUS.com Eurofins 1 (717) 556-7258				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: Q3			
				ANALYSIS REQUIRED (Specify number of bottles)											
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	SVOCs	(62/70)								COMMENTS	
1	GWTS-EFF1-082620	08/26/2020	0934	2	2										
2	GWTS-INF1-082620	08/26/2020	0940	2	2										
3	KAFB-106233	08/26/2020	1000	2	2										
4	KAFB-106234	08/26/2020	1005	2	2										
5															
6															
SAMPLER(S): J Livingston															
COURIER AND SHIPPING NUMBER: Fedex: 8156 5978 2984															
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: J Livingston				8/26/2020		1100		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature: Kristin Zeigler				8/27/20		1110	

JML

KAM

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-12115-1

Login Number: 12115**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Rivera, Tatiana**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-12727-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

9/28/2020 1:21:24 PM

Jennifer Pursel, Operations Support Specialist
(717)556-7262

jenniferpursel@eurofinsus.com

Designee for

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

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www.eurofinsus.com/Env

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Jennifer Pursel
Operations Support Specialist
9/28/2020 1:21:24 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Job ID: 410-12727-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-12727-1

Receipt

The samples were received on 9/2/2020 11:06 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Client Sample ID: GWTS-GAC1-A1-090120

Lab Sample ID: 410-12727-1

☐ No Detections.

Client Sample ID: GWTS-GAC1-A2-090120

Lab Sample ID: 410-12727-2

☐ No Detections.

Client Sample ID: GWTS-GAC1-A3-090120

Lab Sample ID: 410-12727-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.011	J	0.029	0.019	0.0096	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-GAC1-B1-090120

Lab Sample ID: 410-12727-4

☐ No Detections.

Client Sample ID: GWTS-GAC1-B2-090120

Lab Sample ID: 410-12727-5

☐ No Detections.

Client Sample ID: GWTS-GAC1-B3-090120

Lab Sample ID: 410-12727-6

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Client Sample ID: GWTS-GAC1-A1-090120

Lab Sample ID: 410-12727-1

Date Collected: 09/01/20 07:30

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0097	ug/L		09/14/20 21:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	90		46 - 136				09/12/20 13:04	09/14/20 21:17	1
1,1,2,2-Tetrachloroethane (2C)	106		46 - 136				09/12/20 13:04	09/14/20 21:17	1

Client Sample ID: GWTS-GAC1-A2-090120

Lab Sample ID: 410-12727-2

Date Collected: 09/01/20 07:32

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	95		46 - 136				09/12/20 13:04	09/14/20 21:33	1
1,1,2,2-Tetrachloroethane (2C)	114		46 - 136				09/12/20 13:04	09/14/20 21:33	1

Client Sample ID: GWTS-GAC1-A3-090120

Lab Sample ID: 410-12727-3

Date Collected: 09/01/20 07:34

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.011	J	0.029	0.019	0.0096	ug/L		09/14/20 21:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	119		46 - 136				09/12/20 13:04	09/14/20 21:50	1
1,1,2,2-Tetrachloroethane (2C)	122		46 - 136				09/12/20 13:04	09/14/20 21:50	1

Client Sample ID: GWTS-GAC1-B1-090120

Lab Sample ID: 410-12727-4

Date Collected: 09/01/20 07:36

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 22:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136				09/12/20 13:04	09/14/20 22:07	1
1,1,2,2-Tetrachloroethane (2C)	120		46 - 136				09/12/20 13:04	09/14/20 22:07	1

Client Sample ID: GWTS-GAC1-B2-090120

Lab Sample ID: 410-12727-5

Date Collected: 09/01/20 07:38

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 22:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	101		46 - 136				09/12/20 13:04	09/14/20 22:24	1
1,1,2,2-Tetrachloroethane (2C)	126		46 - 136				09/12/20 13:04	09/14/20 22:24	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Client Sample ID: GWTS-GAC1-B3-090120

Lab Sample ID: 410-12727-6

Date Collected: 09/01/20 07:40

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	88		46 - 136	09/12/20 13:04	09/14/20 22:40	1
1,1,2,2-Tetrachloroethane (2C)	114		46 - 136	09/12/20 13:04	09/14/20 22:40	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1122TCA1	1122TCA2
		(46-136)	(46-136)
410-12727-1	GWTS-GAC1-A1-090120	90	106
410-12727-2	GWTS-GAC1-A2-090120	95	114
410-12727-3	GWTS-GAC1-A3-090120	119	122
410-12727-4	GWTS-GAC1-B1-090120	100	120
410-12727-5	GWTS-GAC1-B2-090120	101	126
410-12727-6	GWTS-GAC1-B3-090120	88	114
LCS 410-43222/2-A	Lab Control Sample	95	112
LCSD 410-43222/3-A	Lab Control Sample Dup	93	108
MB 410-43222/1-A	Method Blank	87	102
Surrogate Legend			
1122TCA = 1,1,2,2-Tetrachloroethane			

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-43222/1-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43222

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		09/14/20 18:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	87		46 - 136	09/12/20 13:04	09/14/20 18:46	1
1,1,2,2-Tetrachloroethane (2C)	102		46 - 136	09/12/20 13:04	09/14/20 18:46	1

Lab Sample ID: LCS 410-43222/2-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.118		ug/L		92	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	95		46 - 136
1,1,2,2-Tetrachloroethane (2C)	112		46 - 136

Lab Sample ID: LCSD 410-43222/3-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.106		ug/L		83	60 - 140	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	93		46 - 136
1,1,2,2-Tetrachloroethane (2C)	108		46 - 136

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

GC Semi VOA

Prep Batch: 43222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12727-1	GWTS-GAC1-A1-090120	Total/NA	Water	8011	
410-12727-2	GWTS-GAC1-A2-090120	Total/NA	Water	8011	
410-12727-3	GWTS-GAC1-A3-090120	Total/NA	Water	8011	
410-12727-4	GWTS-GAC1-B1-090120	Total/NA	Water	8011	
410-12727-5	GWTS-GAC1-B2-090120	Total/NA	Water	8011	
410-12727-6	GWTS-GAC1-B3-090120	Total/NA	Water	8011	
MB 410-43222/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-43222/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-43222/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 43649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12727-1	GWTS-GAC1-A1-090120	Total/NA	Water	8011	43222
410-12727-2	GWTS-GAC1-A2-090120	Total/NA	Water	8011	43222
410-12727-3	GWTS-GAC1-A3-090120	Total/NA	Water	8011	43222
410-12727-4	GWTS-GAC1-B1-090120	Total/NA	Water	8011	43222
410-12727-5	GWTS-GAC1-B2-090120	Total/NA	Water	8011	43222
410-12727-6	GWTS-GAC1-B3-090120	Total/NA	Water	8011	43222
MB 410-43222/1-A	Method Blank	Total/NA	Water	8011	43222
LCS 410-43222/2-A	Lab Control Sample	Total/NA	Water	8011	43222
LCSD 410-43222/3-A	Lab Control Sample Dup	Total/NA	Water	8011	43222

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Client Sample ID: GWTS-GAC1-A1-090120

Lab Sample ID: 410-12727-1

Date Collected: 09/01/20 07:30

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 21:17	AC3T	ELLE

Client Sample ID: GWTS-GAC1-A2-090120

Lab Sample ID: 410-12727-2

Date Collected: 09/01/20 07:32

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 21:33	AC3T	ELLE

Client Sample ID: GWTS-GAC1-A3-090120

Lab Sample ID: 410-12727-3

Date Collected: 09/01/20 07:34

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 21:50	AC3T	ELLE

Client Sample ID: GWTS-GAC1-B1-090120

Lab Sample ID: 410-12727-4

Date Collected: 09/01/20 07:36

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 22:07	AC3T	ELLE

Client Sample ID: GWTS-GAC1-B2-090120

Lab Sample ID: 410-12727-5

Date Collected: 09/01/20 07:38

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 22:24	AC3T	ELLE

Client Sample ID: GWTS-GAC1-B3-090120

Lab Sample ID: 410-12727-6

Date Collected: 09/01/20 07:40

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 22:40	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Method	Method Description	Protocol	Laboratory
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12727-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-12727-1	GWTS-GAC1-A1-090120	Water	09/01/20 07:30	09/02/20 11:06	
410-12727-2	GWTS-GAC1-A2-090120	Water	09/01/20 07:32	09/02/20 11:06	
410-12727-3	GWTS-GAC1-A3-090120	Water	09/01/20 07:34	09/02/20 11:06	
410-12727-4	GWTS-GAC1-B1-090120	Water	09/01/20 07:36	09/02/20 11:06	
410-12727-5	GWTS-GAC1-B2-090120	Water	09/01/20 07:38	09/02/20 11:06	
410-12727-6	GWTS-GAC1-B3-090120	Water	09/01/20 07:40	09/02/20 11:06	

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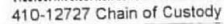
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Eurofins Lancaster Laboratories Env, LLC



Thank

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-12727-1

Login Number: 12727**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Rivera, Tatiana**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-12731-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility
Revision: 1

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Darlene Bandy

Authorized for release by:
11/4/2020 6:37:23 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

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results through
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www.eurofinsus.com/Env

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Darlene Bandy
Project Manager I
11/4/2020 6:37:23 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Job ID: 410-12731-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-12731-1

Revision

The report being provided is a revision of the original report sent on 9/29/2020. The report (revision 1) is being revised due to: Sample IDs were logged incorrectly. Samples were originally logged with IDs beginning with GWTS-GAC, but should begin with GWTS-GAC2, per the COC. Please note that the sample IDs may still appear as GWTS-GAC in the raw data.

Receipt

The samples were received on 9/2/2020 11:06 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Client Sample ID: GWTS-GAC2-A1-090120**Lab Sample ID: 410-12731-1**

No Detections.

Client Sample ID: GWTS-GAC2-A2-090120**Lab Sample ID: 410-12731-2**

No Detections.

Client Sample ID: GWTS-GAC2-A3-090120**Lab Sample ID: 410-12731-3**

No Detections.

Client Sample ID: GWTS-GAC2-B1-090120**Lab Sample ID: 410-12731-4**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.018	J	0.029	0.019	0.0097	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-GAC2-B2-090120**Lab Sample ID: 410-12731-5**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.026	J	0.029	0.020	0.0098	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-GAC2-B3-090120**Lab Sample ID: 410-12731-6**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.019	J	0.029	0.019	0.0097	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-TB01-090120**Lab Sample ID: 410-12731-7**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Client Sample ID: GWTS-GAC2-A1-090120

Lab Sample ID: 410-12731-1

Date Collected: 09/01/20 07:42

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	93		46 - 136				09/12/20 13:04	09/14/20 22:57	1
1,1,2,2-Tetrachloroethane (2C)	124		46 - 136				09/12/20 13:04	09/14/20 22:57	1

Client Sample ID: GWTS-GAC2-A2-090120

Lab Sample ID: 410-12731-2

Date Collected: 09/01/20 07:44

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 23:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	105		46 - 136				09/12/20 13:04	09/14/20 23:14	1
1,1,2,2-Tetrachloroethane (2C)	129		46 - 136				09/12/20 13:04	09/14/20 23:14	1

Client Sample ID: GWTS-GAC2-A3-090120

Lab Sample ID: 410-12731-3

Date Collected: 09/01/20 07:46

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/14/20 23:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	98		46 - 136				09/12/20 13:04	09/14/20 23:30	1
1,1,2,2-Tetrachloroethane (2C)	118		46 - 136				09/12/20 13:04	09/14/20 23:30	1

Client Sample ID: GWTS-GAC2-B1-090120

Lab Sample ID: 410-12731-4

Date Collected: 09/01/20 07:48

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.018	J	0.029	0.019	0.0097	ug/L		09/23/20 00:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	113		46 - 136				09/12/20 13:04	09/23/20 00:58	1
1,1,2,2-Tetrachloroethane (2C)	104		46 - 136				09/12/20 13:04	09/23/20 00:58	1

Client Sample ID: GWTS-GAC2-B2-090120

Lab Sample ID: 410-12731-5

Date Collected: 09/01/20 07:50

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.026	J	0.029	0.020	0.0098	ug/L		09/23/20 01:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	109		46 - 136				09/12/20 13:04	09/23/20 01:15	1
1,1,2,2-Tetrachloroethane (2C)	104		46 - 136				09/12/20 13:04	09/23/20 01:15	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Client Sample ID: GWTS-GAC2-B3-090120

Lab Sample ID: 410-12731-6

Date Collected: 09/01/20 07:52

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	J	0.029	0.019	0.0097	ug/L		09/23/20 01:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	109		46 - 136	09/12/20 13:06	09/23/20 01:31	1
1,1,2,2-Tetrachloroethane (2C)	109		46 - 136	09/12/20 13:06	09/23/20 01:31	1

Client Sample ID: GWTS-TB01-090120

Lab Sample ID: 410-12731-7

Date Collected: 09/01/20 08:00

Matrix: Water

Date Received: 09/02/20 11:06

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/15/20 01:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	92		46 - 136	09/12/20 13:06	09/15/20 01:11	1
1,1,2,2-Tetrachloroethane (2C)	117		46 - 136	09/12/20 13:06	09/15/20 01:11	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-12731-1	GWTS-GAC2-A1-090120	93	124
410-12731-2	GWTS-GAC2-A2-090120	105	129
410-12731-3	GWTS-GAC2-A3-090120	98	118
410-12731-4	GWTS-GAC2-B1-090120	113	104
410-12731-5	GWTS-GAC2-B2-090120	109	104
410-12731-6	GWTS-GAC2-B3-090120	109	109
410-12731-7	GWTS-TB01-090120	92	117
LCS 410-43222/2-A	Lab Control Sample	95	112
LCSD 410-43222/3-A	Lab Control Sample Dup	93	108
MB 410-43222/1-A	Method Blank	87	102
MB 410-43222/1-A	Method Blank	94	94

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-43222/1-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43222

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		09/14/20 18:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	87		46 - 136	09/12/20 13:04	09/14/20 18:46	1
1,1,2,2-Tetrachloroethane (2C)	102		46 - 136	09/12/20 13:04	09/14/20 18:46	1

Lab Sample ID: MB 410-43222/1-A
Matrix: Water
Analysis Batch: 46653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43222

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		09/22/20 23:51	1
Ethylene Dibromide (2C)	0.020	U	0.030	0.020	0.010	ug/L		09/22/20 23:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	94		46 - 136	09/12/20 13:04	09/22/20 23:51	1
1,1,2,2-Tetrachloroethane (2C)	94		46 - 136	09/12/20 13:04	09/22/20 23:51	1

Lab Sample ID: LCS 410-43222/2-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.118		ug/L		92	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	95		46 - 136
1,1,2,2-Tetrachloroethane (2C)	112		46 - 136

Lab Sample ID: LCSD 410-43222/3-A
Matrix: Water
Analysis Batch: 43649

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.106		ug/L		83	60 - 140	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	93		46 - 136
1,1,2,2-Tetrachloroethane (2C)	108		46 - 136

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

GC Semi VOA

Prep Batch: 43222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12731-1	GWTS-GAC2-A1-090120	Total/NA	Water	8011	
410-12731-2	GWTS-GAC2-A2-090120	Total/NA	Water	8011	
410-12731-3	GWTS-GAC2-A3-090120	Total/NA	Water	8011	
410-12731-4	GWTS-GAC2-B1-090120	Total/NA	Water	8011	
410-12731-5	GWTS-GAC2-B2-090120	Total/NA	Water	8011	
410-12731-6	GWTS-GAC2-B3-090120	Total/NA	Water	8011	
410-12731-7	GWTS-TB01-090120	Total/NA	Water	8011	
MB 410-43222/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-43222/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-43222/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 43649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12731-1	GWTS-GAC2-A1-090120	Total/NA	Water	8011	43222
410-12731-2	GWTS-GAC2-A2-090120	Total/NA	Water	8011	43222
410-12731-3	GWTS-GAC2-A3-090120	Total/NA	Water	8011	43222
410-12731-7	GWTS-TB01-090120	Total/NA	Water	8011	43222
MB 410-43222/1-A	Method Blank	Total/NA	Water	8011	43222
LCS 410-43222/2-A	Lab Control Sample	Total/NA	Water	8011	43222
LCSD 410-43222/3-A	Lab Control Sample Dup	Total/NA	Water	8011	43222

Analysis Batch: 46653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-12731-4	GWTS-GAC2-B1-090120	Total/NA	Water	8011	43222
410-12731-5	GWTS-GAC2-B2-090120	Total/NA	Water	8011	43222
410-12731-6	GWTS-GAC2-B3-090120	Total/NA	Water	8011	43222
MB 410-43222/1-A	Method Blank	Total/NA	Water	8011	43222

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Client Sample ID: GWTS-GAC2-A1-090120**Lab Sample ID: 410-12731-1****Date Collected: 09/01/20 07:42****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 22:57	AC3T	ELLE

Client Sample ID: GWTS-GAC2-A2-090120**Lab Sample ID: 410-12731-2****Date Collected: 09/01/20 07:44****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 23:14	AC3T	ELLE

Client Sample ID: GWTS-GAC2-A3-090120**Lab Sample ID: 410-12731-3****Date Collected: 09/01/20 07:46****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/14/20 23:30	AC3T	ELLE

Client Sample ID: GWTS-GAC2-B1-090120**Lab Sample ID: 410-12731-4****Date Collected: 09/01/20 07:48****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	46653	09/23/20 00:58	AC3T	ELLE

Client Sample ID: GWTS-GAC2-B2-090120**Lab Sample ID: 410-12731-5****Date Collected: 09/01/20 07:50****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:04	UKQ8	ELLE
Total/NA	Analysis	8011		1	46653	09/23/20 01:15	AC3T	ELLE

Client Sample ID: GWTS-GAC2-B3-090120**Lab Sample ID: 410-12731-6****Date Collected: 09/01/20 07:52****Matrix: Water****Date Received: 09/02/20 11:06**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:06	UKQ8	ELLE
Total/NA	Analysis	8011		1	46653	09/23/20 01:31	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Client Sample ID: GWTS-TB01-090120

Lab Sample ID: 410-12731-7

Date Collected: 09/01/20 08:00

Matrix: Water

Date Received: 09/02/20 11:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			43222	09/12/20 13:06	UKQ8	ELLE
Total/NA	Analysis	8011		1	43649	09/15/20 01:11	AC3T	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Method	Method Description	Protocol	Laboratory
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
8011	Microextraction	SW846	ELLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-12731-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-12731-1	GWTS-GAC2-A1-090120	Water	09/01/20 07:42	09/02/20 11:06	
410-12731-2	GWTS-GAC2-A2-090120	Water	09/01/20 07:44	09/02/20 11:06	
410-12731-3	GWTS-GAC2-A3-090120	Water	09/01/20 07:46	09/02/20 11:06	
410-12731-4	GWTS-GAC2-B1-090120	Water	09/01/20 07:48	09/02/20 11:06	
410-12731-5	GWTS-GAC2-B2-090120	Water	09/01/20 07:50	09/02/20 11:06	
410-12731-6	GWTS-GAC2-B3-090120	Water	09/01/20 07:52	09/02/20 11:06	
410-12731-7	GWTS-TB01-090120	Water	09/01/20 08:00	09/02/20 11:06	

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Eurofins Lancaster Laboratories Env, LLC

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-12731-1

Login Number: 12731**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Rivera, Tatiana**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-13531-1

Client Project/Site: Kirtland AFB Bulk Fuels Facility

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, Texas 75067

Attn: Pamela J Moss

Authorized for release by:

9/28/2020 4:23:08 PM

Jennifer Pursel, Operations Support Specialist
(717)556-7262

jenniferpursel@eurofinsus.com

Designee for

Kay Hower, Principal Project Manager
(717)556-7364

kayhower@eurofinsus.com

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

* QC recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.

* Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Jennifer Pursel
Operations Support Specialist
9/28/2020 4:23:08 PM

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Lancaster Laboratories Env, LLC

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Job ID: 410-13531-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-13531-1

Receipt

The samples were received on 9/10/2020 11:11 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 410-46650 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. GWTS-FB01-090920 (410-13531-8) and GWTS-TB01-090920 (410-13531-9).

Method 8011: The continuing calibration verification (CCV) associated with batch 410-46650 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane (SURR). The samples associated with this CCV had acceptable recoveries for the surrogate; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-EFF2-090920

Lab Sample ID: 410-13531-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.013	J	0.029	0.019	0.0096	ug/L	1			8011	Total/NA

Client Sample ID: GWTS-EFF2DUP-090920

Lab Sample ID: 410-13531-2

No Detections.

Client Sample ID: GWTS-GAC2-090920

Lab Sample ID: 410-13531-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.015	J	0.029	0.019	0.0096	ug/L	1			8011	Total/NA

Client Sample ID: GWTS-INF2-090920

Lab Sample ID: 410-13531-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.024	J	0.029	0.019	0.0097	ug/L	1			8011	Total/NA
Manganese	0.0053	J	0.010	0.0052	0.0031	mg/L	1			6010C	Dissolved

Client Sample ID: GWTS-EFF1-090920

Lab Sample ID: 410-13531-5

No Detections.

Client Sample ID: GWTS-GAC1-090920

Lab Sample ID: 410-13531-6

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.021	J	0.028	0.019	0.0095	ug/L	1			8011	Total/NA

Client Sample ID: GWTS-INF1-090920

Lab Sample ID: 410-13531-7

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil	Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.012	J	0.029	0.019	0.0095	ug/L	1			8011	Total/NA

Client Sample ID: GWTS-FB01-090920

Lab Sample ID: 410-13531-8

No Detections.

Client Sample ID: GWTS-TB01-090920

Lab Sample ID: 410-13531-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-EFF2-090920

Lab Sample ID: 410-13531-1

Date Collected: 09/09/20 09:00

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 04:28	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 04:28	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 04:28	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 04:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		81 - 118		09/19/20 04:28	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 04:28	1
Dibromofluoromethane (Surr)	102		80 - 119		09/19/20 04:28	1
Toluene-d8 (Surr)	97		89 - 112		09/19/20 04:28	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.013	J	0.029	0.019	0.0096	ug/L		09/23/20 06:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	111		46 - 136	09/16/20 00:05	09/23/20 06:56	1
1,1,2,2-Tetrachloroethane (2C)	103		46 - 136	09/16/20 00:05	09/23/20 06:56	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/16/20 21:44	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/16/20 21:44	1

Client Sample ID: GWTS-EFF2DUP-090920

Lab Sample ID: 410-13531-2

Date Collected: 09/09/20 09:00

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 04:50	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 04:50	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 04:50	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		09/19/20 04:50	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 04:50	1
Dibromofluoromethane (Surr)	101		80 - 119		09/19/20 04:50	1
Toluene-d8 (Surr)	99		89 - 112		09/19/20 04:50	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/23/20 07:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	112		46 - 136	09/16/20 00:05	09/23/20 07:14	1
1,1,2,2-Tetrachloroethane (2C)	102		46 - 136	09/16/20 00:05	09/23/20 07:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/17/20 20:44	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-EFF2DUP-090920

Lab Sample ID: 410-13531-2

Date Collected: 09/09/20 09:00

Matrix: Water

Date Received: 09/10/20 11:11

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/17/20 20:44	1

Client Sample ID: GWTS-GAC2-090920

Lab Sample ID: 410-13531-3

Date Collected: 09/09/20 09:08

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:12	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 05:12	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:12	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 05:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		81 - 118		09/19/20 05:12	1
4-Bromofluorobenzene (Surr)	96		85 - 114		09/19/20 05:12	1
Dibromofluoromethane (Surr)	103		80 - 119		09/19/20 05:12	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 05:12	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.015	J	0.029	0.019	0.0096	ug/L		09/23/20 07:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136	09/16/20 00:05	09/23/20 07:31	1
1,1,2,2-Tetrachloroethane (2C)	102		46 - 136	09/16/20 00:05	09/23/20 07:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/17/20 20:41	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/17/20 20:41	1

Client Sample ID: GWTS-INF2-090920

Lab Sample ID: 410-13531-4

Date Collected: 09/09/20 09:25

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:34	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 05:34	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:34	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 05:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		81 - 118		09/19/20 05:34	1
4-Bromofluorobenzene (Surr)	96		85 - 114		09/19/20 05:34	1
Dibromofluoromethane (Surr)	102		80 - 119		09/19/20 05:34	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 05:34	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.024	J	0.029	0.019	0.0097	ug/L		09/23/20 07:47	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-INF2-090920

Lab Sample ID: 410-13531-4

Date Collected: 09/09/20 09:25

Matrix: Water

Date Received: 09/10/20 11:11

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	95		46 - 136	09/16/20 00:05	09/23/20 07:47	1
1,1,2,2-Tetrachloroethane (2C)	105		46 - 136	09/16/20 00:05	09/23/20 07:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/16/20 21:28	1
Manganese	0.0053	J	0.010	0.0052	0.0031	mg/L		09/16/20 21:28	1

Client Sample ID: GWTS-EFF1-090920

Lab Sample ID: 410-13531-5

Date Collected: 09/09/20 08:25

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:48	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 00:48	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:48	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 00:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		81 - 118		09/19/20 00:48	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 00:48	1
Dibromofluoromethane (Surr)	101		80 - 119		09/19/20 00:48	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 00:48	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		09/23/20 08:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	103		46 - 136	09/16/20 00:05	09/23/20 08:04	1
1,1,2,2-Tetrachloroethane (2C)	104		46 - 136	09/16/20 00:05	09/23/20 08:04	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U J1	0.21	0.10	0.041	mg/L		09/15/20 13:09	1
Manganese	0.0052	U Q J1	0.010	0.0052	0.0031	mg/L		09/15/20 13:09	1

Client Sample ID: GWTS-GAC1-090920

Lab Sample ID: 410-13531-6

Date Collected: 09/09/20 08:40

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:56	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 05:56	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 05:56	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 05:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		81 - 118		09/19/20 05:56	1
4-Bromofluorobenzene (Surr)	94		85 - 114		09/19/20 05:56	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-GAC1-090920

Lab Sample ID: 410-13531-6

Date Collected: 09/09/20 08:40

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		80 - 119		09/19/20 05:56	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 05:56	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.021	J	0.028	0.019	0.0095	ug/L		09/23/20 08:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136	09/16/20 00:05	09/23/20 08:55	1
1,1,2,2-Tetrachloroethane (2C)	105		46 - 136	09/16/20 00:05	09/23/20 08:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/17/20 20:16	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/17/20 20:16	1

Client Sample ID: GWTS-INF1-090920

Lab Sample ID: 410-13531-7

Date Collected: 09/09/20 08:51

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 06:18	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 06:18	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 06:18	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 06:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		81 - 118		09/19/20 06:18	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 06:18	1
Dibromofluoromethane (Surr)	103		80 - 119		09/19/20 06:18	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 06:18	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.012	J	0.029	0.019	0.0095	ug/L		09/25/20 19:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	88		46 - 136	09/16/20 00:05	09/25/20 19:50	1
1,1,2,2-Tetrachloroethane (2C)	97		46 - 136	09/16/20 00:05	09/25/20 19:50	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/16/20 21:38	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/16/20 21:38	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-FB01-090920

Lab Sample ID: 410-13531-8

Date Collected: 09/09/20 08:25

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:04	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 00:04	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:04	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 00:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		09/19/20 00:04	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 00:04	1
Dibromofluoromethane (Surr)	101		80 - 119		09/19/20 00:04	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 00:04	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0096	ug/L		09/23/20 10:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	97	Q	46 - 136	09/16/20 00:05	09/23/20 10:04	1
1,1,2,2-Tetrachloroethane (2C)	101	Q	46 - 136	09/16/20 00:05	09/23/20 10:04	1

Client Sample ID: GWTS-TB01-090920

Lab Sample ID: 410-13531-9

Date Collected: 09/09/20 09:30

Matrix: Water

Date Received: 09/10/20 11:11

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:26	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/19/20 00:26	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/19/20 00:26	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/19/20 00:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		09/19/20 00:26	1
4-Bromofluorobenzene (Surr)	95		85 - 114		09/19/20 00:26	1
Dibromofluoromethane (Surr)	101		80 - 119		09/19/20 00:26	1
Toluene-d8 (Surr)	98		89 - 112		09/19/20 00:26	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U Q	0.029	0.019	0.0095	ug/L		09/23/20 10:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	97	Q	46 - 136	09/16/20 00:05	09/23/20 10:21	1
1,1,2,2-Tetrachloroethane (2C)	99	Q	46 - 136	09/16/20 00:05	09/23/20 10:21	1

Eurofins Lancaster Laboratories Env, LLC

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-13531-1	GWTS-EFF2-090920	108	95	102	97
410-13531-2	GWTS-EFF2DUP-090920	105	95	101	99
410-13531-3	GWTS-GAC2-090920	108	96	103	98
410-13531-4	GWTS-INF2-090920	107	96	102	98
410-13531-5	GWTS-EFF1-090920	106	95	101	98
410-13531-5 MS	GWTS-EFF1-090920	106	99	102	99
410-13531-5 MSD	GWTS-EFF1-090920	105	99	101	99
410-13531-6	GWTS-GAC1-090920	108	94	102	98
410-13531-7	GWTS-INF1-090920	110	95	103	98
410-13531-8	GWTS-FB01-090920	105	95	101	98
410-13531-9	GWTS-TB01-090920	105	95	101	98
LCS 410-45563/5	Lab Control Sample	105	98	100	99
MB 410-45563/8	Method Blank	106	96	101	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-13531-1	GWTS-EFF2-090920	111	103
410-13531-2	GWTS-EFF2DUP-090920	112	102
410-13531-3	GWTS-GAC2-090920	100	102
410-13531-4	GWTS-INF2-090920	95	105
410-13531-5	GWTS-EFF1-090920	103	104
410-13531-5 MS	GWTS-EFF1-090920	103	108
410-13531-5 MSD	GWTS-EFF1-090920	100	108
410-13531-6	GWTS-GAC1-090920	100	105
410-13531-7	GWTS-INF1-090920	88	97
410-13531-8	GWTS-FB01-090920	97 Q	101 Q
410-13531-9	GWTS-TB01-090920	97 Q	99 Q
LCS 410-44234/2-A	Lab Control Sample	104	105
LCSD 410-44234/3-A	Lab Control Sample Dup	100	99
MB 410-44234/1-A	Method Blank	107	108

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-45563/8

Matrix: Water

Analysis Batch: 45563

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	0.50	U	1.0	0.50	0.20	ug/L		09/18/20 23:16	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		09/18/20 23:16	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		09/18/20 23:16	1
Xylenes, Total	2.0	U	6.0	2.0	1.4	ug/L		09/18/20 23:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		81 - 118		09/18/20 23:16	1
4-Bromofluorobenzene (Surr)	96		85 - 114		09/18/20 23:16	1
Dibromofluoromethane (Surr)	101		80 - 119		09/18/20 23:16	1
Toluene-d8 (Surr)	99		89 - 112		09/18/20 23:16	1

Lab Sample ID: LCS 410-45563/5

Matrix: Water

Analysis Batch: 45563

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19.7		ug/L		98	42 - 138
Ethylbenzene	20.0	19.1		ug/L		95	79 - 121
Toluene	20.0	19.1		ug/L		96	80 - 121
Xylenes, Total	60.0	56.5		ug/L		94	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		81 - 118
4-Bromofluorobenzene (Surr)	98		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Lab Sample ID: 410-13531-5 MS

Matrix: Water

Analysis Batch: 45563

Client Sample ID: GWTS-EFF1-090920

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.50	U	20.0	22.8		ug/L		114	42 - 138
Ethylbenzene	0.80	U	20.0	22.1		ug/L		111	79 - 121
Toluene	0.50	U	20.0	21.9		ug/L		109	80 - 121
Xylenes, Total	2.0	U	60.0	64.9		ug/L		108	79 - 121

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-13531-5 MSD

Matrix: Water

Analysis Batch: 45563

Client Sample ID: GWTS-EFF1-090920

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.50	U	20.0	22.8		ug/L		114	42 - 138	0	20
Ethylbenzene	0.80	U	20.0	22.1		ug/L		111	79 - 121	0	20
Toluene	0.50	U	20.0	22.0		ug/L		110	80 - 121	0	20
Xylenes, Total	2.0	U	60.0	65.6		ug/L		109	79 - 121	1	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	105		81 - 118
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-44234/1-A

Matrix: Water

Analysis Batch: 46650

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44234

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		09/23/20 00:43	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	107		46 - 136	09/16/20 00:05	09/23/20 00:43	1
1,1,2,2-Tetrachloroethane (2C)	108		46 - 136	09/16/20 00:05	09/23/20 00:43	1

Lab Sample ID: LCS 410-44234/2-A

Matrix: Water

Analysis Batch: 46650

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.164		ug/L		128	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1,1,2,2-Tetrachloroethane (1C)	104		46 - 136
1,1,2,2-Tetrachloroethane (2C)	105		46 - 136

Lab Sample ID: LCSD 410-44234/3-A

Matrix: Water

Analysis Batch: 46650

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 44234

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.128	0.157		ug/L		122	60 - 140	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136
1,1,2,2-Tetrachloroethane (2C)	99		46 - 136

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 410-13531-5 MS

Matrix: Water

Analysis Batch: 46650

Client Sample ID: GWTS-EFF1-090920

Prep Type: Total/NA

Prep Batch: 44234

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.019	U	0.123	0.156		ug/L		127	60 - 140
Surrogate	%Recovery	MS Qualifier	Limits						
1,1,2,2-Tetrachloroethane (1C)	103		46 - 136						
1,1,2,2-Tetrachloroethane (2C)	108		46 - 136						

Lab Sample ID: 410-13531-5 MSD

Matrix: Water

Analysis Batch: 46650

Client Sample ID: GWTS-EFF1-090920

Prep Type: Total/NA

Prep Batch: 44234

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Ethylene Dibromide (1C)	0.019	U	0.124	0.159		ug/L		128	60 - 140	2	20
Surrogate	%Recovery	MSD Qualifier	Limits								
1,1,2,2-Tetrachloroethane (1C)	100		46 - 136								
1,1,2,2-Tetrachloroethane (2C)	108		46 - 136								

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-43367/1-A

Matrix: Water

Analysis Batch: 44063

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43367

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/15/20 13:03	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/15/20 13:03	1

Lab Sample ID: LCS 410-43367/2-A

Matrix: Water

Analysis Batch: 44063

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43367

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.419		mg/L		104	87 - 115
Manganese	0.0200	0.0231	Q	mg/L		116	90 - 114

Lab Sample ID: MB 410-43619/1-A

Matrix: Water

Analysis Batch: 45163

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43619

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/17/20 19:51	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/17/20 19:51	1

Lab Sample ID: LCS 410-43619/2-A

Matrix: Water

Analysis Batch: 45163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.389		mg/L		97	87 - 115

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-43619/2-A
Matrix: Water
Analysis Batch: 45163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.0200	0.0218		mg/L		109	90 - 114

Lab Sample ID: MB 410-43621/1-A
Matrix: Water
Analysis Batch: 44707

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43621

Analyte	Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	0.10	U	0.21	0.10	0.041	mg/L		09/16/20 21:00	1
Manganese	0.0052	U	0.010	0.0052	0.0031	mg/L		09/16/20 21:00	1

Lab Sample ID: LCS 410-43621/2-A
Matrix: Water
Analysis Batch: 44707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.402	0.439		mg/L		109	87 - 115
Manganese	0.0200	0.0221		mg/L		111	90 - 114

Lab Sample ID: 410-13531-5 MS
Matrix: Water
Analysis Batch: 44063

Client Sample ID: GWTS-EFF1-090920
Prep Type: Dissolved
Prep Batch: 43367

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	0.10	U J1	0.402	0.10	U J1	mg/L		0	87 - 115
Manganese	0.0052	U Q J1	0.0200	0.0052	U J1	mg/L		0	90 - 114

Lab Sample ID: 410-13531-5 MSD
Matrix: Water
Analysis Batch: 44063

Client Sample ID: GWTS-EFF1-090920
Prep Type: Dissolved
Prep Batch: 43367

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Iron	0.10	U J1	0.402	0.10	U J1	mg/L		0	87 - 115	NC	20
Manganese	0.0052	U Q J1	0.0200	0.0052	U J1	mg/L		0	90 - 114	NC	20

Lab Sample ID: 410-13531-5 DU
Matrix: Water
Analysis Batch: 44063

Client Sample ID: GWTS-EFF1-090920
Prep Type: Dissolved
Prep Batch: 43367

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	0.10	U J1	0.10	U	mg/L		NC	20
Manganese	0.0052	U Q J1	0.0052	U Q	mg/L		NC	20

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

GC/MS VOA

Analysis Batch: 45563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-1	GWTS-EFF2-090920	Total/NA	Water	8260C DOD	
410-13531-2	GWTS-EFF2DUP-090920	Total/NA	Water	8260C DOD	
410-13531-3	GWTS-GAC2-090920	Total/NA	Water	8260C DOD	
410-13531-4	GWTS-INF2-090920	Total/NA	Water	8260C DOD	
410-13531-5	GWTS-EFF1-090920	Total/NA	Water	8260C DOD	
410-13531-6	GWTS-GAC1-090920	Total/NA	Water	8260C DOD	
410-13531-7	GWTS-INF1-090920	Total/NA	Water	8260C DOD	
410-13531-8	GWTS-FB01-090920	Total/NA	Water	8260C DOD	
410-13531-9	GWTS-TB01-090920	Total/NA	Water	8260C DOD	
MB 410-45563/8	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-45563/5	Lab Control Sample	Total/NA	Water	8260C DOD	
410-13531-5 MS	GWTS-EFF1-090920	Total/NA	Water	8260C DOD	
410-13531-5 MSD	GWTS-EFF1-090920	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 44234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-1	GWTS-EFF2-090920	Total/NA	Water	8011	
410-13531-2	GWTS-EFF2DUP-090920	Total/NA	Water	8011	
410-13531-3	GWTS-GAC2-090920	Total/NA	Water	8011	
410-13531-4	GWTS-INF2-090920	Total/NA	Water	8011	
410-13531-5	GWTS-EFF1-090920	Total/NA	Water	8011	
410-13531-6	GWTS-GAC1-090920	Total/NA	Water	8011	
410-13531-7	GWTS-INF1-090920	Total/NA	Water	8011	
410-13531-8	GWTS-FB01-090920	Total/NA	Water	8011	
410-13531-9	GWTS-TB01-090920	Total/NA	Water	8011	
MB 410-44234/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-44234/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-44234/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-13531-5 MS	GWTS-EFF1-090920	Total/NA	Water	8011	
410-13531-5 MSD	GWTS-EFF1-090920	Total/NA	Water	8011	

Analysis Batch: 46650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-1	GWTS-EFF2-090920	Total/NA	Water	8011	44234
410-13531-2	GWTS-EFF2DUP-090920	Total/NA	Water	8011	44234
410-13531-3	GWTS-GAC2-090920	Total/NA	Water	8011	44234
410-13531-4	GWTS-INF2-090920	Total/NA	Water	8011	44234
410-13531-5	GWTS-EFF1-090920	Total/NA	Water	8011	44234
410-13531-6	GWTS-GAC1-090920	Total/NA	Water	8011	44234
410-13531-8	GWTS-FB01-090920	Total/NA	Water	8011	44234
410-13531-9	GWTS-TB01-090920	Total/NA	Water	8011	44234
MB 410-44234/1-A	Method Blank	Total/NA	Water	8011	44234
LCS 410-44234/2-A	Lab Control Sample	Total/NA	Water	8011	44234
LCSD 410-44234/3-A	Lab Control Sample Dup	Total/NA	Water	8011	44234
410-13531-5 MS	GWTS-EFF1-090920	Total/NA	Water	8011	44234
410-13531-5 MSD	GWTS-EFF1-090920	Total/NA	Water	8011	44234

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

GC Semi VOA

Analysis Batch: 47950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-7	GWTS-INF1-090920	Total/NA	Water	8011	44234

Metals

Prep Batch: 43367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-5	GWTS-EFF1-090920	Dissolved	Water	Non-Digest Prep	
MB 410-43367/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-43367/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-13531-5 MS	GWTS-EFF1-090920	Dissolved	Water	Non-Digest Prep	
410-13531-5 MSD	GWTS-EFF1-090920	Dissolved	Water	Non-Digest Prep	
410-13531-5 DU	GWTS-EFF1-090920	Dissolved	Water	Non-Digest Prep	

Prep Batch: 43619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-2	GWTS-EFF2DUP-090920	Dissolved	Water	Non-Digest Prep	
410-13531-3	GWTS-GAC2-090920	Dissolved	Water	Non-Digest Prep	
410-13531-6	GWTS-GAC1-090920	Dissolved	Water	Non-Digest Prep	
MB 410-43619/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-43619/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 43621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-1	GWTS-EFF2-090920	Dissolved	Water	Non-Digest Prep	
410-13531-4	GWTS-INF2-090920	Dissolved	Water	Non-Digest Prep	
410-13531-7	GWTS-INF1-090920	Dissolved	Water	Non-Digest Prep	
MB 410-43621/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-43621/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 44063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-5	GWTS-EFF1-090920	Dissolved	Water	6010C	43367
MB 410-43367/1-A	Method Blank	Total/NA	Water	6010C	43367
LCS 410-43367/2-A	Lab Control Sample	Total/NA	Water	6010C	43367
410-13531-5 MS	GWTS-EFF1-090920	Dissolved	Water	6010C	43367
410-13531-5 MSD	GWTS-EFF1-090920	Dissolved	Water	6010C	43367
410-13531-5 DU	GWTS-EFF1-090920	Dissolved	Water	6010C	43367

Analysis Batch: 44707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-1	GWTS-EFF2-090920	Dissolved	Water	6010C	43621
410-13531-4	GWTS-INF2-090920	Dissolved	Water	6010C	43621
410-13531-7	GWTS-INF1-090920	Dissolved	Water	6010C	43621
MB 410-43621/1-A	Method Blank	Total/NA	Water	6010C	43621
LCS 410-43621/2-A	Lab Control Sample	Total/NA	Water	6010C	43621

Analysis Batch: 45163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-13531-2	GWTS-EFF2DUP-090920	Dissolved	Water	6010C	43619
410-13531-3	GWTS-GAC2-090920	Dissolved	Water	6010C	43619
410-13531-6	GWTS-GAC1-090920	Dissolved	Water	6010C	43619

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Metals (Continued)

Analysis Batch: 45163 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-43619/1-A	Method Blank	Total/NA	Water	6010C	43619
LCS 410-43619/2-A	Lab Control Sample	Total/NA	Water	6010C	43619

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-EFF2-090920**Lab Sample ID: 410-13531-1****Date Collected: 09/09/20 09:00****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 04:28	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 06:56	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43621	09/14/20 16:02	UJLA	ELLE
Dissolved	Analysis	6010C		1	44707	09/16/20 21:44	UCIG	ELLE

Client Sample ID: GWTS-EFF2DUP-090920**Lab Sample ID: 410-13531-2****Date Collected: 09/09/20 09:00****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 04:50	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 07:14	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43619	09/14/20 15:58	UJLA	ELLE
Dissolved	Analysis	6010C		1	45163	09/17/20 20:44	UCIG	ELLE

Client Sample ID: GWTS-GAC2-090920**Lab Sample ID: 410-13531-3****Date Collected: 09/09/20 09:08****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 05:12	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 07:31	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43619	09/14/20 15:58	UJLA	ELLE
Dissolved	Analysis	6010C		1	45163	09/17/20 20:41	UCIG	ELLE

Client Sample ID: GWTS-INF2-090920**Lab Sample ID: 410-13531-4****Date Collected: 09/09/20 09:25****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 05:34	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 07:47	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43621	09/14/20 16:02	UJLA	ELLE
Dissolved	Analysis	6010C		1	44707	09/16/20 21:28	UCIG	ELLE

Client Sample ID: GWTS-EFF1-090920**Lab Sample ID: 410-13531-5****Date Collected: 09/09/20 08:25****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 00:48	TQ4J	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Client Sample ID: GWTS-EFF1-090920**Lab Sample ID: 410-13531-5****Date Collected: 09/09/20 08:25****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 08:04	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43367	09/14/20 06:04	UJL8	ELLE
Dissolved	Analysis	6010C		1	44063	09/15/20 13:09	UPJE	ELLE

Client Sample ID: GWTS-GAC1-090920**Lab Sample ID: 410-13531-6****Date Collected: 09/09/20 08:40****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 05:56	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 08:55	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43619	09/14/20 15:58	UJLA	ELLE
Dissolved	Analysis	6010C		1	45163	09/17/20 20:16	UCIG	ELLE

Client Sample ID: GWTS-INF1-090920**Lab Sample ID: 410-13531-7****Date Collected: 09/09/20 08:51****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 06:18	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	47950	09/25/20 19:50	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			43621	09/14/20 16:02	UJLA	ELLE
Dissolved	Analysis	6010C		1	44707	09/16/20 21:38	UCIG	ELLE

Client Sample ID: GWTS-FB01-090920**Lab Sample ID: 410-13531-8****Date Collected: 09/09/20 08:25****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 00:04	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 10:04	AC3T	ELLE

Client Sample ID: GWTS-TB01-090920**Lab Sample ID: 410-13531-9****Date Collected: 09/09/20 09:30****Matrix: Water****Date Received: 09/10/20 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	45563	09/19/20 00:26	TQ4J	ELLE
Total/NA	Prep	8011			44234	09/16/20 00:05	K2IL	ELLE
Total/NA	Analysis	8011		1	46650	09/23/20 10:21	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

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Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
6010C	Metals (ICP)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Bulk Fuels Facility

Job ID: 410-13531-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-13531-1	GWTS-EFF2-090920	Water	09/09/20 09:00	09/10/20 11:11	
410-13531-2	GWTS-EFF2DUP-090920	Water	09/09/20 09:00	09/10/20 11:11	
410-13531-3	GWTS-GAC2-090920	Water	09/09/20 09:08	09/10/20 11:11	
410-13531-4	GWTS-INF2-090920	Water	09/09/20 09:25	09/10/20 11:11	
410-13531-5	GWTS-EFF1-090920	Water	09/09/20 08:25	09/10/20 11:11	
410-13531-6	GWTS-GAC1-090920	Water	09/09/20 08:40	09/10/20 11:11	
410-13531-7	GWTS-INF1-090920	Water	09/09/20 08:51	09/10/20 11:11	
410-13531-8	GWTS-FB01-090920	Water	09/09/20 08:25	09/10/20 11:11	
410-13531-9	GWTS-TB01-090920	Water	09/09/20 09:30	09/10/20 11:11	

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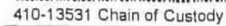
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Eurofins Lancaster Laboratories Env, LLC



Thank

Nicole Reiff NR 9/10/20 11/18

CB

EA		225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-090920			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020					
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258				FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: Q3					
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cu, K, Na, Mg (8200A, 8010C)	Dissolved Fe, Mn (8010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3) Slutide	Alkalinity (SM4500SCF)	(SM2320B)	COMMENTS	
1	GWTS-EFF1-090920	09/09/2020	0825	18	--	9	--	6	--	3*	--	--	--	--	--	--	Additional Volume Provided for MS/MSD
2	GWTS-GAC1-090920	09/09/2020	0840	5	--	3	--	2	--	1*	--	--	--	--	--	--	
3	GWTS-INF1-090920	09/09/2020	0851	5	--	3	--	2	--	1*	--	--	--	--	--	--	
4	GWTS-FB01-090920	09/09/2020	0825	5	--	3	--	2	--	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF1-090920
5	GWTS-TB01-090920	09/09/2020	0930	4	--	2	--	2	--	--	--	--	--	--	--	--	
6																	

COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.

SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 815 659781635			
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		DATE	TIME
Printed Name and Signature: J Livingston		9/9/2020	1030	Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			
Printed Name and Signature:				Printed Name and Signature:			

Nicole Ruff 9/10/20 1111

TMR

CB

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-13531-1

Login Number: 13531**List Source: Eurofins Lancaster Laboratories Env****List Number: 1****Creator: Rivera, Tatiana**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-271675-1

Laboratory Sample Delivery Group: Kirtland AFB New Mexico
Client Project/Site: Kirtland AFB-Well Disinfection Water
Sampling

For:

EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, Colorado 80111

Attn: Pamela J Moss

Authorized for release by:
9/15/2020 3:45:32 PM

Sheri Fama, Project Manager I
(949)260-3274
Sheri.Fama@Eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Laboratory Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

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Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-271675-1	GW239-203-PreDis	Water	09/10/20 08:30	09/11/20 10:15	

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Eurofins Calscience Irvine

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Job ID: 440-271675-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-271675-1

Comments

No additional comments.

Receipt

The sample was received on 9/11/2020 10:15 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5° C.

HPLC/IC

Method 300.1B: The following sample was diluted for the chlorite analyte due to the nature of the sample matrix: GW239-203-PreDis (440-271675-1). Elevated reporting limits (RLs) are provided.

Method 300.1B: The following sample was diluted for the bromate analyte due to the nature of the sample matrix: GW239-203-PreDis (440-271675-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
 SDG: Kirtland AFB New Mexico

Client Sample ID: GW239-203-PreDis

Lab Sample ID: 440-271675-1

Date Collected: 09/10/20 08:30

Matrix: Water

Date Received: 09/11/20 10:15

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		25	5.0	ug/L			09/14/20 15:19	5
Chlorite	ND		100	20	ug/L			09/14/20 15:19	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	101		90 - 115		09/14/20 15:19	5
Dichloroacetic acid(Surr)	101		90 - 115		09/14/20 15:19	5

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.18		0.10	0.016	ug/L			09/11/20 18:29	1

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Eurofins Calscience Irvine

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Method	Method Description	Protocol	Laboratory
300.1B	Disinfection By-Products, (IC)	EPA	TAL IRV
331.0	Perchlorate (LC/MS/MS)	EPA	ECL 2

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Eurofins Calscience Irvine

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Client Sample ID: GW239-203-PreDis

Lab Sample ID: 440-271675-1

Date Collected: 09/10/20 08:30

Matrix: Water

Date Received: 09/11/20 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		5			624214	09/14/20 15:19	YZ	TAL IRV
Total/NA	Analysis	300.1B		5			624215	09/14/20 15:19	YZ	TAL IRV
Dissolved	Analysis	331.0		1			93854	09/11/20 18:29	URMH	ECL 2

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC)

Lab Sample ID: MB 440-624214/5

Matrix: Water

Analysis Batch: 624214

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L			09/14/20 06:02	1
Surrogate	%Recovery	MB MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					09/14/20 06:02	1

Lab Sample ID: LCS 440-624214/4

Matrix: Water

Analysis Batch: 624214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate			25.0	24.6		ug/L		98	75 - 125
Surrogate	%Recovery	LCS LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	103		90 - 115						

Lab Sample ID: MRL 440-624214/3

Matrix: Water

Analysis Batch: 624214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate			5.00	5.02		ug/L		100	50 - 150
Surrogate	%Recovery	MRL MRL Qualifier	Limits						
Dichloroacetic acid(Surr)	106		90 - 115						

Lab Sample ID: MB 440-624215/5

Matrix: Water

Analysis Batch: 624215

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		20	4.0	ug/L			09/14/20 06:02	1
Surrogate	%Recovery	MB MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					09/14/20 06:02	1

Lab Sample ID: LCS 440-624215/4

Matrix: Water

Analysis Batch: 624215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite			100	94.6		ug/L		95	85 - 115
Surrogate	%Recovery	LCS LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	103		90 - 115						

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: MRL 440-624215/3
Matrix: Water
Analysis Batch: 624215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	20.0	21.5		ug/L		108	10 - 200
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	106		90 - 115				

Method: 331.0 - Perchlorate (LC/MS/MS)

Lab Sample ID: MB 570-93854/6
Matrix: Water
Analysis Batch: 93854

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.10	0.016	ug/L			09/11/20 15:34	1

Lab Sample ID: LCS 570-93854/7
Matrix: Water
Analysis Batch: 93854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	10.0	9.35		ug/L		94	85 - 115

Lab Sample ID: LCSD 570-93854/8
Matrix: Water
Analysis Batch: 93854

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	10.0	9.61		ug/L		96	85 - 115	3	15

Lab Sample ID: 440-271675-1 MS
Matrix: Water
Analysis Batch: 93854

Client Sample ID: GW239-203-PreDis
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.18		10.0	9.90		ug/L		97	80 - 120

Lab Sample ID: 440-271675-1 MSD
Matrix: Water
Analysis Batch: 93854

Client Sample ID: GW239-203-PreDis
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	0.18		10.0	10.1		ug/L		99	80 - 120	2	15

Eurofins Calscience Irvine

QC Association Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
 SDG: Kirtland AFB New Mexico

HPLC/IC

Analysis Batch: 624214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271675-1	GW239-203-PreDis	Total/NA	Water	300.1B	
MB 440-624214/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-624214/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-624214/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 624215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271675-1	GW239-203-PreDis	Total/NA	Water	300.1B	
MB 440-624215/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-624215/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-624215/3	Lab Control Sample	Total/NA	Water	300.1B	

LCMS

Analysis Batch: 93854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271675-1	GW239-203-PreDis	Dissolved	Water	331.0	
MB 570-93854/6	Method Blank	Total/NA	Water	331.0	
LCS 570-93854/7	Lab Control Sample	Total/NA	Water	331.0	
LCSD 570-93854/8	Lab Control Sample Dup	Total/NA	Water	331.0	
440-271675-1 MS	GW239-203-PreDis	Dissolved	Water	331.0	
440-271675-1 MSD	GW239-203-PreDis	Dissolved	Water	331.0	

Eurofins Calscience Irvine

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
SDG: Kirtland AFB New Mexico

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Eurofins Calscience Irvine

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271675-1
 SDG: Kirtland AFB New Mexico

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
Oregon	NELAP	4028 - 008	01-29-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-29-21

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Eurofins Calscience Irvine

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-271675-1
 SDG Number: Kirtland AFB New Mexico
Login Number: 271675**List Number: 1****Creator: Skinner, Alma D****List Source: Eurofins Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Irvine

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-271675-1
 SDG Number: Kirtland AFB New Mexico

Login Number: 271675
List Number: 2
Creator: Stratford, Jordan
List Source: Eurofins Calscience
List Creation: 09/11/20 05:23 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-271831-1

Laboratory Sample Delivery Group: Kirtland AFB New Mexico
Client Project/Site: Kirtland AFB-Well Disinfection Water
Sampling

For:

EA Engineering, Science, and Technology
7995 E. Prentice Ave, Suite 206E
Greenwood Village, Colorado 80111

Attn: Pamela J Moss

Authorized for release by:
9/17/2020 12:12:19 PM

Sheri Fama, Project Manager I
(949)260-3274
Sheri.Fama@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Laboratory Job ID: 440-271831-1
 SDG: Kirtland AFB New Mexico

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Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-271831-1	GW239-203-Post Dis	Water	09/14/20 07:30	09/15/20 09:45	

- 1
- 2
- 3
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Eurofins Calscience Irvine

Case Narrative

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Job ID: 440-271831-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-271831-1

Comments

No additional comments.

Receipt

The sample was received on 9/15/2020 9:45 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

HPLC/IC

Method 300.1B: The following sample was diluted for the chlorite analyte due to the nature of the sample matrix: GW239-203-Post Dis (440-271831-1). Elevated reporting limits (RLs) are provided.

Method 300.1B: The following sample was for the bromate analyte diluted due to the nature of the sample matrix: GW239-203-Post Dis (440-271831-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Client Sample ID: GW239-203-Post Dis

Lab Sample ID: 440-271831-1

Date Collected: 09/14/20 07:30

Matrix: Water

Date Received: 09/15/20 09:45

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		10	2.0	ug/L			09/16/20 09:50	2
Chlorite	ND		40	8.0	ug/L			09/16/20 09:50	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	103		90 - 115					09/16/20 09:50	2
Dichloroacetic acid(Surr)	103		90 - 115					09/16/20 09:50	2

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.16		0.10	0.016	ug/L			09/15/20 23:54	1

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Eurofins Calscience Irvine

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Method	Method Description	Protocol	Laboratory
300.1B	Disinfection By-Products, (IC)	EPA	TAL IRV
331.0	Perchlorate (LC/MS/MS)	EPA	ECL 2

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Eurofins Calscience Irvine

Lab Chronicle

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
 SDG: Kirtland AFB New Mexico

Client Sample ID: GW239-203-Post Dis

Lab Sample ID: 440-271831-1

Date Collected: 09/14/20 07:30

Matrix: Water

Date Received: 09/15/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		2			624543	09/16/20 09:50	YZ	TAL IRV
Total/NA	Analysis	300.1B		2			624544	09/16/20 09:50	YZ	TAL IRV
Dissolved	Analysis	331.0		1			94668	09/15/20 23:54	URMH	ECL 2

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC)

Lab Sample ID: MB 440-624543/5

Matrix: Water

Analysis Batch: 624543

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L			09/16/20 07:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	108		90 - 115					09/16/20 07:38	1

Lab Sample ID: LCS 440-624543/4

Matrix: Water

Analysis Batch: 624543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate	25.0	24.4		ug/L		98	75 - 125
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Dichloroacetic acid(Surr)	109		90 - 115				

Lab Sample ID: MRL 440-624543/3

Matrix: Water

Analysis Batch: 624543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate	5.00	4.74	J	ug/L		95	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	107		90 - 115				

Lab Sample ID: MB 440-624544/5

Matrix: Water

Analysis Batch: 624544

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		20	4.0	ug/L			09/16/20 07:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	108		90 - 115					09/16/20 07:38	1

Lab Sample ID: LCS 440-624544/4

Matrix: Water

Analysis Batch: 624544

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	100	95.0		ug/L		95	85 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Dichloroacetic acid(Surr)	109		90 - 115				

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: MRL 440-624544/3
Matrix: Water
Analysis Batch: 624544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	20.0	21.4		ug/L		107	10 - 200
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	107		90 - 115				

Method: 331.0 - Perchlorate (LC/MS/MS)

Lab Sample ID: MB 570-94668/6
Matrix: Water
Analysis Batch: 94668

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.10	0.016	ug/L			09/15/20 17:27	1

Lab Sample ID: LCS 570-94668/7
Matrix: Water
Analysis Batch: 94668

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	10.0	9.46		ug/L		95	85 - 115

Lab Sample ID: LCSD 570-94668/8
Matrix: Water
Analysis Batch: 94668

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	10.0	9.35		ug/L		94	85 - 115	1	15

Lab Sample ID: 440-271831-1 MS
Matrix: Water
Analysis Batch: 94668

Client Sample ID: GW239-203-Post Dis
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.16		10.0	9.96		ug/L		98	80 - 120

Lab Sample ID: 440-271831-1 MSD
Matrix: Water
Analysis Batch: 94668

Client Sample ID: GW239-203-Post Dis
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	0.16		10.0	9.78		ug/L		96	80 - 120	2	15

Eurofins Calscience Irvine

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

HPLC/IC

Analysis Batch: 624543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271831-1	GW239-203-Post Dis	Total/NA	Water	300.1B	
MB 440-624543/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-624543/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-624543/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 624544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271831-1	GW239-203-Post Dis	Total/NA	Water	300.1B	
MB 440-624544/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-624544/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-624544/3	Lab Control Sample	Total/NA	Water	300.1B	

LCMS

Analysis Batch: 94668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-271831-1	GW239-203-Post Dis	Dissolved	Water	331.0	
MB 570-94668/6	Method Blank	Total/NA	Water	331.0	
LCS 570-94668/7	Lab Control Sample	Total/NA	Water	331.0	
LCSD 570-94668/8	Lab Control Sample Dup	Total/NA	Water	331.0	
440-271831-1 MS	GW239-203-Post Dis	Dissolved	Water	331.0	
440-271831-1 MSD	GW239-203-Post Dis	Dissolved	Water	331.0	

Eurofins Calscience Irvine

Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
SDG: Kirtland AFB New Mexico

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Calscience Irvine

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB-Well Disinfection Water Sampling

Job ID: 440-271831-1
 SDG: Kirtland AFB New Mexico

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
Oregon	NELAP	4028 - 008	01-29-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-29-21

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Eurofins Calscience Irvine

**Environment Testing
America**

Ver: 01/16/2019
9/17/2020

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-271831-1
 SDG Number: Kirtland AFB New Mexico
Login Number: 271831**List Number: 1****Creator: Bonta, Lucia F****List Source: Eurofins Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Irvine

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-271831-1
 SDG Number: Kirtland AFB New Mexico

Login Number: 271831
List Number: 2
Creator: Cortez Diaz, Antonio
List Source: Eurofins Calscience
List Creation: 09/15/20 04:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

KIRTLAND AIR FORCE BASE ALBUQUERQUE, NEW MEXICO

FINAL INJECTION WELL KAFB-7 MAINTENANCE REPORT BULK FUELS FACILITY SOLID WASTE MANAGEMENT UNITS ST-106/SS-111

December 2020



**377 MSG/CEI
2050 Wyoming Boulevard SE
Kirtland Air Force Base, New Mexico 87117-5270**

**KIRTLAND AIR FORCE BASE
ALBUQUERQUE, NEW MEXICO**

**FINAL
INJECTION WELL KAFB-7 MAINTENANCE REPORT
BULK FUELS FACILITY
SOLID WASTE MANAGEMENT UNITS ST-106/SS-111**

December 2020

Prepared for

Kirtland Air Force Base.
2050 Wyoming Boulevard SE
Kirtland Air Force Base, New Mexico 87112-5240

Prepared by

Aptim Federal Services, LLC
5690 DTC Boulevard, Suite 600W
Greenwood Village, Colorado 80111

USACE Contract No. W912DY16D0022
Delivery Order W912PP19F0053

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (08-11-2019) December 2020		2. REPORT TYPE Final		3. DATES COVERED (From - To) May – July 2020	
4. TITLE AND SUBTITLE Injection Well KAFB-7 Maintenance Report Bulk Fuels Facility Spill, Solid Waste Management Units ST-106/SS-111, Kirtland Air Force Base, New Mexico				5a. CONTRACT NUMBER W912DY16D0022 Delivery Order W912PP19F0053	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Aptim Federal Services, LLC				5d. PROJECT NUMBER 501397	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER Not Applicable	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Aptim Federal Services, LLC 5690 DTC Boulevard, Suite 600W Greenwood Village, Colorado 80111				8. PERFORMING ORGANIZATION REPORT NUMBER KAFB-ROS-020-0002	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) USACE Albuquerque District 4101 Jefferson Plaza NE Albuquerque, New Mexico 87109-3435				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This Injection Well KAFB-7 Maintenance Report summarizes routine well rehabilitation, plumbing and equipment modifications, and well house expansion activities conducted between May 26 through July 17, 2020 at injection well KAFB-7. Injection into KAFB-7 is allowed pursuant to the Underground Injection Control Permit, Discharge Permit (DP)-1839 (New Mexico Environment Department [NMED], 2017) issued to the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) site by the NMED Ground Water Quality Bureau. Field activities described in this Maintenance Report include routine well rehabilitation; plumbing and equipment modifications; expansion of the well house; and management of investigation-derived waste. Routine well rehabilitation and maintenance activities were performed in accordance with the <i>Final Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111</i> (Kirtland AFB, 2019a). This Maintenance Report fulfills the reporting requirements set forth in DP-1839, Terms and Conditions # 22 (NMED, 2017).					
15. SUBJECT TERMS BFF Spill, Solid Waste Management Units ST-106/SS-111, Interim Measures, Resource Conservation and Recovery Act, KAFB-7 operation, underground injection control					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT ABSTRACT	18. NUMBER OF PAGES 204	19a. NAME OF RESPONSIBLE PERSON Sheen Kottkamp
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) (505)-846-7674

Standard Form 298
(Rev. 8-98) Prescribed by ANSI Std. Z39.18

40 CFR 270.11 DOCUMENT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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 fines and imprisonment for knowing violations.

DAVID S. MILLER, Colonel, U.S. Air Force
Commander, 377th Air Base Wing

Date

This document has been approved for public release.

KIRTLAND AIR FORCE BASE
377th Air Base Wing Public Affairs

Date

PREFACE

This Injection Well KAFB-7 Maintenance Report has been prepared by Aptim Federal Services, LLC (APTIM) for Kirtland Air Force Base under U.S. Army Corps of Engineers Contract Number W912DY16D0022, Delivery Order W912PP19F0053. It pertains to the Kirtland Air Force Base Bulk Fuels Facility Spill, Solid Waste Management Units ST-106/SS-111, located in Albuquerque, New Mexico. This Report was prepared in accordance with all applicable federal, state, and local laws and regulations, including the New Mexico Hazardous Waste Act, New Mexico Statutes Annotated 1978, the New Mexico Water Quality Act, New Mexico Hazardous Waste Management Regulations, Resource Conservation and Recovery Act, and the Water Quality Control Commission Regulations.



Kathleen Romalia, PE, PMP
APTIM
Project Manager

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
APTIM	Aptim Federal Services, LLC
ARV	air relief valve
BFF	Bulk Fuels Facility
bgs	below ground surface
DP	Discharge Permit
EPA	U.S. Environmental Protection Agency
GCMP	Golf Course Main Pond
GWTS	groundwater treatment system
IDW	investigation-derived waste
KAFB	Kirtland Air Force Base
mg/L	milligram(s) per liter
NMED	New Mexico Environment Department
ORCOM	ORCOM, A Division of Ortega Companies, Inc.
psi	pounds per square inch
Report	Injection Well KAFB-7 Maintenance Report
USACE	U.S. Army Corps of Engineers

EXECUTIVE SUMMARY

This Injection Well KAFB-7 Maintenance Report summarizes routine well rehabilitation, plumbing and equipment modifications, and well house expansion activities conducted between May 26 through July 17, 2020. Injection into KAFB-7 is allowed pursuant to the Underground Injection Control Permit, Discharge Permit (DP)-1839 (New Mexico Environment Department [NMED], 2017) issued to the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) site by the NMED Ground Water Quality Bureau. This Report fulfills the quarterly reporting requirements set forth in DP-1839, Section IV.B, *Monitoring, Reporting, and Other Requirements*, Term and Condition Number 22 (NMED, 2017).

KAFB-7 was both mechanically cleaned and disinfected between May 27 through June 8, 2020. Well rehabilitation activities included removal/reinstallation of injection pipe; cleaning of iron oxide buildup on 8-inch louvered injection pipe; mechanical well rehabilitation; video surveying; disinfection; and placement of gravel to stabilize a potential breach in the 12-inch liner. These activities were performed to ensure the well remained as a functional effluent discharge location for treated water from the GWTS. Routine well rehabilitation and maintenance activities were performed in accordance with the *Final Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111* (Kirtland AFB, 2019a).

KAFB-7 construction activities were initiated on June 15, 2020 after well rehabilitation was performed and downhole equipment reinstalled, and were completed on July 17, 2020. Construction activities consisted of expansion of the concrete pad and freeze-proof enclosure, modifying/replacing equipment, and re-plumbing of equipment into an above-grade configuration. Newly installed equipment, which includes a new pressure sustaining valve, V-Cone flow meter, and actuating valve, were programmed to interface with the groundwater treatment system supervisory control and data acquisition and human

machine interface. KAFB-7 construction activities were performed to aid future service of the well components and to aid in compliance with DP-1839.

1. INTRODUCTION

This Injection Well KAFB-7 Maintenance Report (Report) covers routine well rehabilitation, plumbing and equipment modifications, and well house expansion activities conducted between May 26 through July 17, 2020 at injection well KAFB-7. Injection into KAFB-7 is allowed pursuant to the Underground Injection Control Permit, Discharge Permit (DP)-1839 (New Mexico Environment Department [NMED], 2017) issued to the Kirtland Air Force Base (AFB) Bulk Fuels Facility (BFF) site by the NMED Ground Water Quality Bureau. Routine well rehabilitation and maintenance activities were conducted in accordance with the *Final Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111* (Kirtland AFB, 2019a).

This Report fulfills the quarterly reporting requirements set forth in DP-1839, Section IV.B, *Monitoring, Reporting, and Other Requirements*, Term and Condition Number 22 (NMED, 2017). This Report covers the period of May through July 2020 since field activities at KAFB-7 were not completed until Third Quarter 2020. Previous Quarterly Monitoring Reports for the BFF site, which are submitted to the NMED Hazardous Waste Bureau, have fulfilled the relevant requirements set forth in DP-1839, Section IV.B Term and Condition Number 19, which outlines the DP-1839 reporting schedule. . Table 1-1 provides each DP-1839 term and condition relevant to field activities performed at KAFB-7 during this reporting period and how those activities met DP-1839 requirements, either by referencing Report sections or providing direct responses.

1.1 GWTS and KAFB-7 Description

In 2015, KAFB-7 was converted into an injection well in order to receive treated groundwater from the groundwater treatment system (GWTS), which was installed as part of the ongoing interim measures for groundwater remediation at Solid Waste Management Units ST-106/SS-111 pursuant to the Resource

Conservation and Recovery Act Hazardous Waste Treatment Facility Operating Permit Number NM9570024423 (NMED, 2010).

Treated groundwater from the GWTS is conveyed via a single-walled high-density polyethylene effluent pipe to a junction with an existing pipeline that connects KAFB-7 to the Tijeras Arroyo Golf Course Main Pond (GCMP; Figure 1-1). During the winter months, treated groundwater is primarily injected into the aquifer through KAFB-7 in accordance with DP-1839 (NMED, 2017). A schematic of the current injection well is included as Figure 1-2.

1.2 KAFB-7 Background

KAFB-7 was installed in 1955 and was originally used as a base drinking water supply well until nitrate concentrations were detected above the state and federal drinking water standard in 1995. The well was initially constructed with 16-inch diameter blank steel casing and 16-inch diameter, ¼-inch shutter screen casing (also referred to as a louvered screen) to a depth of 1,010 feet below ground surface (bgs).

KAFB-7 has been rehabilitated numerous times throughout operation. In 2002, a 14-inch blank liner (468 feet to 578 feet bgs) and 12-inch slotted liner (578 feet to 1,010 feet) were installed. Also, in 2002, as part of the Interim Stage 2 Abatement Plan (Kirtland AFB, 2002), a water transmission pipeline was constructed to transport groundwater extracted from KAFB-7 to the GCMP. From 2002 to October 2015, KAFB-7 was used to extract nitrate-contaminated groundwater for beneficial use as irrigation water at the GCMP. During this time, KAFB-7 discharged untreated groundwater directly to the GCMP under other jurisdictional control (Site ST-105) and was beneficially used to irrigate the golf course.

In October 2015, a pumping and recovery test was conducted at KAFB-7 to ensure that the well was capable of accepting the anticipated volume of treated groundwater. The results indicated that KAFB-7 was capable of accepting the then-anticipated maximum 400 gallons per minute of treated groundwater with only a 5-foot rise in water table (Kirtland AFB, 2015). Following the pumping and recovery testing,

the existing pump and equipment were removed, and an injection assembly was installed to inject treated water from the GWTS.

In the spring of 2018, the injection system at KAFB-7 became inoperable due to a malfunction of the injection valve (V-Smart Valve) installed in the well. In August 2018, all components of the injection system at KAFB-7 were removed from the well as described in the *KAFB-7 Injection System Repair and Improvement Bulk Fuels Facility Report* (ORCOM, A Division of Ortega Companies, Inc. [ORCOM], 2019). In 2020, the meters and valves associated with KAFB-7 were removed from the underground vault, which required permitted confined space entry and re-plumbed in an above-grade configuration for ease of access during maintenance or repair. Section 2.2 discusses re-plumbing and well house expansion activities.

2. FIELD ACTIVITIES

Field activities performed between May 26 and July 17, 2020 at KAFB-7 included routine well rehabilitation; plumbing and equipment modifications; expansion of the well house; and management of investigation-derived waste (IDW). In accordance with DP-1839, well rehabilitation, and operations and maintenance activities performed at KAFB-7 are discussed in the sections below. Volume of treated GWTS effluent discharged, flow rates, and head measurements are reported in the Quarterly Monitoring Reports for the BFF site and are not discussed in this report.

2.1 Well Rehabilitation

Over time, the ability of KAFB-7 to receive treated water may decline due to physical buildup (calcium or iron deposits) on the screen and casing, bacterial growth, and biofouling. KAFB-7 was both mechanically cleaned and disinfected to ensure the well remained as a functional effluent discharge location for treated water from the GWTS. Well rehabilitation activities, including removal/reinstallation of injection pipe; removal of iron oxide buildup on 8-inch louvered injection pipe; mechanical well rehabilitation; video surveying; disinfection; and placement of gravel to stabilize a potential breach in the 12-inch liner, occurred from May 27 through June 8, 2020. Both of these activities are discussed in the following sections.

2.1.1 Mechanical Well Rehabilitation

Gentle mechanical rehabilitation was performed on May 27 through June 3, 2020 by Cascade Environmental. On May 26, 2020, prior to mobilization of the drilling subcontractor, the wellhead and manifold were removed for access to the well. Beginning on May 27, 2020, all of the downhole equipment (injection pipe, transducer pipe, and transducer) was removed. After the downhole equipment was removed, depth to water and bottom of the well were measured at 476.66 and 850 feet below top of the wellhead platform, respectively. Depth to well bottom (top of material) was determined using the

bailer and a cable counter. Bailing was initiated at the top of material, approximately 850 feet below top of the wellhead platform. The bailer was emptied into a 275-gallon tote for temporary storage and to allow sediments to settle out. Bailed material included formation sand and suspended biological material. Once settled, the water was pumped into the Baker tanks, and the remaining sediment, which consisted of formation sand, was used as bedding sand for the new concrete pad at KAFB-7 (Section 2.3.1). Top of material was measured at approximately 883 feet below top of the wellhead platform after bailing activities were completed on May 28, 2020.

On May 29, 2020 a 12-inch diameter wireline nylon casing brush and swab assembly was used to brush and swab the accessible submerged screen, which was approximately 480 feet to 875 (feet below top of the wellhead platform). The brush/swab tool would not go past 875 feet below top of the wellhead platform due to a presumed casing obstruction. The accessible submerged interval was brushed/swabbed twice due to concern about infiltrating formation sand. After brushing and swabbing, top of material was measured at 869 feet below top of the wellhead and was determined to be formation sand. Due to the amount of formation sand infiltrating the well casing and potentially causing structural instability of the lower portions of the well a video survey was conducted prior to any further mechanical rehabilitation or disinfection. The video survey is discussed in the section below and is provided as Attachment A.

Prior to conducting the video survey to assess the downhole condition of KAFB-7, AQUAMARK, Inc. flocculent (NSF International certified [NSF-60] for use in drinking water supply wells) was introduced to KAFB-7 to ensure that the suspended solids settled out and turbidity was minimized. Use of this flocculent was approved in the Response to Notice of Intent to Discharge letter issued by the NMED Ground Water Quality Bureau on March 10, 2020 (NMED, 2020). A total of 6.8 gallons of AQUAMARK, Inc. flocculent and 162 gallons of potable chase water were introduced to KAFB-7. A 12-inch diameter brush was used to mix the flocculent downhole. The well was allowed to sit undisturbed from May 30 through June 1, 2020 in order to settle out solids. The video survey was performed on June

2, 2020 by Alpha Southwest. A breach in the casing was not observed and the 12-inch liner was in relatively good condition for its age. Carbonate buildup was observed on the slotted liner, with more significant buildup below 700 feet below top of the wellhead. Scale was also observed on the 12-inch liner. The presumed casing obstruction at approximately 875 feet below top of the wellhead was not observed during the video survey. During the video survey, top of material was observed at approximately 848 feet below top of the wellhead and any clear video was not obtained past this point.

After the video survey, mechanical rehabilitation was resumed on June 3, 2020. Top of material was measured at 856 feet below top of the wellhead. A brush/swab assembly consisting of two 11.5-inch diameter brushes and two 11.5-inch diameter rubber swabs was used to brush/swab from 580 to 750 feet below top of the wellhead. There was no change in the depth to the top of the material after brushing/swabbing. Mechanical rehabilitation was completed on June 3, 2020.

2.1.2 Well Disinfection

Well disinfection activities were performed from June 3 through June 8, 2020 in accordance with the approved *Standard Operating Procedure for Cleaning and Disinfection of the Groundwater Treatment System Remediation Wells and Groundwater Monitoring Wells*, Revision 1 (Kirtland AFB, 2019b).

Additionally, use of sodium hypochlorite was approved in the Response to Notice of Intent to Discharge letter issued by NMED on March 10, 2020 (NMED, 2020). Approximately 6 gallons of sodium hypochlorite (10 percent solution) was introduced into KAFB-7 on June 3, 2020 using a tremie pipe and potable chase water from 483 to 819 feet below top of the wellhead. The disinfectant was mixed using the 11.5-inch diameter brush/swab assembly from 855 to 467 feet below top of the wellhead. The disinfectant was allowed to sit undisturbed for approximately 13 hours.

On June 4, 2020, additional material was bailed from KAFB-7. After bailing, top of material was measured at 876.5 feet below top of the wellhead using a weighted water level probe. On June 5, 2020

approximately 15 feet of coarse gravel was placed by tremie pipe from approximately 876.5 feet to 861.5 feet below top of the wellhead to stabilize a potential breach in the 12-inch liner to prevent further infiltration of formation sand and prevent future damage to the well. Gravel sizes ranged from ¼ to 1-inch in diameter. The gravel was lightly compacted with the steel bailer after installation.

On June 8, 2020 KAFB-7 was over-pumped to remove sediment and free chlorine from the well. A submersible pump intake was set at the following depth intervals: 576, 681, and 786 feet below top of the wellhead and was pumped at approximately 100, 150, and 150 gallons per minute, respectively. Water was placed in two 21,000-gallon storage tanks prior to transport and discharge to the GCMP. Bromate and perchlorate concentrations measured in KAFB-7 are included in Table 2-1. Water level, temperature, pH, conductivity, turbidity, sediment volume, and free chlorine were monitored during pumping (Attachment B). The maximum free chlorine concentration was 1.68 milligrams per liter (mg/L), measured at the beginning of pumping activities. Each depth interval was pumped until free chlorine was measured below 0.4 mg/L. Free chlorine concentration was measured using a HACH DR-900 Colorimeter. Wastewater stored in the 21,000-gallon tanks was also analyzed for chlorine to ensure it was suitable for discharge to the GCMP. Water quality parameters were measured using a YSI DSS Pro and sediment volume was estimated using an Imhoff cone. Little to no sediment was observed in purge water.

2.2 Well House Expansion and Re-plumbing

KAFB-7 construction activities were initiated after well rehabilitation was performed and downhole equipment reinstalled and consisted of expansion of the concrete pad and freeze-proof enclosure, and modifications to the equipment and plumbing. Construction activities were performed between June 15 through July 17, 2020. Re-plumbing activities and expansion of the well house are discussed in the sections below.

2.2.1 Re-plumbing Activities

Re-plumbing activities were performed from June 30, 2020 to July 14, 2020. The existing below grade pipeline from the stub-up point to the existing 12-inch gate valve was excavated and replaced with approximately 8 feet of 12-inch diameter ductile iron. The below grade 12-inch ductile iron pipe, replacement gate valve, and below grade 8-inch carbon steel pipe were leak tested for 30 minutes on June 18, 2020. No leaks were detected and the open excavations were backfilled.

The above-grade section of the pipeline was replaced with 8-inch and 6-inch carbon steel (Figure 2-1). All meters and valves, except for the vacuum breaker were installed along the above-grade 8-inch line. The pipeline reduces to 6 inches downstream of the actuation valve and upstream of the vacuum breaker, before connecting to the wellhead. All meters and valves are now contained in the expanded KAFB-7 freeze-proof enclosure (discussed in Section 2.2.2 below). Figure 2-1 and 2-2 provide a diagram and annotated photograph, respectively, of the new configuration. The new above-grade configuration allows for easier access to equipment during repair and maintenance activities and eliminates the potential for confined space entry.

2.2.1.1 Leak and Integrity Testing

The newly configured above-grade segment of pipeline and equipment were leak tested on July 13, 2020 by closing the actuator valve (AUMA[®]) and holding water within the line for 30 minutes. Minor leaks were observed at flanges bolts and were immediately repaired. The entire effluent pipeline segment from the GWTS to KAFB-7 was pressure tested on July 14, 2020 in accordance with the *Standard Operating Procedure for Effluent Conveyance Line Integrity Testing of the Groundwater Treatment System* (Appendix R of the GWTS Operation and Maintenance Plan; [Kirtland AFB, 2019a]) and DP-1839, Terms and Conditions #15 (NMED, 2017). Integrity testing of the effluent pipeline was conducted using the following steps:

1. The sampling port on train 2 of the GWTS was adapted to accept a male 5/8-inch garden hose fitting.
2. The effluent conveyance line was filled with water by closing all air relief valves (ARVs) and manually operating the effluent pumps to discharge water to KAFB-7 with the changeover valve to the golf course pond closed. The effluent pump was then shut down and the butterfly valve located immediately upstream of the KAFB-7 wellhead were immediately closed. The vacuum within the effluent conveyance line siphons water from the effluent tank to fill the line.
3. To isolate the line, the effluent skid butterfly valves on both treatment trains were closed. The changeover valve to the golf course was closed, the changeover valve to KAFB-7 remained opened, and the actuator valve immediately upstream of the KAFB-7 wellhead was closed (Figure 2-2). It was verified that all effluent conveyance line ARVs were closed. The effluent flow control valve located on the GWTS effluent pipe tree was manually opened to 100 percent open.
4. A garden hose was connected to the 100-pounds per square inch (psi) Base supply water line located on the south wall of the GWTS. All air was evacuated from the hose prior to connecting it to the adapted sampling port.
5. During the initial pressurization, the ARV located on the effluent conveyance line within the GWTS was opened to vent any remaining air from the effluent conveyance line. Once all of the air has been flushed from the line, fresh water from the 100-psi line was introduced into the effluent conveyance line to a set pressure of 50 psi. The effluent conveyance line was then given 30 minutes to allow expansion of the high density polyethylene in response to the set pressure.
6. Following the one hour of monitoring, the final pressure was compared to the set pressure.

The effluent pipeline was able to hold pressure to within 15 percent of the initial reading for one hour.

The initial pressure reading was 50.02 psi and the final reading was 42.76 psi.

2.2.1.2 Equipment Modifications

The magnetic flowmeter that was formerly housed within the vault was removed and replaced with a V-Cone flowmeter. V-Cone flowmeters have short upstream/downstream requirements and allow for the meter to be installed in a vertical position (Figure 2-2). This allowed for a shortened above-grade configuration.

Additionally, a pressure sustaining valve (Singer Model 106-RPS-X107-2) and electronic actuator (AUMA® Model SQ 10.2) were installed in the above-grade configuration. The existing pressure sensor air release valve, and vacuum breaker were reincorporated into the new configuration. The associated electrical conduits and controls for all new controls/equipment terminate in the programmable logic controller panel located just south of the freeze-proof enclosure.

2.2.1.3 Programming and Controls

The new pressure sustaining valve, V-Cone flow meter, and actuating valve were programmed to interface with the GWTS supervisory control and data acquisition and human machine interface. Communication of the new meters and valves were tested by I&C Solutions on July 17, 2020 after the new segment of pipe was leak and pressure tested. Communication testing indicated that all equipment was actuating as it should.

The V-Cone flow meter was factory calibrated by McCrometer (Attachment C). Additionally, flow meter verification testing was performed for the new totalizing V-Cone flow meter. Verification testing consisted of comparing the readout from the V-Cone flowmeter against the total effluent volume reported from the GWTS.

2.2.2 Well House Expansion

The well house area contained a number of existing structures including the concrete pad south of well, the existing well house, and a metal canopy structure over the well that were modified or removed. The existing concrete footprint was expanded north to support the new above-grade configuration. A new freeze-proof enclosure was installed to house the above-grade meters and valves, and the expanded concrete pad footprint. The metal canopy structure was demolished and removed from the site. Expansion of the concrete pad and installation of the new freeze-proof enclosure are discussed in the following sections.

2.2.2.1 Expanded Concrete Pad

On June 15 and 16, 2020, the existing underground vault that housed the flow meter was removed prior to installation of the new concrete pad. The excavated area was backfilled with the clean, non-hazardous formation sand removed from KAFB-7 and approximately 10 cubic yards of clean fill from JPR Decorative Gravel. The fill was compacted with a jumping jack compactor in foot lifts in order to provide a stable sub-grade for a new concrete pad to be poured. During excavation and removal of the vault, the 12-inch butterfly valve located on the supply pipeline to KAFB-7 was identified to be non-functional and was replaced. Additionally, an abandoned 6-inch pipe and valve that was previously connected to KAFB-7 was removed.

A new 10.5-foot by 3.6-foot, 6-inch thick, reinforced concrete pad was poured and doweled back into the existing concrete pad. Figure 2-3 shows the design of the final concrete pad.

2.2.2.2 Freeze-Proof Enclosure Installation

A new freeze-proof enclosure was designed and installed to meet Kirtland AFB airfield requirements and house the new above-grade plumbing configuration (Section 2.2.1). The existing pre-engineered metal building roof/canopy structure installed above the existing well house was removed on May 26, 2020 in

order to gain access to the wellhead for well rehabilitation activities. A 7-foot wide by 25-foot long by 7-foot high (to clear head height) pre-engineered freeze-proof enclosure was installed from July 6 through July 7, 2020 to encase the expanded concrete pad footprint and new addition of piping and the well head. This new enclosure eliminates the need for the metal canopy structure; therefore, it was not reinstalled. The new freeze-proof enclosure is factory painted tan/light brown to reduce reflectivity. The new well house enclosure consists of removable door and roof panels, designed to be readily removed/uninstalled to gain access for well head maintenance. The existing 200-watt heater unit was reinstalled and connected once installation of the freeze-proof enclosure was completed. Additionally, an interior light and switch was installed on the southern wall of the enclosure.

2.3 Investigation-Derived Waste

Non-hazardous sediment and liquid IDW was generated during KAFB-7 well rehabilitation and decontamination activities. This section discusses details of waste generated and managed during at KAFB-7 during operation and maintenance activities. No hazardous soil/sediment or wastewater was generated.

2.3.1 Non-Hazardous Investigation-Derived Waste - Sediment

During well rehabilitation at well KAFB-7, a bailer was used to remove sediment and incrustation material from the well. Sediment was stored in a 275-gallon poly tote and any remaining groundwater was pumped out of the tote into the 21,000-gallon storage tanks. One grab sample was collected for laboratory analysis and verified that the sediment was non-hazardous and was below applicable NMED soil screening levels for residential soil (NMED, 2019). The sediment, which consisted of formation sand, was used as bedding sand for the new concrete pad at KAFB-7. Attachments D-1 and D-2 present the Data Quality Assessment Report and Laboratory Data Packages, respectively.

2.3.2 Non-Hazardous Investigation-Derived Waste - Liquid

During well rehabilitation and decontamination activities at KAFB-7, approximately 28,000 gallons of wastewater was generated and stored in two 21,000-gallon storage tanks. One composite sample was collected from the two tanks for disposal determination. Analytical results confirmed that wastewater from KAFB-7 was below applicable U.S. Environmental Protection Agency (EPA) maximum contamination levels and New Mexico Groundwater Protection Standards, except for total iron (Table 2-2). Total iron was detected at a concentration of 1.62 mg/L, which is slightly above the New Mexico Groundwater Protection Standard of 1.0 mg/L; however, analytical results indicated that wastewater was acceptable for irrigation at the Golf Course. The slightly elevated total iron concentration is likely due to the iron oxide that was removed from the well screen and casing. Inorganic compounds are not a source of contamination in KAFB-7, nor are they released to the injection well from the GWTS. Table 2-2 provides results of the composite wastewater sample collected from the storage tanks. Attachments D-1 and D-2 present the Data Quality Assessment Report and Laboratory Data Packages, respectively.

3. SUMMARY

Routine well rehabilitation and operation and maintenance activities were performed in accordance with the *Final Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111* (Kirtland AFB, 2019a) and are summarized in this Report in accordance with DP-1839 (NMED, 2017).

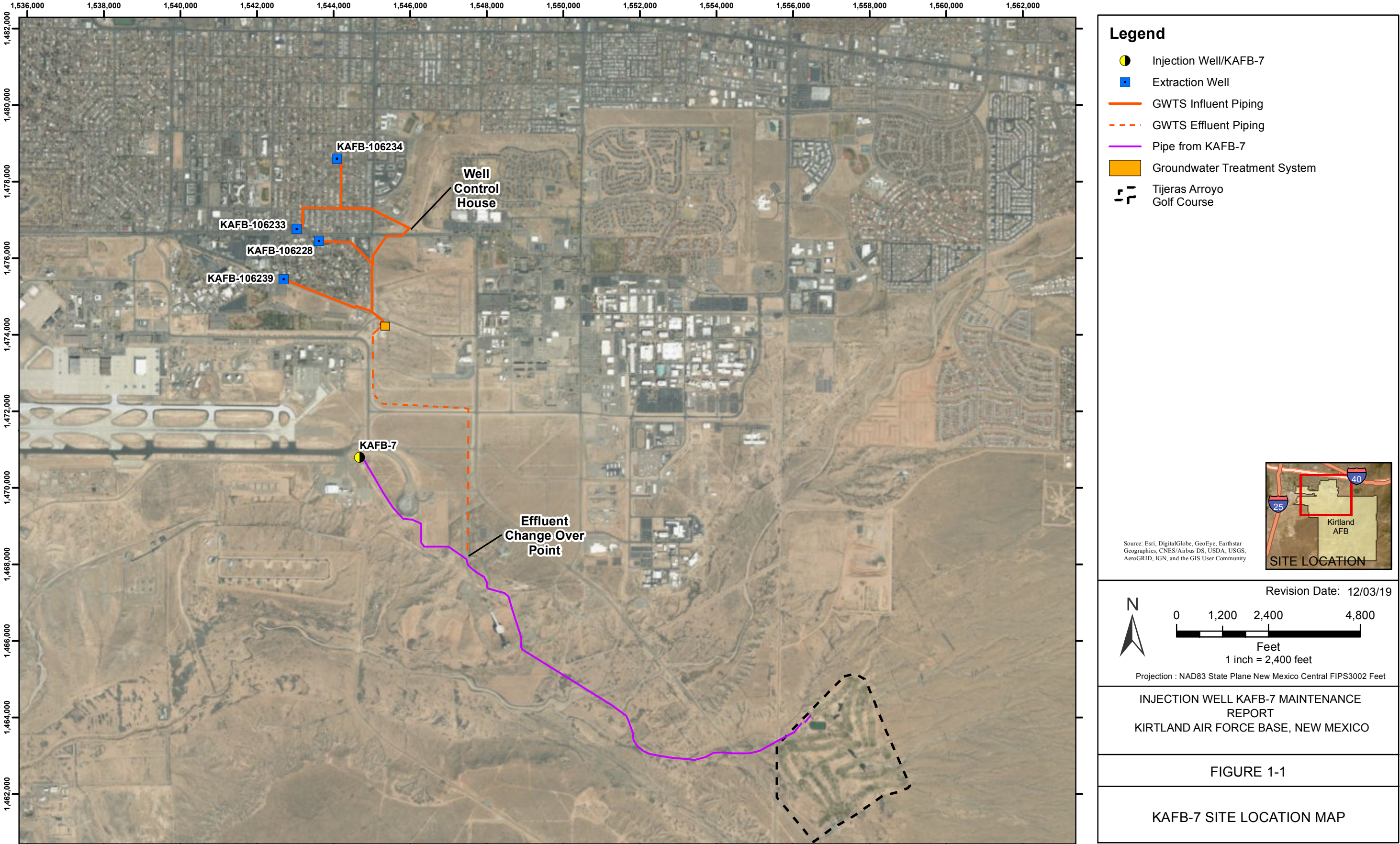
Well rehabilitation activities included removal/reinstallation of injection pipe; removal of iron oxide buildup on 8-inch louvered injection pipe, mechanical well rehabilitation; video surveying; disinfection; and placement of gravel to stabilize potential breach in 12-inch liner. Well rehabilitation activities were performed to ensure the well remained as a functional effluent discharge location for treated water from the GWTS. Wastewater generated during well rehabilitation and decontamination activities was characterized and approved for discharge to the GCMP.

KAFB-7 construction activities were initiated after well rehabilitation was performed and downhole equipment reinstalled. Construction activities consisted of expansion of the concrete pad and freeze-proof enclosure, and modifications to the equipment and plumbing. The valves and meters associated with KAFB-7 were re-plumbed into an above-grade configuration. The reconfigured pipeline was leak and pressure tested. The concrete pad was expanded, and a new freeze-proof enclosure was installed to house the above-grade pipeline and equipment. Communication of the new meters and valves were tested after the new segment of pipe was leak and pressure tested. Communication testing indicated that all equipment was actuating as it should.

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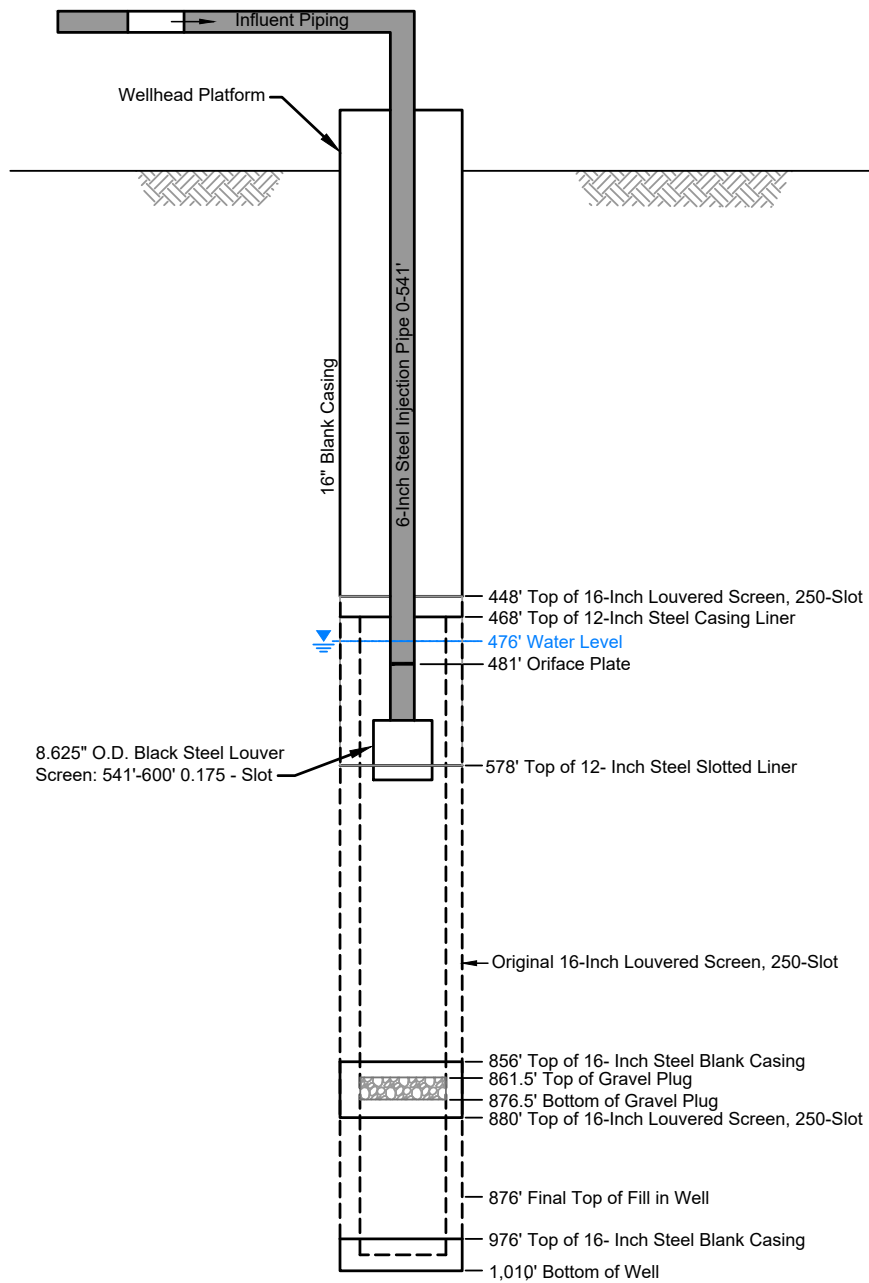
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FIGURES



H:\Kirtland_AFB\GIS_Documents\Project_Maps_bak\KAFB7_workplan\KAFB_002_KAFB7_site_loc.mxd 12/03/19

DRAWING NUMBER	501397-A1
APPROVED BY	---
CHECKED BY	---
DRAWN BY	B. O'Connor
DESIGNED BY	C. LaChance
DATE	11/7/19
OFFICE	Pittsburgh, PA



Not to Scale

Note: Valves, Meters, and Wellhead
are Located Above Ground



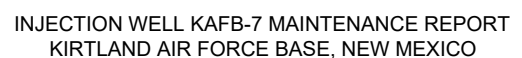
APTIM Federal Services LLC
500 Penn Center Boulevard
Building 5, 9th Floor
Pittsburgh, PA 15235

FIGURE 1-2

KAFB-7 INJECTION WELL SCHEMATIC

INJECTION WELL KAFB-7 MAINTENANCE
REPORT
KIRTLAND AIR FORCE BASE, NEW MEXICO

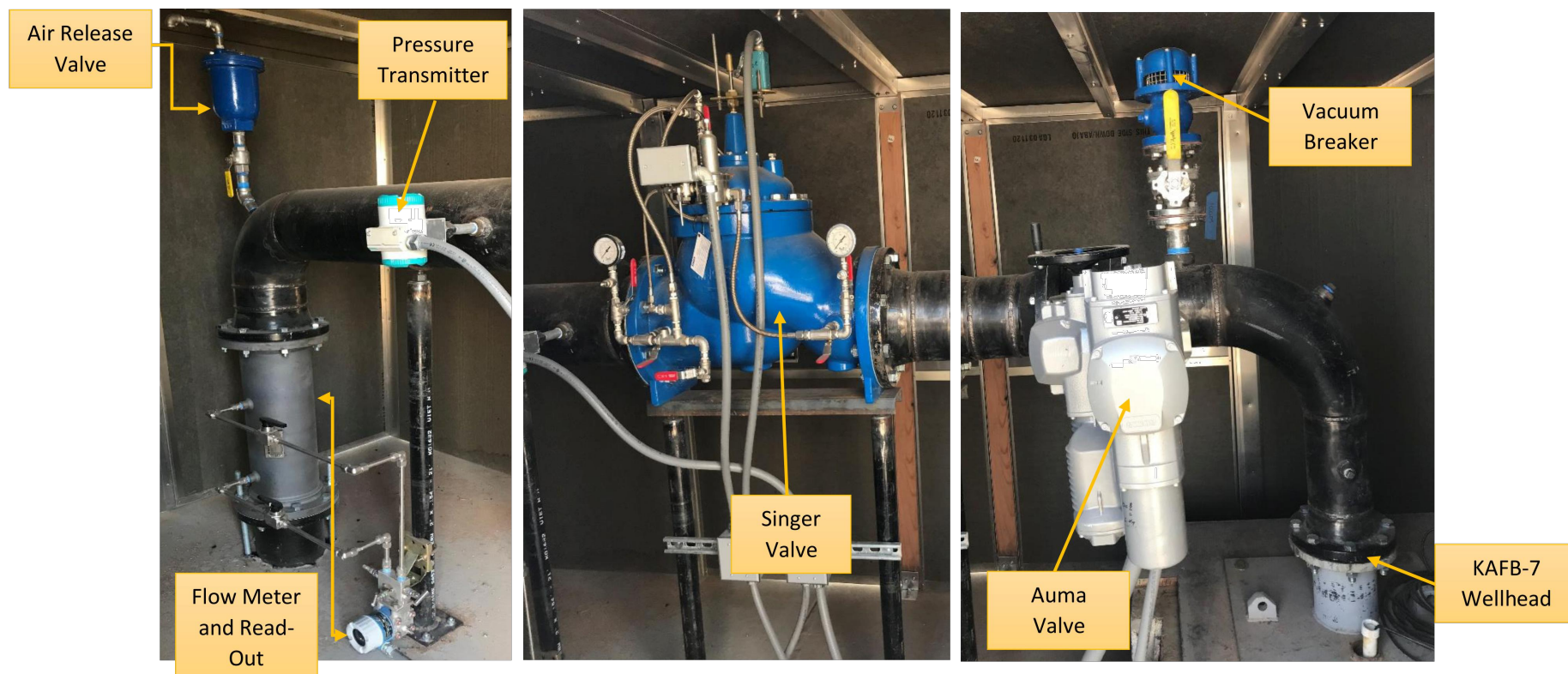
December 2020



Xref
Image : APTIM Logo Standard Color.jpg
EXHIBIT_2_Well_Completion_Diagram.jpg

File: O:\project\USACE Projects\501397\501397-A1.dwg
Plot Date/Time: Sep 16, 2020 -- 5:00pm
Plotted By: bernadette.oconnor

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	9/16/20	C. LaChance	B. O'Connor	--	--	501397-A1

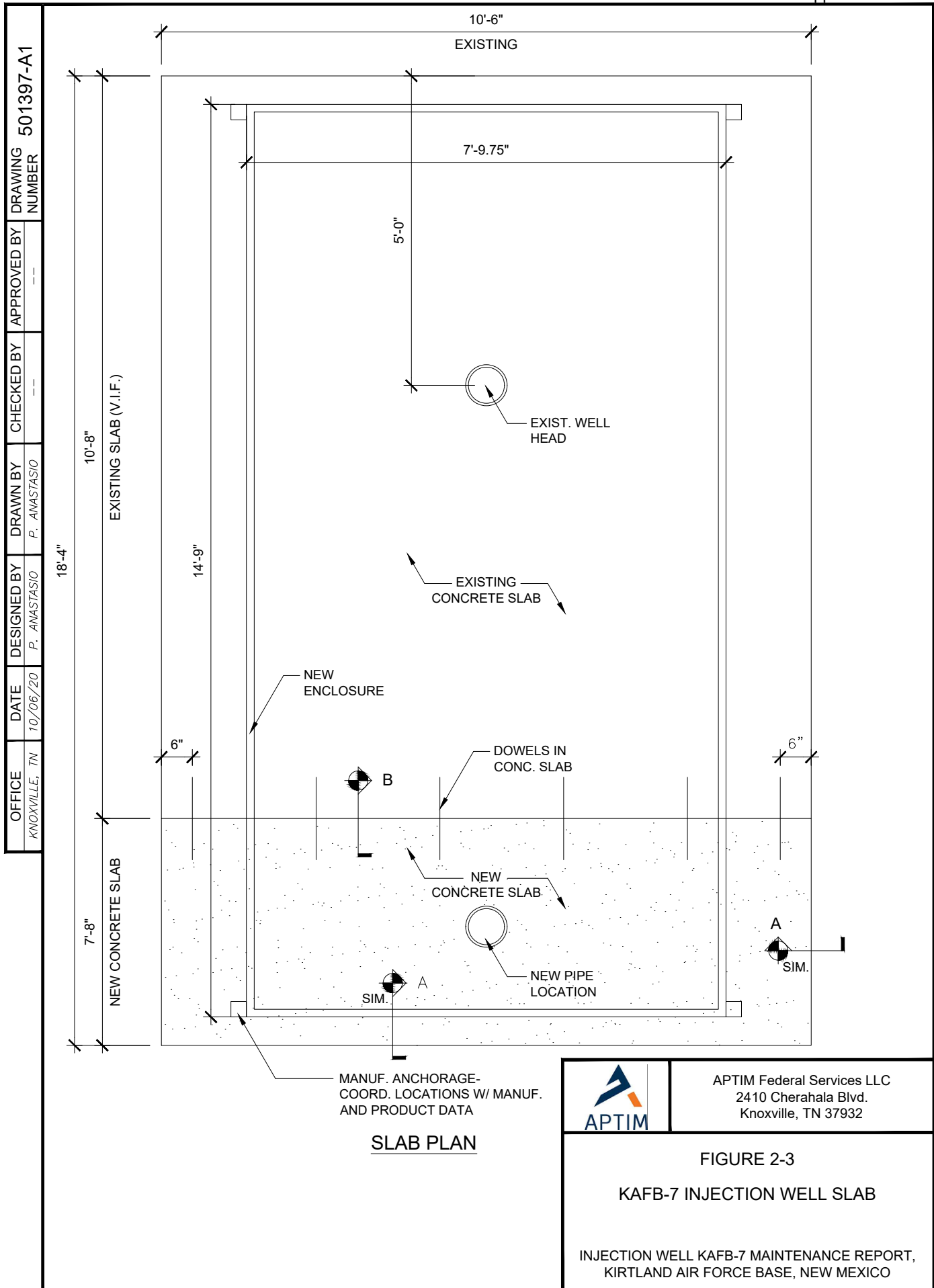


APTIM Federal Services LLC
500 Penn Center Boulevard
Building 5, 9th Floor
Pittsburgh, PA 15235

FIGURE 2-2

KAFB-7 METERS AND VALVES

INJECTION WELL KAFB-7
MAINTENANCE REPORT
KIRTLAND AIR FORCE BASE, NEW
MEXICO



TABLES

Table 1-1
Permit Terms and Conditions Cross References

Condition No.	Terms and Conditions, Discharge Permit (DP)-1839	Response/Reference Location
A. Operational Plan		
1	The Permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 2 and 4 NMAC. [20.6.2.3109.C NMAC]	The existing approved GWTS O&M Plan (KAFB, 2019) will continue to be used to govern well operation in compliance with Condition 1.
2	The Permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, 20.6.2.3109(C) NMAC]	All operations will continue to meet Condition 2 requirements.
3	The Permittee shall ensure that the most recent versions of all Work Plans associated with the GWTS, the effluent conveyance pipeline, and the UIC well(s) are consistent with the requirements of this Discharge Permit. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, 20.6.2.3109(C) NMAC]	All plans will be prepared for compliance with DP-1839.
4	The Permittee shall ensure all discharges associated with this Discharge Permit are located within the Designated UIC Area within Section 01 of T9N R3E; Sections 05, 06, 07, 08, and 09 of T9N R4E; and Section 31 of T10N R4E (see Appendix B). [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, 20.6.2.3109(C) NMAC]	KAFB-7 is located within the designated UIC Area.
5	The Permittee shall ensure that proposed UIC well locations (see Appendix B) and associated discharges are consistent with the most recent approved Stage 2 Abatement Plan for SWMU ST-105. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, 20.6.2.3109(C) NMAC]	NA
6	The Permittee shall ensure that discharged groundwater effluent is less than or equal to the effluent standards for all constituents referenced in 20.6.2.3103 NMAC. The term "effluent standard" is used in this Discharge Permit to refer to the New Mexico Water Quality Control Commission (WQCC) groundwater standard or the federal U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL); whichever is more stringent. [20.6.2.3109(C) NMAC, 20.7.10.100 NMAC]	Discharge water quality continues to be monitored and compared against effluent standards to demonstrate compliance with Condition 6.
7	The Permittee shall ensure that GWTS influent chemistry is consistent with the design basis of the GWTS. [20.6.2.3109(C) NMAC, 20.7.10.100 NMAC]	Influent water quality continues to be monitored to demonstrate compliance with Condition 7.
8	The Permittee is authorized to install and operate not more than five UIC wells. Authorized UIC wells are listed in Table 1. [20.6.2.3109(C) NMAC, 20.7.10.100 NMAC]	NA
9	The Permittee shall ensure that the total discharge from the facility via UIC wells does not exceed 1,440,000 gpd. [20.6.2.3109(C) NMAC, 20.7.10.100 NMAC]	A new totalizing flow meter was installed on the discharge line, located just upgradient from the KAFB-7 wellhead to ensure continued compliance with Condition 9.
10	Prior to the installation of a new UIC well, the Permittee shall submit a Work Plan for NMED approval that satisfies the requirements of this Discharge Permit and the corrective action provisions at Part 6 of the RCRA Permit. This Work Plan shall, at a minimum, include the following information unless the Permittee can demonstrate to NMED that an item is not applicable or appropriate under the proposed activity or if an item has been provided separately under another submission: a. A statement of purpose and need for the additional UIC well(s); b. A list of groundwater monitoring wells which may be added to the monitoring program to effectively monitor performance of the new UIC well(s); c. A map showing the location of the proposed UIC well(s) and the location of all associated monitoring well(s); d. The geographic coordinates of the location of the UIC well(s) including township/range and section; e. A map showing the location of the nearest production well; f. A proposal of how the structural integrity of the treated effluent conveyance system between the GWTS and the new well will be demonstrated; g. Existing data showing the depth to water and general groundwater quality at the proposed new UIC well discharge location; h. A detailed description of groundwater flow modeling (numeric or analytical) predicting the effect of injection on the groundwater flow direction at the discharge location; i. A detailed description of geochemical modeling (numeric or analytical) evaluating the interaction between the treated effluent and receiving groundwater. Prior to any such geochemical modeling the treated effluent and receiving groundwater shall be tested for the analytes listed in Table 5 unless the Permittee can demonstrate that testing for a particular analyte is unnecessary; j. A detailed description of the impact that the proposed injection will have on any known groundwater contaminant plumes, e.g., the nitrate plume(s) addressed in the Site ST-105 Stage 2 Abatement Plan for Nitrate Contaminated Water; k. Maximum estimated monthly discharge volume to the UIC well(s); l. Project schedule, including the date the discharge is to commence and the anticipated duration; and m. Necessary changes to this Discharge Permit's language should the proposal be approved, e.g., the listing of authorized injection wells and associated monitoring wells in Table 1. These Work Plans shall be submitted for NMED approval at least 90 days prior to the scheduled installation of any UIC well. Proposed changes to this Discharge Permit constituting a "permit modification" as defined at 20.6.2.7.P NMAC shall not be submitted as a Work Plan, but shall instead be submitted as a discharge permit modification request as specified at 20.6.2.3109.G NMAC. A proposal to locate a discharge at a location outside the areas specified in Permit Condition #4 shall be considered a permit modification. A proposal to locate a UIC well at a location within the Designated UIC Area shall not be considered a permit modification unless the discharge quality or quantity is modified from that permitted herein. The Permittee shall post the approved Work Plan to the appropriate web site, i.e., KAFB/Environment/Kirtland AFB Fuel Plume Project Documents. [20.6.2.7(P) NMAC, 20.6.2.3107(A) NMAC, 20.6.2.3109(G) NMAC, 20.6.2.5003 NMAC]	NA
11	Prior to discharging to a newly installed UIC well, the Permittee shall submit written notification to NMED stating the date that the discharge is to commence. [20.6.2.3107(A) NMAC]	NA
12	The Permittee shall ensure that the GWTS is secured to control access by the general public. [20.6.2.3109(B) and (C) NMAC, NMSA 1978, §74-6-5(D)]	KAFB-7 is located within a locked fence and is located on a secure military installation.
13	The Permittee shall maintain signs in English and Spanish (unless otherwise prohibited by KAFB policy) at appropriate locations indicating that the GWTS effluent is non-potable. Signs shall be posted at the UIC wellheads, at the GWTS, and any associated UIC well related infrastructure. [20.6.2.3109(B) and (C) NMAC, NMSA 1978, § 74-6-S(D)]	A non-potable sign is posted on the KAFB-7 fence, and will be maintained by Kirtland AFB.

Table 1-1
Permit Terms and Conditions Cross References

Condition No.	Terms and Conditions, Discharge Permit (DP)-1839	Response/Reference Location
14	The Permittee shall ensure that the UIC well(s) include monitoring devices, i.e., water level and pressure head transducers, to prevent overfilling of the well. The Permittee shall measure the volume of treated effluent discharged to each UIC well and maintain a record of these volumes. [20.6.2.3107 and 20.6.2.3109(C)(3)(c)(i) NMAC]	KAFB-7 has been equipped with a totalizer and transducer that provide data to the GWTS and ensure compliance with Condition 14. Calibration information for the new totalizer installed at KAFB-7 is provided as Attachment B to this Report. Volume of treated effluent discharge to KAFB-7 is reported in Quarterly Monitoring Reports for the BFF site, which are submitted to both NMED HWB and GWQB.
15	The Permittee shall ensure the treated effluent conveyance system, i.e., piping, between the GWTS and the UIC well(s) does not leak and shall report any such leakage to the NMED GWQB in accordance with 20.6.2.1203(A) NMAC and copy the NMED HWB. Within one year of the effective date of this Discharge Permit, the Permittee shall demonstrate the structural integrity of the treated effluent conveyance system between the GWTS and KAFB-7. Prior to testing, the Permittee shall propose for NMED approval the test method to be used. The results of the mechanical integrity testing shall be submitted to NMED within 60 days of test completion. The Permittee shall integrity test the treated effluent conveyance system between GWTS and the UIC well(s) prior to submitting a permit renewal application. [20.6.2.3106(C) NMAC, 20.6.2.3107(A) NMAC]	The entire segment of effluent line from the GWTS to the KAFB-7 wellhead was pressure tested in accordance with the approved Standard Operating Procedure for Effluent Conveyance Line Integrity Testing of the Groundwater Treatment System (Appendix R of the GWTS Operation and Maintenance Plan; [KAFB, 2019]). Results of the line pressure tests successfully demonstrated line integrity (see Section 2.2.1 of this Report).
16	Prior to an initial discharge from the GWTS of treated effluent associated with a new extraction well, the Permittee shall submit documentation to NMED demonstrating that the treated effluent is at or below the effluent standards specified for the contaminants of concern listed in Table 2. [20.6.2.1202(A) and (C) NMAC, 20.6.2.3109(C) NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]	Discharge water quality continues to be monitored to demonstrate compliance with Condition 16.
B. Monitoring, Reporting, and Other Requirements		
17-21; 23-24	--	There are no changes as a result of the maintenance performed at KAFB-7 during the May - July 2020 reporting period that effect compliance with DP-1839, Section B unless otherwise listed below. Terms and conditions outlined in Section B will be implemented in accordance with the most recent GWTS O&M Plan (KAFB, 2019).
22	The Permittee shall include the following results and general information in quarterly reports to NMED: a. Any mechanical integrity conducted on either the GWTS or a UIC well; b. Any replacement of GAC media and the associated data that initiated the decision to replace the media; c. Any UIC well rehabilitation conducted; d. Any malfunction, repair, or replacement of a flow meter; and e. Any additional operational changes with the potential to affect the discharge. [20.6.2.3107 NMAC]	This Report summarizes routine well rehabilitation, plumbing and equipment modifications, and wellhouse expansion activities conducted between May 26 through July 20, 2020. Other information such as effluent volumes and transducer levels are included in Quarterly Reports for the BFF site, which are submitted to both NMED HWB and GWQB.
Sections C through E		
25-41	--	There are no changes as a result of the maintenance performed at KAFB-7 during the May - July 2020 reporting period that effect compliance with DP-1839. Terms and conditions outlined in Sections C through E will be implemented in accordance with the most recent GWTS O&M Plan (KAFB, 2019).

Notes:

KAFB, 2019. Operations and Maintenance Plan, Groundwater Treatment System, Bulk Fuels Facility, Solid Waste Management Unit ST-106/SS-111, Revision R3. Prepared for Kirtland Air Force Base by EA Engineering, Science, and Technology, Inc., PBC. November.

AFB = Air Force Base.

BFF = Bulk Fuels Facility.

GAC = granular activated carbon.

gpd = gallon per day.

GWQB = Groundwater Quality Bureau.

GWTS = groundwater treatment system.

HWB = Hazardous Waste Bureau.

KAFB = Kirtland Air Force Base.

NA = not applicable.

NMAC = New Mexico Administrative Code.

NMED = New Mexico Environment Department.

NMSA = New Mexico Statutes Annotated.

No. = number.

O&M = operations and maintenance.

RCRA = Resource Conservation and Recover Act.

SWMU = solid waste management unit.

UIC = underground injection control.

Table 2-1
Analytical Results from Well Disinfection

				LOCATION CODE		KAFB-7		
				SAMPLE NUMBER		KAFB7-WW01-060820		
				SAMPLE DATE		6/8/2020		
				SAMPLE PURPOSE		REG		
				SAMPLE DEPTH		NA		
Test Group	Method	Parameter	Units	NM GWPS ^a	EPA MCL ^b	Result	QUAL	LOQ
Anions	SW9056A	Chloride	mg/L	250	NE	67		0.5
	EPA 300.1	Bromate	mg/L	NE	0.01	ND	U	0.01
		Chlorite	mg/L	NE	1	0.0329	J	0.04
Residual Chlorine	SM4500CL F	Chlorine	mg/L	NE	4	ND	HaU	0.1
Perchlorate	SW6850	Perchlorate	µg/L	NE	15	3.99		0.5

Notes:

^a New Mexico Groundwater Protection Standards (NM GWPS; NMAC 20.6.2.3103).^b EPA National Primary Drinking Water Standards - Maximum Contaminant Levels (MCLs), May 2020.

a - analysis is not DoD ELAP accredited.

EPA - Environmental Protection Agency.

H - holding time outlier.

J - estimated detection.

KAFB - Kirtland Air Force Base.

LOQ - Limit of quantitation.

MCL - Maximum contaminant level.

µg/L - Microgram per liter.

mg/L - Miligram per liter.

NA - not applicable.

ND - Not detected.

NE - Not established.

QUAL - qualifier.

REG - regular/parent sample.

U - analyte was not detected.

Table 2-2
KAFB-7 Wastewater Analytical Results

				LOCATION CODE		KAFB-7		
				SAMPLE NO		KAFB7-WW01-060820		
				SAMPLE DATE		6/8/2020		
				SAMPLE PURPOSE		REG		
				SAMPLE DEPTH		NA		
Test Group	Method	Parameter	Units	NM GWPS ^a	EPA MCL ^b	Result	QUAL	LOQ
Turbidity	E180.1	Turbidity	NTU	NE	NE	16.5		1
		Sulfate	mg/L	600	NE	73.9		0.5
Anions	SW9056	Nitrogen, Nitrate (as N)	mg/L	10	10	0.835		0.1
		Nitrogen, Nitrite (as N)	mg/L	1	1	ND	U	0.1
	EPA 300.1	Chlorite	mg/L	NE	1	0.0329	J	0.04
pH	SM4500H+ B	pH	pH units	6-9	NE	7.01	Ha	0.1
TDS	SM2540C	Total Dissolved Solids (TDS)	mg/L	1,000	NE	356		10
Residual Chlorine	SM4500CL F	Chlorine	mg/L	NE	4	ND	HaU	0.1
Metals	SW6020A	Arsenic	mg/L	0.01	0.01	0.000618	J	0.005
		Barium	mg/L	2	2	0.111		0.005
		Cadmium	mg/L	0.005	0.005	ND	U	0.002
		Chromium	mg/L	0.05	0.1	0.00907		0.005
		Iron	mg/L	1	NE	1.62		0.2
		Lead	mg/L	0.015	0.015	ND	U	0.005
		Selenium	mg/L	0.05	0.05	0.00213	J	0.005
		Silver	mg/L	0.05	NE	ND	U	0.005
		Sodium	mg/L	NE	NE	41		0.2
	SW7470A	Mercury	µg/L	2,000	2,000	0.053	J	0.2

Notes:

Shading indicates that the analyte was detected above regulatory criteria.

^a New Mexico Groundwater Protection Standards (NM GWPS; NMAC 20.6.2.3103).^b EPA National Primary Drinking Water Standards - Maximum Contaminant Levels (MCLs), May 2020.

a - analysis is not DoD ELAP accredited.

EPA - Environmental Protection Agency.

GCMP - Golf Course Main Pond.

H - holding time outlier.

J - estimated detection.

KAFB - Kirtland Air Force Base.

LOQ - Limit of quantitation.

MCL - Maximum contaminant level.

µg/L - Microgram per liter.

mg/L - Miligram per liter.

ND - Not detected.

NE - Not established.

NTU - Nephelometric turbidity unit.

QUAL - qualifier.

TDS - total dissolved solids.

U - analyte was not detected.

**ATTACHMENTS
(INCLUDED ON DISC)**

**ATTACHMENT A
KAFB-7 VIDEO SURVEY**

ATTACHMENT B
KAFB-7 WELL REHABILITATION PUMP DATA

KAFB-7 Well Rehab
Water Quality -
Pumping

Page 1 of

Date

6/8/20

Time	Rate (gpm)	Water Level (feet BTOC)	Volume Removed (gallons) Total	Temp (°C)	pH	EC (mS/cm)	Turbidity (NTU)	Imhoff Cone (mL sediment per L water)	Free Chlorine (mg/L)	Comments
0716	0	476.20	0					0	1.68	Static WL.
0726	124.8	478.10	124	18.9	8.69	0.491	50.63	0.01	1.68	DO = 2.86; lower flow
0731	107.5	478.10	620	19.8	8.89	0.465	37.28	0	NM	
0736	107.0	478.19	1150	20.0	7.83	0.481	24.00	0.10	0.64	DO = 7.01
0746	107.3	478.25	2220	20.0	7.67	0.494	27.70	0.10	0.27	Water much clearer
0756	107.1	478.40	3290	20.1	7.55	0.538	11.1	0.10	0.09	Water is clear
0806	106.2	478.25	4360	20.1	7.48	0.560	9.50	NM	0.09	"
0816	106.4	478.25	5420	20.1	7.44	0.579	8.75	0.0	0.05	No sed. in Imhoff
0819			5738							Pump off @ 0819
0838	0	476.35	5738							Static WL. intake @ 0838
0941			5738							Pump on.
0944	153.8	478.60	6197	20.0	8.24	0.570	54.6	0	0.27	Water slightly cloudy
0954	153.4	479.20	7727	20.2	7.64	0.653	39.8	0	0.23	DO = 10.20, ORP = -53.6
1004	152.2	479.20	9257	20.2	7.47	0.667	11.8	0	0.06	Water is clear.
1014	151.7	479.20	10777	20.2	7.39	0.635	10.2	0	0.08	
1024	152.0	479.24	12287	20.2	7.34	0.612	9.60	0	0.00	
1027	152.0	479.24	12743							pump off. DRW = 478.44 @ 1029
1120	0	476.36	12743							Static WL.
1139	152.5	478.50	12743	20.0	7.41	0.654	56.4	0	0.33	Pump on. Slightly cloudy
1149	151.5	479.08	14263	20.2	7.32	0.629	42.2	0	0.77	
1159	151.4	479.10	15773	20.3	7.31	0.610	15.9	0	0.08	
1209	151.6	479.10	17283	20.3	7.31	0.589	7.29	NM	0.05	DO = 11.35, ORP = -42.9
1219	151.67	479.19	18793	20.3	7.31	0.569	6.63	NM	0.02	
1222	161.6	479.19	19246							Pump off

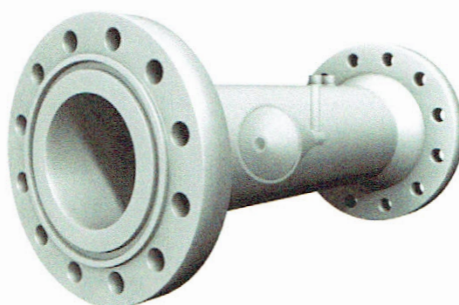
ATTACHMENT C
V-CONE FLOW METER CALIBRATION REPORT



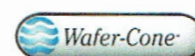
V-Cone® Product Documentation

Danny Ta^{2020.06.22}
12:40:19 -07'00'

Product Serial Number: 20-0669



McCrometer, Inc. • 3255 West Stetson Avenue, Hemet, CA 92545, USA
Tel (951) 652-6811 • Fax (951) 652-3078 • Website: www.mccrometer.com
Hours: 8am – 4:30pm PST, Monday - Friday



Calibration Report

Serial Number: 20-0669Test Number: 20-0669Model: VS08UE03N-WCalibration Date: 6/22/2020Report Date: 6/22/2020Sold To: EVAN RICE
2206 SUN RACH VILLAGE LOOP LOS LUNAS, NM 87031 USDescription: 8" V-ConeMeter I.D. (in): 8.025Cone O.D. (in): 6.685Beta Ratio: 0.5532Average Cf: 0.7912

Calibration Report

	Reynolds Number Interval:	SLBF Cf:
1	407332 - 374517	0.7897
2	374517 - 341702	0.7899
3	341702 - 308887	0.7901
4	308887 - 276072	0.7903
5	276072 - 243257	0.7905
6	243257 - 210442	0.7909
7	210442 - 177627	0.7913
8	177627 - 144812	0.7920
9	144812 - 111997	0.7930
10	111997 - 79182	0.7947

Tested By: Fernando RamirezFernando Ramirez
ID#: 266706Test Fluid: WaterInstrumentation Traceability Kit Number: V0213Approved: Robert GalushaSignatory: Robert Galusha

Robert Galusha

Standard Used: PrimaryCalibration Status: In Tolerance

Test Data

	Water Temperature (°C)	Test Time (seconds)	Collected Mass (kilograms)	Air Temperature (°C)	Barometric Pressure (kPa)	Relative Humidity (%)	Viscosity (cP)	Differential Pressure (kPa)	Rate of Flow Reference (m³/sec)	Reynolds Number (x 1/1000)	Expanded Uncertainty (%) at ~95% confidence
1	29.3	33.915	1791.9	21.7	95.93	65	1	20.373	0.0529	407	0.46
2	29.3	32.354	1708.9	21.7	95.93	65	1	20.381	0.0529	407	0.46
3	29.3	33.232	1750.6	21.7	95.93	65	1	20.427	0.0528	406	0.46
4	29.3	33.094	1395.1	21.7	95.93	65	1	12.830	0.0422	325	0.28
5	29.3	32.181	1356.6	21.7	95.93	65	1	12.859	0.0422	325	0.28
6	29.3	32.585	1372.0	21.7	95.93	65	1	12.838	0.0422	325	0.28
7	29.3	34.350	1056.0	21.7	95.93	65	1	6.906	0.0308	237	0.29
8	29.3	33.085	679.2	21.7	95.93	65	1	3.072	0.0206	158	0.37
9	29.3	34.238	351.9	21.7	95.93	65	1	0.766	0.0103	79	0.29

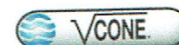
This calibration was performed using standards traceable to the National Institute of Standards and Technology (NIST), USA. Certificates of traceability for the individual test measurements listed in this report are documented and serialized by the Test Stand Instrumentation Traceability Kit Number identified above and are available upon request. Expanded Uncertainty to approximately 95% confidence level (coverage factor k=2) is developed for each test point according to the methods described in the ANSI/NCSS Z540-2-1997. Methods and procedures used in this calibration are in accordance with the latest revision of the McCrometer Flow Laboratory Technical Manual and the NIST Handbook 150. This document does not claim or imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. This calibration only applies to the serial number listed on this certification.

Page 1 of 1



Serial Number: 20-0669

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**ATTACHMENT D
DATA QUALITY ASSESSMENT REPORT AND LABORATORY DATA
PACKAGES**

ATTACHMENT D-1 DATA QUALITY ASSESSMENT REPORT

ACRONYMS AND ABBREVIATIONS

%	percent
ALS	ALS Laboratories
BTEX	benzene, toluene, ethylene and xylenes
DoD	U.S. Department of Defense
ELAP	Environmental Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
ICS	interference check sample
IDW	investigation-derived waste
KAFB	Kirtland Air Force Base
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
MS	matrix spike
MSD	matrix spike duplicate
QAPP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RPD	relative percent difference
RRF	relative response factor
SDG	sample delivery group
SM	Standard Method
SVOC	semivolatile organic compound
TCLP	toxicity characteristic leading procedure
TPH	total petroleum hydrocarbon
VOC	volatile organic compound

LABORATORY DATA QUALITY ASSESSMENT

This Data Quality Assessment describes the findings of the review of data for the June 2020 injection well Kirtland Air Force Base (KAFB)-7 investigation-derived waste (IDW) sampling events, and is provided to document the quality of the analytical data used in the *Injection Well KAFB-7 Maintenance Report, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111*. Sampling procedures and overall quality control (QC) and quality assurance protocols for the June 2020 KAFB-7 IDW sampling events are presented in the *Final Uniform Federal Policy Quality Assurance Project Plan, Bulk Fuels Facility, Solid Waste Management Units ST-106/SS-111, Kirtland Air Force Base, Albuquerque, New Mexico* (QAPP, KAFB, 2020).

The Data Quality Assessment focuses on the data quality and data usability of the samples collected from the following sampling events: sediment and wastewater sampling from well rehabilitation activities at KAFB-7.

Sediment samples generated from well rehabilitation activities at KAFB 7 were analyzed for the following parameters:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – U. Environmental Protection Agency (EPA) Method SW8260B
- Total petroleum hydrocarbons (TPH) as gasoline (C6-C10) – EPA Method SW8015B
- TPH as diesel (C10-C28) – EPA Method SW8015B
- Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compound (VOC) – EPA Method SW1311/8260B
- TCLP semivolatile organic compounds (SVOCs) – EPA Method SW1311/8270D
- TCLP pesticides – EPA Method SW1311/8081B
- TCLP herbicides – EPA Method SW1311/8151A
- TCLP metals – EPA Method SW1311/6020/7470
- Reactivity as sulfide and cyanide, corrosivity, and ignitability – Chapter 7.3

Wastewater samples generated from well rehabilitation activities at KAFB 7 were analyzed for the following parameters:

- Total metals – EPA Methods 6020/7470
- Anions (chloride, sulfate, nitrate and nitrite as nitrogen) – EPA Method 9056
- Total dissolved solids – Standard Method (SM) 2540C
- Free chlorine – SM4500CL F
- Perchlorate – EPA Method SW6850
- Chlorite and bromate – EPA Method 300.1
- pH – SM4500H+ B
- Turbidity – EPA Method 180.1

The analyses of chlorite and bromate was completed by ALS Laboratories (ALS) in Middletown, Pennsylvania. The remaining listed analyses for the KAFB 7 sediment and wastewater samples were performed by ALS in Houston, TX. ALS in Houston TX holds a current U.S. Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) certification version 5.3.

All analytical results from the June 2020 KAFB-7 sediment and wastewater sampling were reported by the off-site laboratories and received in sample delivery groups (SDGs). Attachment C-1 – Table 1 (provided at the end of this report) summarizes sample collection dates, sample numbers, sample locations, laboratories, sample types, sample matrix, analysis methods, and SDG numbers. Laboratory data packages for the June 2020 KAFB 7 sediment and wastewater sampling events are provided in Attachment C-2. Stage 2A data validation was completed for KAFB-7 sediment and wastewater data, which consisted of the following QC elements:

- Sample preservation and sample extraction and analysis holding times
- Laboratory method blanks
- Surrogate recoveries (organic analyses)
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries
- Relevant percent differences (RPDs)

Stage 2A data validation was performed in accordance with the guidelines and control criteria specified in the following documents:

- Quality Assurance Project Plan (QAPP) (KAFB, 2020)
- *DoD Quality Systems Manual for Environmental Laboratories, Version 5.3* (2019)
- *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (2006), SW-846* (EPA, 1996 and updates)
- *Standard Methods for the Examination of Water and Wastewater (21st Edition)* (American Public Health Association et al., 2005)
- *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Superfund Methods Data Review, Final* (EPA, 2017a)
- *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Methods Data Review, Final* (EPA, 2017b)
- *DoD General Data Validation Guidelines* (2018)

Analytical data were reviewed in terms of precision, bias, representativeness, comparability, and completeness as follows:

- *Bias* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. The recovery of target analytes from fortified samples is compared with the acceptance criteria defined in the QAPP (KAFB, 2020) and DoD Quality Systems Manual (QSM). When the acceptance criteria are not available in the QAPP or DoD QSM, results are compared with the laboratory in-house control limits. When these criteria are not met, the data are qualified accordingly.
- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods.
- *Completeness* is expressed as a ratio of the number of usable data points to the total number of analytical data results.

The following sections present the Stage 2A data validation findings. The discussion summarizes data quality exceedances and their potential impact on the quality and usability of analytical results.

Attachment C-1 – Table 2 presents definitions of data qualification and reason codes applied to the

analytical results. Attachment C-1 – Table 3 summarizes the qualified data. For informational purposes, qualified field QC data are also presented in this table.

1.1 Data Quality Outliers

1.1.1 Sample Preservation and Sample Extraction and Analysis Holding Times (Reason Code H)

The sample coolers and samples contained within were received intact at the laboratory and were held within the required 0 to 6 degrees Celsius, and when required, were chemically preserved in accordance with EPA and SM preservation requirements.

Sample holding times were evaluated by comparing the sample collection dates to the sample extraction and analysis dates. Extraction and analysis holding times were reviewed for all samples to determine the validity of the sample results. Holding time exceedances were reported for samples analyzed for free chlorine and pH. The affected sample numbers, analyses, holding time outliers, and holding time requirements are summarized below.

June 2020 KAFB-7 Wastewater and Sediment Sampling Event					
KAFB7 Sediment-060120	EPA Method SW9045D	pH	144 hours	24 hours	J
KAFB-7-WW01-060820	SM4500 CL	Free Chlorine	2 days	Immediately	UJ
KAFB-7-WW01-060820	SM4500 H+B	pH	72 hours	24 hours	J

Sediment and wastewater samples for pH and free chlorine analyses were collected and shipped on the same day; however, the samples were already expired when they were received by the laboratory on the following day. The analysis of pH and free chlorine was completed as soon as practical. Due to non-compliant holding times, the results of pH and free chlorine were qualified as estimated (J-/UJ). With the exception of the holding time exceedances, all other associated QC results were within the criteria.

Except as noted above, the extraction and analysis holding-time requirements were achieved for all other samples and for all other methods.

1.1.2 Laboratory Method Blanks (Reason Code B1)

The field sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch, and for each analytical method. No target analytes were detected in any laboratory method blanks for all KAFB-7 sediment and wastewater analyses.

1.1.3 Initial and Continuing Calibration Blanks (Reason Code B2)

In addition to the laboratory method blanks for metals and anions analyses, initial and continuing calibration blank results were reviewed to ensure that the instrument was free of contamination prior to the analyses. All initial and continuing calibration blanks were free of metals and anions.

1.1.4 Surrogate Recoveries (Reason Code S)

Surrogate standards are organic compounds added to field and laboratory QC samples for organic analysis to evaluate the matrix effect and method performance on an individual sample basis. Surrogates in all samples analyzed for BTEX, TPH as gasoline and diesel, TCLP VOCs, TCLP SVOCs, TCLP pesticides, and TCLP herbicides were recovered within the accuracy specifications.

1.1.5 Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries and Precisions (Reason Codes L, D3, and D1)

The LCS is an aliquot of analyte-free matrix spiked with target analytes that is prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. Non-compliant LCS precision results were reported for EPA Methods 1311/SW8270D, as presented below:

June 2020 KAFB 7 Sediment Sampling Event				
Analytical Method	Laboratory Batch Number	LCS Precision Outlier (%)	RPD Control Limit (%)	Data Qualification
EPA SW1311/8270D	154155	Total Cresols: RPD: 23.7	20	None
		Hexachlorobenzene: 20.5	20	None

In batch 154155, total cresols and hexachlorobenzene in both LCS and LCSD analyses met the accuracy requirements; however the RPDs between the LCS and LCSD recoveries marginally exceeded the precision control limits. Because both SVOCs were not detected in any samples, the high biased RPD results did not affect the data quality of the SVOC results and did not lead to any data qualification.

With the exception of the above, the LCS results met the bias and precision acceptance criteria for all other analyses.

1.1.6 Matrix Spike/Matrix Spike Duplicate Recoveries and Precisions (Reason Codes M and D2)

The MS and MSD samples are a portion of a field sample spiked with target analytes that are prepared with each analytical batch and with each method. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch.

In accordance with the site-specific QAPP requirements (KAFB, 2020), the MS/MSD samples are to be collected at a rate of 1 per 20 groundwater samples or 5 percent (%). During each quarterly monitoring event, one MS/MSD sample was collected thus achieving the 5% MS/MSD sample frequency. Although additional MS/MSD sample volumes were not provided to the laboratory, the laboratory performed MS/MSD analyses on site-specific samples to meet their internal QC frequency requirements and to verify the presence of a matrix effect and its potential impact on the precision and bias of the analytical results.

The following KAFB-7 samples were spiked for MS/MSD analysis:

KAFB-7 Sediment Sampling Event		
Well Location	Sample Number	MS/MSD Analysis
KAFB-7	KAFB7-Sediment-060120	TCLP SVOC, TCLP pesticides, TCLP herbicides, and TPH gasoline

The MS results met the established bias and precision requirements.

1.1.7 Initial Calibration (Reason Code G)

Instrument calibration is performed for VOC, 1,2-dibromoethane/ethylene dibromide, metals, and anions analyses according to the EPA Method requirements (EPA, 1996). The linear analytical range is established for each method by analysis of calibration standards prepared at increasing concentrations that cover the expected sample concentrations. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or coefficient. The initial calibration results were acceptable for all the listed analyses.

Immediately after the initial calibration for each analysis, initial calibration verification was conducted at the mid-point of instrument calibration range by using a second-source calibration standard to verify the accuracy of the initial calibration. The review indicated acceptable initial calibration verification results for all target analytes.

1.1.8 Continuing Calibration Verification (Reason Code C)

Routinely during sample analysis, the stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the instrument calibration range. The percent difference values between the relative response factor (RRF) in the initial calibration and the RRF in the continuing calibration met the continuing calibration requirements for metals and anions analyses.

1.1.9 Interference Check Samples (Reason Code O)

The interference check sample (ICS) verifies the inter-element and background correction factors. An ICS was analyzed at the required frequencies, and all ICS results were within the established control limit for EPA Method SW6020 for the June 2020 KAFB-7 sampling event.

1.1.10 Sample Confirmation (Reason Code D)

As required by the DoD and EPA, when samples are analyzed by either a gas chromatography or high-performance liquid chromatography method, all positive results, with the exception of TPH as gasoline and diesel, must be confirmed by a second column or a different detector. This was not required for the June 2020 KAFB-7 sediment and wastewater samples.

1.1.11 Trip Blanks (Reason Code K3)

Trip blanks were prepared by the laboratory and stored with the samples collected for VOCs analysis. One trip blank was shipped with KAFB sediment samples. The trip blank was free of VOCs and was acceptable.

1.1.12 Equipment Rinse Blanks (Reason Code K1)

Equipment rinse blanks are designed to check for contamination from sampling equipment, and the results for the equipment rinse blanks are used to evaluate the efficiency of equipment decontamination procedures.

In accordance with the site-specific QAPP requirements (KAFB, 2020), no equipment rinse blanks will be collected when dedicated or disposable sampling equipment is used to collect groundwater samples. When non-dedicated or non-disposable sampling equipment is used, one equipment rinse blank will be collected at a rate of one per day. Disposable sampling equipment was used to collect sediment and wastewater samples from KAFB-7. As no cross-contamination between wells or samples could occur, no equipment rinse blanks were necessary in this case.

1.1.13 Field Duplicates

Field duplicate samples are evaluated by calculating the RPD between the parent sample and its duplicate. In accordance with the site-specific QAPP requirements (KAFB, 2020), field duplicate samples are to be collected at a minimum rate of 10% of the total number of groundwater samples. Field duplicates are not collected for IDW samples (i.e., KAFB-7 sediment and wastewater samples).

1.2 Completeness

The following sections present a discussion of technical and holding time completeness for the June 2020 KAFB-7 sampling events. Completeness results are calculated for project samples that will be used for project decisions. For information purposes, completeness results are also calculated for field QC samples. Completeness results for both project samples and field QC samples are presented in Attachment C-1 – Table 4.

1.2.1 Technical Completeness

Technical completeness is a quantitative measure of the data usability based on the number of rejected data compared to the total number of sample results. The technical completeness goal for each method is equal to or greater than 90%. The technical completeness calculation considers all data that are not rejected to be usable. The technical completeness is calculated as follows:

$$\% \text{ Technical Completeness} = \frac{\text{Number of Usable Results}}{\text{Total Number of Results}} \times 100$$

Despite the exceedances discussed in the previous sections, all qualified data is still considered usable. The technical completeness was 100% for all methods exceeding the 90% technical completeness objective. Therefore, the project data quality objectives were achieved for all methods for the June 2020 KAFB-7 sampling events.

1.2.2 Holding Time Completeness

Holding time completeness is a quantitative determination of the number of samples extracted and analyzed within their respective holding times to the total number of samples collected. The holding time completeness goal is 100% for each method. Holding time completeness is calculated as follows:

$$\% \text{ Holding Time Completeness} = \frac{\text{Number of Holding Time Compliant Results}}{\text{Total Number of Results}} \times 100$$

June 2020 KAFB-7 sediment and wastewater sampling:

- pH by EPA Method SW9045D or SM4500H: 0%
- free chlorine by SM4500CL F: 0%

With the exception of above, the 100% holding time completeness objective was achieved for all other methods. As discussed in the previous sections, due to a short hold and laboratory login error, results of pH and free chlorine in KAFB-7 sediment and wastewater samples were analyzed outside their respective holding time requirements. The affected results were qualified as estimated; however, the data usability is not affected.

1.3 Representativeness and Comparability

During sampling, samplers followed the approved site-specific QAPP requirements (KAFB, 2020) and established sampling standard operating procedures to collect, preserve, document, and ship samples to off-site laboratories, thus ensuring the representativeness of the sediment and wastewater samples collected for the events.

ALS in Houston is DoD ELAP certified and adhered to the most current EPA Method and standard method requirements, project QAPP (KAFB, 2020), and DoD QSM (2019) requirements to prepare, analyze, and report the data. This ensures the comparability of the analytical results between different samples and different sampling events. Stage 2A data validation was performed on 100% of the KAFB-7 data to verify that the laboratories complied with the DoD QSM, project QAPP, and method requirements. Analytical results that were outside the established QC requirements were qualified and the data quality and usability were discussed in the previous sections. Based on a review of the completed sample collection logs, chain-of-custody forms, sample receipt forms, and laboratory data packages, the analytical data reported for the events has met the comparability requirements.

1.4 Summary

The analytical data reported for the events have been reviewed for precision, bias, representativeness, comparability, and completeness. Data quality exceedances consisted of holding time outliers, non-compliant LCS RPD and MS/MSD recoveries, and low-level laboratory blank contamination. The affected data were qualified as estimated or not detected. The 90% technical completeness goal was exceeded for all methods for the June 2020 KAFB-7 sediment and wastewater sampling events. All data are usable for their intended purposes.

REFERENCES

- American Public Health Association, American Water Works Association, and Water Environment Federation. 2005. *Standard Methods for the Examination of Water and Wastewater, 21st Edition*. American Public Health Association: Washington, DC.
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- U.S. Department of Defense (DoD). 2019. *DoD Quality Systems Manual for Environmental Laboratories, Version 5.3*.
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- U.S. Environmental Protection Agency (EPA). 2017a. *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Superfund Methods Data Review, Final*. Office of Superfund Remediation and Technology Innovation, OLEM 9335.0-136 and EPA-540-R-2017-002. January.
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- U.S. Environmental Protection Agency (EPA). 1996. *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods (2006), SW-846 On-line*. Office of Solid Waste, Washington D.C. <http://www.epa.gov/osw/hazard/testmethods/sw846>.

TABLES

List of Attachment D-1 Tables

Attachment D-1 – Table 1: Summary of Samples Collected, Sample Location, Sample Date, Analysis

Method, and SDG Number

Attachment D-1 – Table 2: Data Qualification Flags and Reason Codes

Attachment D-1 – Table 3: Qualified Data Summary

Attachment D-1 – Table 4: Holding Time and Technical Completeness

Attachment D-1 - Table 1: Summary of Samples Collected, Sample Location, Sample Date, Analysis Method and SDG Number

Task	Location	Sample ID	Sample Date	Matrix	Purp	GEN CHEMISTRY	TCLP Herbicides	METALS	TCLP Metals
Method						SM2320/SM4500/9056	SW1311/8151A	SW6020	SW1311/6020/ 7470
Laboratory						ALS	ALS	ALS	ALS
KAFB-7 SEDIMENT	KAFB7-SEDIMENT	KAFB7-SEDIMENT-060120	6/1/2020	SD	REG	HS20060102	HS20060102	-	HS20060102
KAFB-7 SEDIMENT	FIELDQC	TB-060120	6/1/2020	WQ	TB	-	-	-	-
KAFB-7 Wastewater	KAFB7-WW01	KAFB7-WW01-060820	6/8/2020	WW	REG	HS20060397	-	HS20060397	-

Notes:
-: not applicable
ALS = ALS Environmental Laboratories, Inc
EDB = 1,2-dibromoethane
REG = regular sample
SD = sediment
SDG = sample delivery group
SOP = standard operating procedure
SVOC = semivolatile organic compound
TB = trip blank
TCLP = toxicity characteristic leaching procedure
TPH =total petroleum hydrocarbon
VOC = volatile organic compound
WW = wastewater

Attachment D-1 - Table 1: Summary of Samples Collected, Sample Location, Sample Date, Analysis Method and SDG Number

Task	Location	Sample ID	Sample Date	Matrix	Purp	TCLP Pesticides	TCLP SVOCs	TPH	VOCs	TCLP VOCs
Method						SW1311/8081B	SW1311/8270D	SW8015B	SW8260B	SW1311/8260B
Laboratory						ALS	ALS	ALS	ALS	ALS
KAFB-7 SEDIMENT	KAFB7-SEDIMENT	KAFB7-SEDIMENT-060120	6/1/2020	SD	REG	HS20060102	HS20060102	HS20060102	HS20060102	HS20060102
KAFB-7 SEDIMENT	FIELDQC	TB-060120	6/1/2020	WQ	TB	-	-	-	HS20060102	-
KAFB-7 Wastewater	KAFB7-WW01	KAFB7-WW01-060820	6/8/2020	WW	REG	-	-	-	-	-

Notes:
-: not applicable
ALS = ALS Environmental Laboratories, Inc
EDB = 1,2-dibromoethane
REG = regular sample
SD = sediment
SDG = sample delivery group
SOP = standard operating procedure
SVOC = semivolatile organic compound
TB = trip blank
TCLP = toxicity characteristic leaching procedure
TPH =total petroleum hydrocarbon
VOC = volatile organic compound
WW = wastewater

Attachment D-1 – Table 2: Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Organic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the reported limit of quantitation.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified," and the associated value represents its approximate concentration.
UJ	The analyte was not detected above the reported limit of quantitation. However, the reported limit of quantitation is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
X	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Data Qualifier Definitions For Inorganic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the level of the reported value. The reported value is the limit of quantitation for water and soil for all the analytes except cyanide and mercury. For cyanide and mercury, the reported value is the contract-required detection limit.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected above the reported value. The reported value may not accurately or precisely represent the sample limit of quantitation.
X	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Attachment D-1 – Table 2: Data Qualification Flags and Reason Codes (concluded)***Reason Codes for Data Review and Validation***

Reason Code	Description
A	Serial dilution outside criteria (Level IV).
B1	Method blank contaminants above reporting limit.
B2	Calibration blank contaminants above reporting limit.
B2, Bias Flag “-”	Calibration blank indicates negative interference; false negatives may be present.
C	Calibration outside control limits.
D	Sample results precision between primary and secondary columns outside control limit.
D1	Sample duplicate RPD outside control limit.
D2	Matrix duplicate RPD outside control limit.
D3	Laboratory control sample duplicate RPD outside control limit.
E	The sample results exceed the linear calibration range of the instrument.
F	Hydrocarbon pattern does not match hydrocarbon pattern in the standard.
G1	Initial calibration relative standard deviation outside control limit.
G2	Initial continuing calibration RRF outside control limit.
G3	Continuing calibration RRF outside control limit.
H	Holding time exceeded.
I	Internal standard recovery outside control limit.
K1	Equipment rinsate contamination.
K2	Ambient blank contamination.
K3	Trip blank contamination.
L	LCS outside control limits.
M	MS outside control limits.
O	Interference check sample outside acceptance criteria.
P	Analyte qualified based on the professional judgment of the reviewer.
S	Surrogate recovery outside control limit.
T	Temperature outside acceptance criteria.
Tr	Value reported detected between the detection limit and limit of quantitation.
W	Pesticide breakdown outside criteria (Level IV).
X	Raised reporting limit due to matrix interference or high analyte concentration.
Y	Analyte was not confirmed by a second column.

Attachment D-1 - Table 3: Qualified Data Summary

Sample	Sample Type	Sample Date	Analyte	SDG	Result	LOQ	Units	Qualifier
KAFB-7 Sediment Samples								
Reason Code H			Method SW9045D					
KAFB7-SEDIMENT-060120	REG	06/01/2020	PH	HS20060102	6.23	0.100	SU	J
KAFB-7 Wastewater Samples								
Reason Code H			Method SM4500CL F					
KAFB7-WW01-060820	REG	06/08/2020	RESIDUAL CHLORINE	HS20060397	0.1	0.10	mg/L	UJ
Reason Code H			Method SM4500H+ B					
KAFB7-WW01-060820	REG	06/08/2020	PH	HS20060397	7.01	0.100	SU	J

Notes:

Please see Attachment C-1 Table 2 for definitions of qualifiers and reason codes.

LOQ = limit of quantitation

mg/L = milligrams per liter

REG = regular samples

SDG = sample delivery group

SU = standard unit

Attachment D-1 - Table 4: Holding Time and Technical Completeness

		Number of Analytes	Number of Samples	Number of Results	Holding Time Incompliant Results	Number of Useable Results	Holding Time Completeness [Goal = 100 %] (percent)	Technical Completeness [Goal = 90 %] (percent)
KAFB-7 Sediment Samples								
7.3.3.2	Reactivity as Sulfide	1	1	1	0	1	100	100
7.3.4.2	Reactivity as Cyanide	1	1	1	0	1	100	100
SW1311/6020	TCLP Metals	7	1	7	0	7	100	100
SW1311/7470	TCLP Mercury	1	1	1	0	1	100	100
SW8015B	TPH	2	1	2	0	2	100	100
SW1311/8081B	TCLP Pesticides	20	1	20	0	20	100	100
SW1311/8151A	TCLP Herbicides	10	1	10	0	10	100	100
SW8260B	VOCs	4	1	4	0	4	100	100
SW1311/8260B	TCLP VOCs	11	1	11	0	11	100	100
SW1311/8270D	TCLP SVOCs	10	1	10	0	10	100	100
SW9045D	pH	1	1	1	1	1	0	100
KAFB-7 Wastewater Samples								
E180.1	Turbidity	1	1	1	0	1	100	100
E300.1	Anions (Chlorite and Bromate)	2	1	2	0	2	100	100
SM2540C	TDS	1	1	1	0	1	100	100
SM4500CL F	Free Chlorine	1	1	1	1	1	0	100
SM4500H+ B	pH	1	1	1	1	1	0	100
SW6020	Metals	9	1	9	0	9	100	100
SW6850	Perchlorate	1	1	1	0	1	100	100
SW7470	Mercury	1	1	1	0	1	100	100
SW9056	Anions (Chloride, Sulfate, Nitrate and Nitrite)	4	1	4	0	4	100	100

Notes:

Results in bold did not meet the completeness objective.

KAFB = Kirtland Air Force Base

pH = potential of hydrogen

SVOC = semivolatile organic compound

TCLP = Toxicity Characteristic Leaching Procedure

TDS = total dissolved solid

TPH = total petroleum hydrocarbon

VOC = volatile organic compound

ATTACHMENT D-2 LABORATORY DATA PACKAGES



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

June 12, 2020

Susan Huang
Aptim Environmental & Infrastructure, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS20060102**

Laboratory Results for: **KAFB ROS**

Dear Susan,

ALS Environmental received 2 sample(s) on Jun 02, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

RJ Modashia
Project Manager

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060102

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20060102-01	KAFB7-Sediment-060120	Soil	KAFB-7	01-Jun-2020 12:35	02-Jun-2020 09:00	☐
HS20060102-02	TB-060120	Water	CG-011520 -101	01-Jun-2020 13:00	02-Jun-2020 09:00	☐

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060102

CASE NARRATIVE**Work Order Comments**

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
- The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

ECD Organics by Method SW8081**Batch ID: 154121**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ECD Organics by Method SW8151**Batch ID: 154120**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Semivolatiles by Method SW8015M**Batch ID: 154060**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method SW8015**Batch ID: R362630**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Semivolatiles by Method SW1311/8270**Batch ID: 154115****Sample ID: LCSD-154115**

- LCSD RPD was above the control limits. The individual recoveries were in control.

GCMS Volatiles by Method SW8260**Batch ID: 154080,R362656,R362682**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470**Batch ID: 154171**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW1311/6020**Batch ID: 154111**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method ASTM D92-12b**Batch ID: R362773**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060102

CASE NARRATIVE

WetChemistry by Method ASTM D92-12b

WetChemistry by Method SW7.3.3.2

Batch ID: R362743

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SW7.3.4.2

Batch ID: R362739

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SW9045D

Batch ID: R362620

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: KAFB7-Sediment-060120
 Collection Date: 01-Jun-2020 12:35

ANALYTICAL REPORT
 WorkOrder: HS20060102
 Lab ID: HS20060102-01
 Matrix: Soil

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP VOLATILES		Method: SW8260		Leache: SW1311 / 04-Jun-2020		Prep: SW1311 / 04-Jun-2020		Analyst: PC
1,1-Dichloroethene	40	U	10	40	100	ug/L	20	04-Jun-2020 17:38
1,2-Dichloroethane	20	U	10	20	100	ug/L	20	04-Jun-2020 17:38
1,4-Dichlorobenzene	20	U	12	20	100	ug/L	20	04-Jun-2020 17:38
2-Butanone	20	U	20	20	200	ug/L	20	04-Jun-2020 17:38
Benzene	40	U	12	40	100	ug/L	20	04-Jun-2020 17:38
Carbon tetrachloride	20	U	12	20	100	ug/L	20	04-Jun-2020 17:38
Chlorobenzene	20	U	8.0	20	100	ug/L	20	04-Jun-2020 17:38
Chloroform	20	U	12	20	100	ug/L	20	04-Jun-2020 17:38
Tetrachloroethene	40	U	12	40	100	ug/L	20	04-Jun-2020 17:38
Trichloroethene	40	U	10	40	100	ug/L	20	04-Jun-2020 17:38
Vinyl chloride	20	U	8.0	20	40	ug/L	20	04-Jun-2020 17:38
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>88.1</i>			0	<i>70-126</i>	<i>%REC</i>	<i>20</i>	<i>04-Jun-2020 17:38</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>101</i>			0	<i>82-124</i>	<i>%REC</i>	<i>20</i>	<i>04-Jun-2020 17:38</i>
<i>Surr: Dibromofluoromethane</i>	<i>89.3</i>			0	<i>77-123</i>	<i>%REC</i>	<i>20</i>	<i>04-Jun-2020 17:38</i>
<i>Surr: Toluene-d8</i>	<i>108</i>			0	<i>82-127</i>	<i>%REC</i>	<i>20</i>	<i>04-Jun-2020 17:38</i>
VOLATILES ORGANICS BY SW8260C		Method: SW8260						Analyst: QX
Benzene	1.2	U	0.50	1.2	5.0	ug/Kg	1	03-Jun-2020 17:17
Ethylbenzene	1.2	U	0.69	1.2	5.0	ug/Kg	1	03-Jun-2020 17:17
Toluene	2.5	U	0.59	2.5	5.0	ug/Kg	1	03-Jun-2020 17:17
Xylenes, Total	1.2	U	0.99	1.2	5.0	ug/Kg	1	03-Jun-2020 17:17
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>92.9</i>			0	<i>71-136</i>	<i>%REC</i>	<i>1</i>	<i>03-Jun-2020 17:17</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.3</i>			0	<i>79-119</i>	<i>%REC</i>	<i>1</i>	<i>03-Jun-2020 17:17</i>
<i>Surr: Dibromofluoromethane</i>	<i>92.7</i>			0	<i>78-119</i>	<i>%REC</i>	<i>1</i>	<i>03-Jun-2020 17:17</i>
<i>Surr: Toluene-d8</i>	<i>101</i>			0	<i>85-116</i>	<i>%REC</i>	<i>1</i>	<i>03-Jun-2020 17:17</i>
GASOLINE RANGE ORGANICS BY SW8015C		Method: SW8015						Analyst: QX
Gasoline Range Organics	0.026	U	0.010	0.026	0.052	mg/Kg	1	03-Jun-2020 12:28
<i>Surr: 4-Bromofluorobenzene</i>	<i>117</i>			0	<i>70-123</i>	<i>%REC</i>	<i>1</i>	<i>03-Jun-2020 12:28</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: KAFB7-Sediment-060120
 Collection Date: 01-Jun-2020 12:35

ANALYTICAL REPORT
 WorkOrder: HS20060102
 Lab ID: HS20060102-01
 Matrix: Soil

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP SEMIVOLATILES		Method: SW1311/8270		Leache: SW1311 / 04-Jun-2020		Prep: SW3510 / 04-Jun-2020		Analyst: GEY
2,4,5-Trichlorophenol	1.0	U	0.90	1.0	5.0	ug/L	1	09-Jun-2020 15:29
2,4,6-Trichlorophenol	1.0	U	1.4	1.0	5.0	ug/L	1	09-Jun-2020 15:29
2,4-Dinitrotoluene	1.0	U	1.0	1.0	5.0	ug/L	1	09-Jun-2020 15:29
Cresols, Total	1.0	U	2.0	1.0	15	ug/L	1	09-Jun-2020 15:29
Hexachlorobenzene	1.0	U	1.1	1.0	5.0	ug/L	1	09-Jun-2020 15:29
Hexachlorobutadiene	1.0	U	1.1	1.0	5.0	ug/L	1	09-Jun-2020 15:29
Hexachloroethane	2.0	U	1.0	2.0	5.0	ug/L	1	09-Jun-2020 15:29
Nitrobenzene	1.0	U	0.80	1.0	5.0	ug/L	1	09-Jun-2020 15:29
Pentachlorophenol	2.0	U	1.6	2.0	5.0	ug/L	1	09-Jun-2020 15:29
Pyridine	1.0	U	2.0	1.0	5.0	ug/L	1	09-Jun-2020 15:29
Surr: 2,4,6-Tribromophenol	103			0	39-153	%REC	1	09-Jun-2020 15:29
Surr: 2-Fluorobiphenyl	79.9			0	40-147	%REC	1	09-Jun-2020 15:29
Surr: 2-Fluorophenol	44.1			0	21-110	%REC	1	09-Jun-2020 15:29
Surr: 4-Terphenyl-d14	88.1			0	39-141	%REC	1	09-Jun-2020 15:29
Surr: Nitrobenzene-d5	84.1			0	37-140	%REC	1	09-Jun-2020 15:29
Surr: Phenol-d6	70.2			0	11-110	%REC	1	09-Jun-2020 15:29
TPH (DRO) BY SW8015C		Method: SW8015M		Prep: SW3541 / 03-Jun-2020		Analyst: PVL		
DRO (>C10 - C28)	9.0	a	0.50	1.0	1.7	mg/Kg	1	04-Jun-2020 05:07
Surr: 2-Fluorobiphenyl	80.1			0	60-129	%REC	1	04-Jun-2020 05:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: KAFB7-Sediment-060120
 Collection Date: 01-Jun-2020 12:35

ANALYTICAL REPORT
 WorkOrder: HS20060102
 Lab ID: HS20060102-01
 Matrix: Soil

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
TCLP PEST BY SW8081B		Method: SW8081		Leache: SW1311 / 04-Jun-2020		Prep: SW3510C / 04-Jun-2020		Analyst: JBA
4,4'-DDD	0.010	U	0.0080	0.010	0.10	ug/L	1	11-Jun-2020 23:35
4,4'-DDE	0.010	U	0.0040	0.010	0.10	ug/L	1	11-Jun-2020 23:35
4,4'-DDT	0.010	U	0.0070	0.010	0.10	ug/L	1	11-Jun-2020 23:35
Aldrin	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
alpha-BHC	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
beta-BHC	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Chlordane	0.25	U	0.10	0.25	0.50	ug/L	1	11-Jun-2020 23:35
delta-BHC	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Dieldrin	0.025	U	0.010	0.025	0.10	ug/L	1	11-Jun-2020 23:35
Endosulfan I	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Endosulfan II	0.025	U	0.020	0.025	0.10	ug/L	1	11-Jun-2020 23:35
Endosulfan sulfate	0.025	U	0.030	0.025	0.10	ug/L	1	11-Jun-2020 23:35
Endrin	0.025	U	0.030	0.025	0.10	ug/L	1	11-Jun-2020 23:35
Endrin aldehyde	0.025	U	0.030	0.025	0.10	ug/L	1	11-Jun-2020 23:35
Endrin ketone	0.025	U	0.030	0.025	0.10	ug/L	1	11-Jun-2020 23:35
gamma-BHC	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Heptachlor	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Heptachlor epoxide	0.012	U	0.010	0.012	0.050	ug/L	1	11-Jun-2020 23:35
Methoxychlor	0.12	U	0.15	0.12	0.50	ug/L	1	11-Jun-2020 23:35
Toxaphene	0.50	U	0.19	0.50	0.50	ug/L	1	11-Jun-2020 23:35
Surr: Decachlorobiphenyl	103			0	55-145	%REC	1	11-Jun-2020 23:35
Surr: Tetrachloro-m-xylene	94.1			0	44-124	%REC	1	11-Jun-2020 23:35
TCLP HERBICIDES BY SW8151A		Method: SW8151		Leache: SW1311 / 04-Jun-2020		Prep: SW8151A / 04-Jun-2020		Analyst: JBA
2,4,5-T	0.10	aU	0.050	0.10	0.20	ug/L	1	08-Jun-2020 14:04
2,4,5-TP (Silvex)	0.10	aU	0.050	0.10	0.20	ug/L	1	08-Jun-2020 14:04
2,4-D	0.10	aU	0.060	0.10	0.20	ug/L	1	08-Jun-2020 14:04
2,4-DB	0.20	aU	0.080	0.20	0.40	ug/L	1	08-Jun-2020 14:04
Dalapon	0.10	aU	0.070	0.10	0.20	ug/L	1	08-Jun-2020 14:04
Dicamba	0.10	aU	0.050	0.10	0.20	ug/L	1	08-Jun-2020 14:04
Dichlorprop	0.20	aU	0.080	0.20	0.40	ug/L	1	08-Jun-2020 14:04
Dinoseb	0.10	aU	0.050	0.10	0.30	ug/L	1	08-Jun-2020 14:04
MCPA	10	aU	8.1	10	30	ug/L	1	08-Jun-2020 14:04
MCPP	10	aU	8.1	10	30	ug/L	1	08-Jun-2020 14:04
Surr: DCAA	103			0	32-138	%REC	1	08-Jun-2020 14:04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: KAFB7-Sediment-060120
 Collection Date: 01-Jun-2020 12:35

ANALYTICAL REPORT
 WorkOrder: HS20060102
 Lab ID: HS20060102-01
 Matrix: Soil

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED	
TCLP METALS BY SW6020A			Method:SW1311/6020		Leache:SW1311 / 04-Jun-2020		Prep:SW3010A / 05-Jun-2020		Analyst: JHD
Arsenic	0.00500	U	0.00400	0.00500	0.0500	mg/L	1	05-Jun-2020 20:57	
Barium	0.309		0.0190	0.0250	0.200	mg/L	1	05-Jun-2020 20:57	
Cadmium	0.00500	U	0.00200	0.00500	0.0500	mg/L	1	05-Jun-2020 20:57	
Chromium	0.00500	U	0.00400	0.00500	0.0500	mg/L	1	05-Jun-2020 20:57	
Lead	0.0100	U	0.00600	0.0100	0.0500	mg/L	1	05-Jun-2020 20:57	
Selenium	0.0250	U	0.0110	0.0250	0.0500	mg/L	1	05-Jun-2020 20:57	
Silver	0.00500	U	0.00200	0.00500	0.0500	mg/L	1	05-Jun-2020 20:57	
TCLP MERCURY BY SW7470A			Method:SW7470		Leache:SW1311 / 04-Jun-2020		Prep:SW7470 / 05-Jun-2020		Analyst: FO
Mercury	0.000100	U	0.0000300	0.000100	0.000200	mg/L	1	05-Jun-2020 17:21	
FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B			Method:ASTM D92-12b						Analyst: TH
Flash Point	> 212		50.0	0	50.0	°F	1	08-Jun-2020 07:30	
REACTIVE CYANIDE			Method:SW7.3.3.2		Prep:SW7.3.3.2				Analyst: KVL
Reactive Cyanide	0	U	100	0	100	mg/Kg	1	05-Jun-2020 16:00	
REACTIVE SULFIDE			Method:SW7.3.4.2						Analyst: KVL
Reactive Sulfide	0	U	100	0	100	mg/Kg	1	05-Jun-2020 15:00	
PH SOIL BY SW9045D			Method:SW9045D						Analyst: JAC
pH	6.23	H	0.100	0	0.100	pH Units	1	03-Jun-2020 16:13	
Temp Deg C @pH	23.0	H	0	0	0	°C	1	03-Jun-2020 16:13	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: TB-060120
 Collection Date: 01-Jun-2020 13:00

ANALYTICAL REPORT
 WorkOrder: HS20060102
 Lab ID: HS20060102-02
 Matrix: Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED	
VOLATILES ORGANICS BY METHOD		Method: SW8260							Analyst: PC
8260C									
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	04-Jun-2020	16:50
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	04-Jun-2020	16:50
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	04-Jun-2020	16:50
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Jun-2020	16:50
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Jun-2020	16:50
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	04-Jun-2020	16:50
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	04-Jun-2020	16:50
Xylenes, Total	1.0	U	0.30	1.0	1.0	UG/L	1	04-Jun-2020	16:50
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>85.7</i>			0	<i>81-118</i>	<i>%REC</i>	<i>1</i>	<i>04-Jun-2020</i>	<i>16:50</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>			0	<i>85-114</i>	<i>%REC</i>	<i>1</i>	<i>04-Jun-2020</i>	<i>16:50</i>
<i>Surr: Dibromofluoromethane</i>	<i>88.1</i>			0	<i>80-119</i>	<i>%REC</i>	<i>1</i>	<i>04-Jun-2020</i>	<i>16:50</i>
<i>Surr: Toluene-d8</i>	<i>108</i>			0	<i>89-112</i>	<i>%REC</i>	<i>1</i>	<i>04-Jun-2020</i>	<i>16:50</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 12-Jun-20

Weight / Prep Log

Client: Aptim Environmental & Infrastructure, Inc.

Project: KAFB ROS

WorkOrder: HS20060102

Batch ID: 3763	Start Date: 01 Jun 2020 13:18	End Date: 01 Jun 2020 13:18
Method: TCLP VOLATILES	Prep Code:	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01	1	5.075 (g)	5 (mL)	0.99	Bulk (5030B)
HS20060102-01	1	5.075 (g)	5 (mL)	0.99	Bulk (5030B)

Batch ID: 3766	Start Date: 03 Jun 2020 11:03	End Date: 03 Jun 2020 11:03
Method: GASOLINE RANGE ORGANICS BY SW8015C	Prep Code:	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01	1	4.864 (g)	5 (mL)	1.03	Bulk (5030B)

Batch ID: 154060	Start Date: 03 Jun 2020 12:30	End Date: 03 Jun 2020 15:30
Method: SOPREP: 3541 TPH	Prep Code: 8015SPR_LL	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01	1	30.09 (g)	1 (mL)	0.03323	

Batch ID: 154072	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP MERCURY EXTRACTION BY SW1311	Prep Code: 1311LHG EXT	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01		400 (grams)	8000 (mL)	20	

Batch ID: 154074	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP METALS EXTRACTION BY SW1311	Prep Code: 1311LM EXT	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01		400 (grams)	8000 (mL)	20	

Batch ID: 154076	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP SAMPLE EXTRACTION HEB	Prep Code: 1311LO_HERB	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01		400 (grams)	8000 (mL)	20	

Batch ID: 154077	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP SAMPLE EXTRACTION -PEST	Prep Code: 1311LO_PEST	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01		400 (grams)	8000 (mL)	20	

Batch ID: 154079	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP SAMPLE EXTRACTION SEMI	Prep Code: 1311LO_SV	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS20060102-01		400 (grams)	8000 (mL)	20	

ALS Houston, US

Date: 12-Jun-20

Weight / Prep Log

Client: Aptim Environmental & Infrastructure, Inc.

Project: KAFB ROS

WorkOrder: HS20060102

Batch ID: 154080	Start Date: 03 Jun 2020 16:30	End Date: 04 Jun 2020 09:30
Method: TCLP ZHE (VOL EXTRACTION)	Prep Code: 1311ZHE	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01		25 (g)	500 (mL)	20

Batch ID: 154111	Start Date: 05 Jun 2020 12:00	End Date: 05 Jun 2020 16:00
Method: TCLP LEACHATE DIGESTION BY SW3010A	Prep Code: 3010A_TCLP	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01		1 (mL)	10 (mL)	10

Batch ID: 154115	Start Date: 04 Jun 2020 11:30	End Date: 04 Jun 2020 15:00
Method: SV AQ SEP FUNNEL EXTRACTION - SW3510C	Prep Code: 3510_B	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01	1	1000 (mL)	1 (mL)	0.001

Batch ID: 154120	Start Date: 04 Jun 2020 12:00	End Date: 05 Jun 2020 09:30
Method: HERBICIDE AQ SEP FUN EXTRACT-SW8151	Prep Code: 3510_H_1311	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01	1	1000 (mL)	10 (mL)	0.01

Batch ID: 154121	Start Date: 04 Jun 2020 12:00	End Date: 04 Jun 2020 17:00
Method: PEST AQ SEP FUN EXTRACT-SW3510C	Prep Code: 3510_P_1311	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01	1	1000 (mL)	10 (mL)	0.01

Batch ID: 154171	Start Date: 05 Jun 2020 11:30	End Date: 05 Jun 2020 13:30
Method: MERCURY TCLP PREP BY SW7470A	Prep Code: 1311_HGPR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060102-01		10 (mL)	10 (mL)	1

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154060 (0)		Test Name : TPH (DRO) BY SW8015C			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35		03 Jun 2020 12:30	04 Jun 2020 05:07	1
Batch ID: 154080 (0)		Test Name : TCLP VOLATILES			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	04 Jun 2020 13:22	04 Jun 2020 17:38	20
Batch ID: 154111 (0)		Test Name : TCLP METALS BY SW6020A			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	05 Jun 2020 15:22	05 Jun 2020 20:57	1
Batch ID: 154115 (0)		Test Name : TCLP SEMIVOLATILES			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	04 Jun 2020 11:30	09 Jun 2020 15:29	1
Batch ID: 154120 (0)		Test Name : TCLP HERBICIDES BY SW8151A			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	04 Jun 2020 12:00	08 Jun 2020 14:04	1
Batch ID: 154121 (0)		Test Name : TCLP PEST BY SW8081B			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	04 Jun 2020 12:00	11 Jun 2020 23:35	1
Batch ID: 154171 (0)		Test Name : TCLP MERCURY BY SW7470A			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35	04 Jun 2020 09:30	05 Jun 2020 11:30	05 Jun 2020 17:21	1
Batch ID: R362620 (0)		Test Name : PH SOIL BY SW9045D			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			03 Jun 2020 16:13	1
Batch ID: R362630 (0)		Test Name : GASOLINE RANGE ORGANICS BY SW8015C			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			03 Jun 2020 12:28	1
Batch ID: R362656 (0)		Test Name : VOLATILES ORGANICS BY SW8260C			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			03 Jun 2020 17:17	1
Batch ID: R362682 (0)		Test Name : VOLATILES ORGANICS BY METHOD 8260C			Matrix: Water	
HS20060102-02	TB-060120	01 Jun 2020 13:00			04 Jun 2020 16:50	1
Batch ID: R362739 (0)		Test Name : REACTIVE SULFIDE			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			05 Jun 2020 15:00	1
Batch ID: R362743 (0)		Test Name : REACTIVE CYANIDE			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			05 Jun 2020 16:00	1
Batch ID: R362773 (0)		Test Name : FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B			Matrix: Soil	
HS20060102-01	KAFB7-Sediment-060120	01 Jun 2020 12:35			08 Jun 2020 07:30	1

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154120 (0)		Instrument: ECD_13		Method: TCLP HERBICIDES BY SW8151A						
MBLK	Sample ID: MBLK-154120	Units: ug/L			Analysis Date: 08-Jun-2020 13:12					
Client ID:	Run ID: ECD_13_362875	SeqNo: 5616772		PrepDate: 04-Jun-2020		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	0.10	0.20								U
2,4,5-TP (Silvex)	0.10	0.20								U
2,4-D	0.10	0.20								U
2,4-DB	0.20	0.40								U
Dalapon	0.10	0.20								U
Dicamba	0.10	0.20								U
Dichlorprop	0.20	0.40								U
Dinoseb	0.10	0.30								U
MCPA	10	30								U
MCPP	10	30								U
Surr: DCAA	4.939	0	5	0	98.8	32 - 138				

LCS	Sample ID: LCS-154120	Units: ug/L			Analysis Date: 08-Jun-2020 13:30					
Client ID:	Run ID: ECD_13_362875	SeqNo: 5616773		PrepDate: 04-Jun-2020		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	2.311	0.20	2.5	0	92.4	42 - 147				
2,4,5-TP (Silvex)	2.298	0.20	2.5	0	91.9	51 - 134				
2,4-D	2.085	0.20	2.5	0	83.4	45 - 152				
2,4-DB	2.365	0.40	2.5	0	94.6	35 - 153				
Dalapon	2.281	0.20	2.5	0	91.2	19 - 139				
Dicamba	2.232	0.20	2.5	0	89.3	50 - 141				
Dichlorprop	2.225	0.40	2.5	0	89.0	46 - 159				
Dinoseb	1.822	0.30	2.5	0	72.9	28 - 115				
MCPA	232.1	30	250	0	92.9	35 - 144				
MCPP	321.9	30	250	0	129	33 - 157				
Surr: DCAA	4.821	0	5	0	96.4	32 - 138				

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154120 (0)		Instrument: ECD_13		Method: TCLP HERBICIDES BY SW8151A					
LCSD		Sample ID: LCSD-154120		Units: ug/L		Analysis Date: 08-Jun-2020 13:47			
Client ID:		Run ID: ECD_13_362875		SeqNo: 5616774		PrepDate: 04-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-T	2.372	0.20	2.5	0	94.9	42 - 147	2.311	2.61	30
2,4,5-TP (Silvex)	2.349	0.20	2.5	0	94.0	51 - 134	2.298	2.21	30
2,4-D	2.13	0.20	2.5	0	85.2	45 - 152	2.085	2.14	30
2,4-DB	2.438	0.40	2.5	0	97.5	35 - 153	2.365	3.03	30
Dalapon	2.546	0.20	2.5	0	102	19 - 139	2.281	11	30
Dicamba	2.288	0.20	2.5	0	91.5	50 - 141	2.232	2.47	30
Dichlorprop	2.326	0.40	2.5	0	93.0	46 - 159	2.225	4.41	30
Dinoseb	1.869	0.30	2.5	0	74.8	28 - 115	1.822	2.56	30
MCPA	221.8	30	250	0	88.7	35 - 144	232.1	4.56	30
MCPP	307	30	250	0	123	33 - 157	321.9	4.73	30
Surr: DCAA	4.902	0	5	0	98.0	32 - 138	4.821	1.67	30

MS		Sample ID: HS20060102-01MS		Units: ug/L		Analysis Date: 08-Jun-2020 14:21			
Client ID: KAFB7-Sediment-060120		Run ID: ECD_13_362875		SeqNo: 5616776		PrepDate: 04-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-T	2.152	0.20	2.5	0	86.1	44 - 122			
2,4,5-TP (Silvex)	2.135	0.20	2.5	0	85.4	49 - 126			
2,4-D	1.928	0.20	2.5	0	77.1	39 - 120			
2,4-DB	2.196	0.40	2.5	0	87.8	44 - 120			
Dalapon	1.759	0.20	2.5	0	70.4	40 - 120			
Dicamba	2.152	0.20	2.5	0	86.1	60 - 120			
Dichlorprop	2.25	0.40	2.5	0	90.0	68 - 122			
Dinoseb	2.127	0.30	2.5	0	85.1	28 - 115			
MCPA	199.9	30	250	0	80.0	62 - 144			
MCPP	254.4	30	250	0	102	60 - 133			
Surr: DCAA	4.743	0	5	0	94.9	50 - 130			

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154121 (0)		Instrument: ECD_11		Method: TCLP PEST BY SW8081B					
MBLK	Sample ID: MBLK-154121	Units: ug/L		Analysis Date: 12-Jun-2020 01:05					
Client ID:	Run ID: ECD_11_363117		SeqNo: 5616756		PrepDate: 04-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
4,4'-DDD	0.010	0.10							U
4,4'-DDE	0.010	0.10							U
4,4'-DDT	0.010	0.10							U
Aldrin	0.012	0.050							U
alpha-BHC	0.012	0.050							U
beta-BHC	0.012	0.050							U
Chlordane	0.25	0.50							U
delta-BHC	0.012	0.050							U
Dieldrin	0.025	0.10							U
Endosulfan I	0.012	0.050							U
Endosulfan II	0.025	0.10							U
Endosulfan sulfate	0.025	0.10							U
Endrin	0.025	0.10							U
Endrin aldehyde	0.025	0.10							U
Endrin ketone	0.025	0.10							U
gamma-BHC	0.012	0.050							U
Heptachlor	0.012	0.050							U
Heptachlor epoxide	0.012	0.050							U
Methoxychlor	0.12	0.50							U
Toxaphene	0.50	0.50							U
Surr: Decachlorobiphenyl	0.2208	0	0.2	0	110	55 - 145			
Surr: Tetrachloro-m-xylene	0.2183	0	0.2	0	109	44 - 124			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154121 (0)		Instrument: ECD_11		Method: TCLP PEST BY SW8081B					
LCS	Sample ID: LCS-154121	Units: ug/L			Analysis Date: 12-Jun-2020 00:20				
Client ID:	Run ID: ECD_11_363117	SeqNo: 5616754		PrepDate: 04-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
4,4'-DDD	0.6312	0.10	0.5	0	126	56 - 143			
4,4'-DDE	0.6276	0.10	0.5	0	126	57 - 135			
4,4'-DDT	0.6087	0.10	0.5	0	122	51 - 143			
Aldrin	0.3183	0.050	0.25	0	127	45 - 134			
alpha-BHC	0.3095	0.050	0.25	0	124	54 - 138			
beta-BHC	0.2917	0.050	0.25	0	117	56 - 136			
delta-BHC	0.3032	0.050	0.25	0	121	52 - 142			
Dieldrin	0.6318	0.10	0.5	0	126	60 - 136			
Endosulfan I	0.2644	0.050	0.25	0	106	62 - 126			
Endosulfan II	0.5677	0.10	0.5	0	114	52 - 135			
Endosulfan sulfate	0.5804	0.10	0.5	0	116	62 - 133			
Endrin	0.583	0.10	0.5	0	117	60 - 138			
Endrin aldehyde	0.6327	0.10	0.5	0	127	51 - 132			
Endrin ketone	0.6323	0.10	0.5	0	126	58 - 134			
gamma-BHC	0.3108	0.050	0.25	0	124	59 - 134			
Heptachlor	0.2914	0.050	0.25	0	117	54 - 130			
Heptachlor epoxide	0.299	0.050	0.25	0	120	61 - 133			
Methoxychlor	3.124	0.50	2.5	0	125	54 - 145			
Surr: Decachlorobiphenyl	0.2492	0	0.2	0	125	55 - 145			
Surr: Tetrachloro-m-xylene	0.2011	0	0.2	0	101	44 - 124			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154121 (0)		Instrument: ECD_11		Method: TCLP PEST BY SW8081B				
LCSD		Sample ID: LCSD-154121		Units: ug/L		Analysis Date: 12-Jun-2020 00:43		
Client ID:		Run ID: ECD_11_363117		SeqNo: 5616755		PrepDate: 04-Jun-2020		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
4,4'-DDD	0.4874	0.10	0.5	0	97.5	56 - 143	0.6312	25.7 30
4,4'-DDE	0.4794	0.10	0.5	0	95.9	57 - 135	0.6276	26.8 30
4,4'-DDT	0.4705	0.10	0.5	0	94.1	51 - 143	0.6087	25.6 30
Aldrin	0.244	0.050	0.25	0	97.6	45 - 134	0.3183	26.4 30
alpha-BHC	0.2388	0.050	0.25	0	95.5	54 - 138	0.3095	25.8 30
beta-BHC	0.2292	0.050	0.25	0	91.7	56 - 136	0.2917	24 30
delta-BHC	0.2329	0.050	0.25	0	93.2	52 - 142	0.3032	26.2 30
Dieldrin	0.4861	0.10	0.5	0	97.2	60 - 136	0.6318	26.1 30
Endosulfan I	0.204	0.050	0.25	0	81.6	62 - 126	0.2644	25.8 30
Endosulfan II	0.4519	0.10	0.5	0	90.4	52 - 135	0.5677	22.7 30
Endosulfan sulfate	0.459	0.10	0.5	0	91.8	62 - 133	0.5804	23.4 30
Endrin	0.449	0.10	0.5	0	89.8	60 - 138	0.583	26 30
Endrin aldehyde	0.4983	0.10	0.5	0	99.7	51 - 132	0.6327	23.8 30
Endrin ketone	0.4867	0.10	0.5	0	97.3	58 - 134	0.6323	26 30
gamma-BHC	0.2401	0.050	0.25	0	96.0	59 - 134	0.3108	25.7 30
Heptachlor	0.2257	0.050	0.25	0	90.3	54 - 130	0.2914	25.4 30
Heptachlor epoxide	0.2321	0.050	0.25	0	92.8	61 - 133	0.299	25.2 30
Methoxychlor	2.421	0.50	2.5	0	96.8	54 - 145	3.124	25.4 30
Surr: Decachlorobiphenyl	0.2062	0	0.2	0	103	55 - 145	0.2492	18.9 30
Surr: Tetrachloro-m-xylene	0.1973	0	0.2	0	98.6	44 - 124	0.2011	1.91 30

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154121 (0)		Instrument: ECD_11		Method: TCLP PEST BY SW8081B					
MS		Sample ID: HS20060102-01MS		Units: ug/L		Analysis Date: 11-Jun-2020 23:58			
Client ID: KAFB7-Sediment-060120		Run ID: ECD_11_363117		SeqNo: 5616753		PrepDate: 04-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
4,4'-DDD	0.5437	0.10	0.5	0	109	56 - 143			
4,4'-DDE	0.5429	0.10	0.5	0	109	57 - 135			
4,4'-DDT	0.5451	0.10	0.5	0	109	51 - 143			
Aldrin	0.2599	0.050	0.25	0	104	45 - 134			
alpha-BHC	0.2692	0.050	0.25	0	108	54 - 138			
beta-BHC	0.2754	0.050	0.25	0	110	56 - 136			
delta-BHC	0.2726	0.050	0.25	0	109	52 - 142			
Dieldrin	0.5492	0.10	0.5	0	110	60 - 136			
Endosulfan I	0.235	0.050	0.25	0	94.0	62 - 126			
Endosulfan II	0.5285	0.10	0.5	0	106	52 - 135			
Endosulfan sulfate	0.5153	0.10	0.5	0	103	62 - 133			
Endrin	0.5601	0.10	0.5	0	112	60 - 138			
Endrin aldehyde	0.5423	0.10	0.5	0	108	51 - 132			
Endrin ketone	0.536	0.10	0.5	0	107	58 - 134			
gamma-BHC	0.2754	0.050	0.25	0	110	59 - 134			
Heptachlor	0.2624	0.050	0.25	0	105	54 - 130			
Heptachlor epoxide	0.229	0.050	0.25	0	91.6	61 - 133			
Methoxychlor	2.785	0.50	2.5	0	111	54 - 145			
Surr: Decachlorobiphenyl	0.2313	0	0.2	0	116	55 - 145			
Surr: Tetrachloro-m-xylene	0.2242	0	0.2	0	112	44 - 124			

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154060 (0)		Instrument: FID-7		Method: TPH (DRO) BY SW8015C				
MBLK	Sample ID: MBLK-154060	Units: mg/Kg		Analysis Date: 08-Jun-2020 11:18				
Client ID:	Run ID: FID-7_362811		SeqNo: 5609797		PrepDate: 03-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

DRO (>C10 - C28)	1.0	1.7							U
Surr: 2-Fluorobiphenyl	2.352	0	3.3	0	71.3	70 - 130			

LCS	Sample ID: LCS-154060	Units: mg/Kg		Analysis Date: 03-Jun-2020 23:05				
Client ID:	Run ID: FID-7_362811		SeqNo: 5609789		PrepDate: 03-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

DRO (>C10 - C28)	25.38	1.7	33.3	0	76.2	70 - 130			
Surr: 2-Fluorobiphenyl	2.382	0	3.3	0	72.2	70 - 130			

MS	Sample ID: HS20051140-01MS	Units: mg/Kg		Analysis Date: 03-Jun-2020 23:54				
Client ID:	Run ID: FID-7_362811		SeqNo: 5609791		PrepDate: 03-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

DRO (>C10 - C28)	30.48	1.7	33.2	4.537	78.1	51 - 152			
Surr: 2-Fluorobiphenyl	2.621	0	3.29	0	79.7	60 - 129			

MSD	Sample ID: HS20051140-01MSD	Units: mg/Kg		Analysis Date: 04-Jun-2020 00:18				
Client ID:	Run ID: FID-7_362811		SeqNo: 5609792		PrepDate: 03-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

DRO (>C10 - C28)	29.76	1.7	33.26	4.537	75.8	51 - 152	30.48	2.38	30
Surr: 2-Fluorobiphenyl	2.77	0	3.296	0	84.1	60 - 129	2.621	5.54	30

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362630 (0)		Instrument: FID-14		Method: GASOLINE RANGE ORGANICS BY SW8015C				
MBLK	Sample ID: MBLK-060320	Units: mg/Kg		Analysis Date: 03-Jun-2020 10:39				
Client ID:	Run ID: FID-14_362630	SeqNo: 5605977		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

Gasoline Range Organics	0.025	0.050							U
Surr: 4-Bromofluorobenzene	0.11	0.0050	0.1	0	110	75 - 121			

LCS	Sample ID: LCS-060320	Units: mg/Kg		Analysis Date: 03-Jun-2020 10:22				
Client ID:	Run ID: FID-14_362630	SeqNo: 5605976		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

Gasoline Range Organics	1.118	0.050	1	0	112	72 - 121			
Surr: 4-Bromofluorobenzene	0.09328	0.0050	0.1	0	93.3	75 - 121			

MS	Sample ID: HS20060102-01MS	Units: mg/Kg		Analysis Date: 03-Jun-2020 12:44				
Client ID: KAFB7-Sediment-060120	Run ID: FID-14_362630	SeqNo: 5605983		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

Gasoline Range Organics	1.022	0.048	0.96	0	106	70 - 130			
Surr: 4-Bromofluorobenzene	0.08653	0.0048	0.096	0	90.1	70 - 123			

MSD	Sample ID: HS20060102-01MSD	Units: mg/Kg		Analysis Date: 03-Jun-2020 13:00				
Client ID: KAFB7-Sediment-060120	Run ID: FID-14_362630	SeqNo: 5605984		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual

Gasoline Range Organics	1.009	0.050	1.01	0	99.9	70 - 130	1.022	1.25	30
Surr: 4-Bromofluorobenzene	0.08273	0.0050	0.101	0	81.9	70 - 123	0.08653	4.49	30

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154111 (0)		Instrument: ICPMS04		Method: TCLP METALS BY SW6020A					
MBLK	Sample ID: MBLKT2-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:31					
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608655		PrepDate: 05-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.00419	0.0500							J
Barium	0.0250	0.200							U
Cadmium	0.00500	0.0500							U
Chromium	0.00500	0.0500							U
Lead	0.0100	0.0500							U
Selenium	0.0250	0.0500							U
Silver	0.00500	0.0500							U

MBLK	Sample ID: MBLKT4-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:35					
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608657		PrepDate: 05-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.000500	0.00500							U
Barium	0.00250	0.0200							U
Cadmium	0.000500	0.00500							U
Chromium	0.000500	0.00500							U
Lead	0.00100	0.00500							U
Selenium	0.00250	0.00500							U
Silver	0.000500	0.00500							U

MBLK	Sample ID: MBLKT3-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:33					
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608656		PrepDate: 05-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.00500	0.0500							U
Barium	0.0250	0.200							U
Cadmium	0.00500	0.0500							U
Chromium	0.00500	0.0500							U
Lead	0.0100	0.0500							U
Selenium	0.0250	0.0500							U
Silver	0.00500	0.0500							U

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154111 (0)		Instrument: ICPMS04		Method: TCLP METALS BY SW6020A				
MBLK	Sample ID: MBLKT1-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:29				
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608654		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Arsenic	0.00500	0.0500						U
Barium	0.0250	0.200						U
Cadmium	0.00500	0.0500						U
Chromium	0.00500	0.0500						U
Lead	0.0100	0.0500						U
Selenium	0.0250	0.0500						U
Silver	0.00500	0.0500						U

MBLK	Sample ID: MBLK-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:27				
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608653		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Arsenic	0.000500	0.00500						U
Barium	0.00250	0.0200						U
Cadmium	0.000500	0.00500						U
Chromium	0.000500	0.00500						U
Lead	0.00100	0.00500						U
Selenium	0.00250	0.00500						U
Silver	0.000500	0.00500						U

LCS	Sample ID: LCS-154111	Units: mg/L		Analysis Date: 05-Jun-2020 20:37				
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608658		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Arsenic	0.0474	0.00500	0.05	0	94.8	80 - 120		
Barium	0.04355	0.0200	0.05	0	87.1	80 - 120		
Cadmium	0.04619	0.00500	0.05	0	92.4	80 - 120		
Chromium	0.0448	0.00500	0.05	0	89.6	80 - 120		
Lead	0.04493	0.00500	0.05	0	89.9	80 - 120		
Selenium	0.04875	0.00500	0.05	0	97.5	80 - 120		
Silver	0.04895	0.00500	0.05	0	97.9	80 - 120		

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154111 (0)		Instrument: ICPMS04		Method: TCLP METALS BY SW6020A					
MS		Sample ID: HS20060096-01MS		Units: mg/L		Analysis Date: 05-Jun-2020 20:47			
Client ID:		Run ID: ICPMS04_362714		SeqNo: 5608663		PrepDate: 05-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.4803	0.0500	0.5	0.00089	95.9	80 - 120			
Barium	0.8136	0.200	0.5	0.3754	87.7	80 - 120			
Cadmium	0.4378	0.0500	0.5	0.00007	87.5	80 - 120			
Chromium	0.4492	0.0500	0.5	0.00471	88.9	80 - 120			
Lead	0.4403	0.0500	0.5	0.00024	88.0	80 - 120			
Selenium	0.4952	0.0500	0.5	0.00053	98.9	80 - 120			
Silver	0.4545	0.0500	0.5	0.00002	90.9	80 - 120			
MSD		Sample ID: HS20060096-01MSD		Units: mg/L		Analysis Date: 05-Jun-2020 20:49			
Client ID:		Run ID: ICPMS04_362714		SeqNo: 5608664		PrepDate: 05-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.5019	0.0500	0.5	0.00089	100	80 - 120	0.4803	4.4	20
Barium	0.8498	0.200	0.5	0.3754	94.9	80 - 120	0.8136	4.35	20
Cadmium	0.4581	0.0500	0.5	0.00007	91.6	80 - 120	0.4378	4.53	20
Chromium	0.4674	0.0500	0.5	0.00471	92.5	80 - 120	0.4492	3.96	20
Lead	0.4625	0.0500	0.5	0.00024	92.5	80 - 120	0.4403	4.92	20
Selenium	0.5248	0.0500	0.5	0.00053	105	80 - 120	0.4952	5.8	20
Silver	0.4909	0.0500	0.5	0.00002	98.2	80 - 120	0.4545	7.7	20
PDS		Sample ID: HS20060096-01PDS		Units: mg/L		Analysis Date: 05-Jun-2020 20:51			
Client ID:		Run ID: ICPMS04_362714		SeqNo: 5608665		PrepDate: 05-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.9078	0.0500	1	0.00089	90.7	75 - 125			
Barium	1.168	0.200	1	0.3754	79.3	75 - 125			
Cadmium	0.8299	0.0500	1	0.00007	83.0	75 - 125			
Chromium	0.8445	0.0500	1	0.00471	84.0	75 - 125			
Lead	0.8456	0.0500	1	0.00024	84.5	75 - 125			
Selenium	0.9717	0.0500	1	0.00053	97.1	75 - 125			
Silver	0.853	0.0500	1	0.00002	85.3	75 - 125			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154111 (0)		Instrument: ICPMS04		Method: TCLP METALS BY SW6020A					
SD	Sample ID: HS20060096-01SD	Units: mg/L		Analysis Date: 05-Jun-2020 20:45					
Client ID:	Run ID: ICPMS04_362714	SeqNo: 5608662		PrepDate: 05-Jun-2020		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Arsenic	0.0250	0.250					0.00089	0 10	U
Barium	0.3769	1.00					0.3754	0 10	J
Cadmium	0.0250	0.250					0.00007	0 10	U
Chromium	0.0250	0.250					0.00471	0 10	U
Lead	0.0500	0.250					0.00024	0 10	U
Selenium	0.125	0.250					0.00053	0 10	U
Silver	0.0250	0.250					0.00002	0 10	U
The following samples were analyzed in this batch: HS20060102-01									

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154171 (0)		Instrument: HG03		Method: TCLP MERCURY BY SW7470A				
MBLK	Sample ID: MBLKT1-154171	Units: mg/L		Analysis Date: 05-Jun-2020 17:19				
Client ID:	Run ID: HG03_362736	SeqNo: 5608612		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Mercury	0.000100	0.000200						U
MBLK	Sample ID: MBLK-154171	Units: mg/L		Analysis Date: 05-Jun-2020 17:10				
Client ID:	Run ID: HG03_362736	SeqNo: 5608607		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Mercury	0.000100	0.000200						U
LCS	Sample ID: LCS-154171	Units: mg/L		Analysis Date: 05-Jun-2020 17:11				
Client ID:	Run ID: HG03_362736	SeqNo: 5608608		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Mercury	0.00499	0.000200	0.005	0	99.8	80 - 120		
MS	Sample ID: HS20060215-01MS	Units: mg/L		Analysis Date: 05-Jun-2020 17:16				
Client ID:	Run ID: HG03_362736	SeqNo: 5608610		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Mercury	0.00508	0.000200	0.005	0.000018	101	75 - 125		
MSD	Sample ID: HS20060215-01MSD	Units: mg/L		Analysis Date: 05-Jun-2020 17:17				
Client ID:	Run ID: HG03_362736	SeqNo: 5608611		PrepDate: 05-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
Mercury	0.0051	0.000200	0.005	0.000018	102	75 - 125	0.00508	0.393 20
The following samples were analyzed in this batch: HS20060102-01								

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154115 (0)		Instrument: SV-4		Method: TCLP SEMIVOLATILES					
MBLK	Sample ID: MBLK-154115	Units: ug/L		Analysis Date: 09-Jun-2020 11:18					
Client ID:	Run ID: SV-4_362925		SeqNo: 5612009		PrepDate: 04-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-Trichlorophenol	1.0	5.0							U
2,4,6-Trichlorophenol	1.0	5.0							U
2,4-Dinitrotoluene	1.0	5.0							U
Cresols, Total	1.0	15							U
Hexachlorobenzene	1.0	5.0							U
Hexachlorobutadiene	1.0	5.0							U
Hexachloroethane	2.0	5.0							U
Nitrobenzene	1.0	5.0							U
Pentachlorophenol	2.0	5.0							U
Pyridine	1.0	5.0							U
Surr: 2,4,6-Tribromophenol	80.14	5.0	100	0	80.1	39 - 153			
Surr: 2-Fluorobiphenyl	70.66	5.0	100	0	70.7	40 - 147			
Surr: 2-Fluorophenol	105.5	5.0	100	0	106	21 - 110			
Surr: 4-Terphenyl-d14	87.02	5.0	100	0	87.0	39 - 141			
Surr: Nitrobenzene-d5	86.13	5.0	100	0	86.1	37 - 140			
Surr: Phenol-d6	83.26	5.0	100	0	83.3	11 - 110			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154115 (0)		Instrument: SV-4		Method: TCLP SEMIVOLATILES				
LCS		Sample ID: LCS-154115		Units: ug/L		Analysis Date: 09-Jun-2020 11:39		
Client ID:		Run ID: SV-4_362925		SeqNo: 5612010		PrepDate: 04-Jun-2020		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
2,4,5-Trichlorophenol	86.35	5.0	100	0	86.4	55 - 120		
2,4,6-Trichlorophenol	80.17	5.0	100	0	80.2	55 - 120		
2,4-Dinitrotoluene	40.7	5.0	50	0	81.4	55 - 125		
Cresols, Total	206.7	15	250	0	82.7	48 - 115		
Hexachlorobenzene	56.38	5.0	50	0	113	55 - 120		
Hexachlorobutadiene	46.52	5.0	50	0	93.0	55 - 120		
Hexachloroethane	43.22	5.0	50	0	86.4	55 - 120		
Nitrobenzene	38.35	5.0	50	0	76.7	55 - 120		
Pentachlorophenol	91.54	5.0	100	0	91.5	50 - 135		
Pyridine	21.24	5.0	50	0	42.5	30 - 120		
<i>Surr: 2,4,6-Tribromophenol</i>	<i>70.58</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>70.6</i>	<i>39 - 153</i>		
<i>Surr: 2-Fluorobiphenyl</i>	<i>79.43</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>79.4</i>	<i>40 - 147</i>		
<i>Surr: 2-Fluorophenol</i>	<i>75.57</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>75.6</i>	<i>21 - 110</i>		
<i>Surr: 4-Terphenyl-d14</i>	<i>82.63</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>82.6</i>	<i>39 - 141</i>		
<i>Surr: Nitrobenzene-d5</i>	<i>61.51</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>61.5</i>	<i>37 - 140</i>		
<i>Surr: Phenol-d6</i>	<i>63.41</i>	<i>5.0</i>	<i>100</i>	<i>0</i>	<i>63.4</i>	<i>11 - 110</i>		

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154115 (0)		Instrument: SV-4		Method: TCLP SEMIVOLATILES					
LCSD		Sample ID: LCSD-154115		Units: ug/L		Analysis Date: 09-Jun-2020 13:24			
Client ID:		Run ID: SV-4_362925		SeqNo: 5612011		PrepDate: 04-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-Trichlorophenol	93.17	5.0	100	0	93.2	55 - 120	86.35	7.6	20
2,4,6-Trichlorophenol	86.13	5.0	100	0	86.1	55 - 120	80.17	7.18	20
2,4-Dinitrotoluene	49.32	5.0	50	0	98.6	55 - 125	40.7	19.2	20
Cresols, Total	262.4	15	250	0	105	48 - 115	206.7	23.7	20 R
Hexachlorobenzene	45.88	5.0	50	0	91.8	55 - 120	56.38	20.5	20 R
Hexachlorobutadiene	41.18	5.0	50	0	82.4	55 - 120	46.52	12.2	20
Hexachloroethane	47.01	5.0	50	0	94.0	55 - 120	43.22	8.4	20
Nitrobenzene	40.67	5.0	50	0	81.3	55 - 120	38.35	5.89	20
Pentachlorophenol	85.19	5.0	100	0	85.2	50 - 135	91.54	7.19	20
Pyridine	19.55	5.0	50	0	39.1	30 - 120	21.24	8.28	20
Surr: 2,4,6-Tribromophenol	87.64	5.0	100	0	87.6	39 - 153	70.58	21.6	20 R
Surr: 2-Fluorobiphenyl	82.2	5.0	100	0	82.2	40 - 147	79.43	3.43	20
Surr: 2-Fluorophenol	78.84	5.0	100	0	78.8	21 - 110	75.57	4.22	20
Surr: 4-Terphenyl-d14	87.68	5.0	100	0	87.7	39 - 141	82.63	5.93	20
Surr: Nitrobenzene-d5	69.87	5.0	100	0	69.9	37 - 140	61.51	12.7	20
Surr: Phenol-d6	67.87	5.0	100	0	67.9	11 - 110	63.41	6.8	20

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154115 (0)		Instrument: SV-4		Method: TCLP SEMIVOLATILES					
MS		Sample ID: HS20060102-01MS		Units: ug/L		Analysis Date: 09-Jun-2020 15:50			
Client ID: KAFB7-Sediment-060120		Run ID: SV-4_362925		SeqNo: 5612013		PrepDate: 04-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-Trichlorophenol	114.6	5.0	100	0	115	55 - 120			
2,4,6-Trichlorophenol	106.4	5.0	100	0	106	55 - 120			
2,4-Dinitrotoluene	48.61	5.0	50	0	97.2	55 - 125			
Cresols, Total	227.2	15	250	0	90.9	48 - 115			
Hexachlorobenzene	42.61	5.0	50	0	85.2	55 - 120			
Hexachlorobutadiene	41.86	5.0	50	0	83.7	55 - 120			
Hexachloroethane	37.84	5.0	50	0	75.7	55 - 120			
Nitrobenzene	47.81	5.0	50	0	95.6	55 - 120			
Pentachlorophenol	98.81	5.0	100	0	98.8	50 - 135			
Pyridine	23.59	5.0	50	0	47.2	30 - 120			
Surr: 2,4,6-Tribromophenol	104.2	5.0	100	0	104	39 - 153			
Surr: 2-Fluorobiphenyl	96.9	5.0	100	0	96.9	40 - 147			
Surr: 2-Fluorophenol	64.01	5.0	100	0	64.0	21 - 110			
Surr: 4-Terphenyl-d14	89.4	5.0	100	0	89.4	39 - 141			
Surr: Nitrobenzene-d5	78.4	5.0	100	0	78.4	37 - 140			
Surr: Phenol-d6	85.51	5.0	100	0	85.5	11 - 110			

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154080 (0)		Instrument: VOA6		Method: TCLP VOLATILES					
MBLK		Sample ID: MBLK-154080		Units: ug/L		Analysis Date: 04-Jun-2020 17:14			
Client ID:		Run ID: VOA6_362683		SeqNo: 5607718		PrepDate: 04-Jun-2020		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1-Dichloroethene	40	100							U
1,2-Dichloroethane	20	100							U
1,4-Dichlorobenzene	20	100							U
2-Butanone	20	200							U
Benzene	40	100							U
Carbon tetrachloride	20	100							U
Chlorobenzene	20	100							U
Chloroform	20	100							U
Tetrachloroethene	20	100							U
Trichloroethene	40	100							U
Vinyl chloride	20	40							U
Surr: 1,2-Dichloroethane-d4	876.5	100	1000	0	87.7	70 - 130			
Surr: 4-Bromofluorobenzene	1009	100	1000	0	101	82 - 115			
Surr: Dibromofluoromethane	902	100	1000	0	90.2	73 - 126			
Surr: Toluene-d8	1073	100	1000	0	107	81 - 120			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154080 (0)		Instrument: VOA6		Method: TCLP VOLATILES					
LCS	Sample ID: VLCSW-154080	Units: ug/L			Analysis Date: 04-Jun-2020 12:01				
Client ID:	Run ID: VOA6_362683	SeqNo: 5607025			PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1-Dichloroethene	20.52	5.0	20	0	103	70 - 130			
1,2-Dichloroethane	20.71	5.0	20	0	104	70 - 124			
1,4-Dichlorobenzene	19.08	5.0	20	0	95.4	79 - 113			
2-Butanone	39.37	10	40	0	98.4	70 - 130			
Benzene	20.08	5.0	20	0	100	74 - 120			
Carbon tetrachloride	18.15	5.0	20	0	90.8	71 - 125			
Chlorobenzene	19.41	5.0	20	0	97.0	76 - 113			
Chloroform	21.06	5.0	20	0	105	71 - 121			
Tetrachloroethene	18.91	5.0	20	0	94.5	76 - 119			
Trichloroethene	20.1	5.0	20	0	100	77 - 121			
Vinyl chloride	18.98	2.0	20	0	94.9	70 - 130			
Surr: 1,2-Dichloroethane-d4	53.79	5.0	50	0	108	70 - 130			
Surr: 4-Bromofluorobenzene	50.88	5.0	50	0	102	82 - 115			
Surr: Dibromofluoromethane	53.08	5.0	50	0	106	73 - 126			
Surr: Toluene-d8	48.04	5.0	50	0	96.1	81 - 120			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: 154080 (0)		Instrument: VOA6		Method: TCLP VOLATILES					
MS	Sample ID: HS20060160-01MS	Units: ug/L			Analysis Date: 04-Jun-2020 18:02				
Client ID:	Run ID: VOA6_362683	SeqNo: 5607720		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1-Dichloroethene	18.92	5.0	20	0	94.6	70 - 130			
1,2-Dichloroethane	20.15	5.0	20	0	101	70 - 127			
1,4-Dichlorobenzene	21.33	5.0	20	0	107	70 - 114			
2-Butanone	33.78	10	40	0	84.5	70 - 130			
Benzene	23.53	5.0	20	2.984	103	70 - 127			
Carbon tetrachloride	20.43	5.0	20	0	102	70 - 130			
Chlorobenzene	21.26	5.0	20	0	106	70 - 114			
Chloroform	18.4	5.0	20	0	92.0	70 - 125			
Tetrachloroethene	24.21	5.0	20	1.024	116	70 - 130			
Trichloroethene	21.57	5.0	20	0	108	70 - 129			
Vinyl chloride	16.5	2.0	20	0	82.5	70 - 130			
Surr: 1,2-Dichloroethane-d4	43.21	5.0	50	0	86.4	70 - 126			
Surr: 4-Bromofluorobenzene	50.46	5.0	50	0	101	82 - 124			
Surr: Dibromofluoromethane	45.42	5.0	50	0	90.8	77 - 123			
Surr: Toluene-d8	53.37	5.0	50	0	107	82 - 127			

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362656 (0)		Instrument: VOA5		Method: VOLATILES ORGANICS BY SW8260C					
MBLK	Sample ID: VBLKS1-060320	Units: ug/Kg		Analysis Date: 03-Jun-2020 08:56					
Client ID:	Run ID: VOA5_362656	SeqNo: 5606653		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	1.2	5.0							U
Ethylbenzene	1.2	5.0							U
Toluene	2.5	5.0							U
Xylenes, Total	1.2	5.0							U
Surr: Toluene-d8	50.4	5.0	50	0	101	85 - 116			
Surr: 1,2-Dichloroethane-d4	47.96	5.0	50	0	95.9	71 - 136			
Surr: 4-Bromofluorobenzene	48.4	5.0	50	0	96.8	79 - 119			
Surr: Dibromofluoromethane	47.48	5.0	50	0	95.0	78 - 119			

LCS	Sample ID: VLCSS1-060320	Units: ug/Kg		Analysis Date: 03-Jun-2020 08:06					
Client ID:	Run ID: VOA5_362656	SeqNo: 5606652		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.91	5.0	50	0	91.8	77 - 121			
Ethylbenzene	45.93	5.0	50	0	91.9	76 - 122			
Toluene	44.97	5.0	50	0	89.9	77 - 121			
Xylenes, Total	137.6	5.0	150	0	91.8	77 - 124			
Surr: Toluene-d8	49.77	5.0	50	0	99.5	85 - 116			
Surr: 1,2-Dichloroethane-d4	49.47	5.0	50	0	98.9	71 - 136			
Surr: 4-Bromofluorobenzene	49.45	5.0	50	0	98.9	79 - 119			
Surr: Dibromofluoromethane	50.06	5.0	50	0	100	78 - 119			

MS	Sample ID: HS20060091-05MS	Units: ug/Kg		Analysis Date: 03-Jun-2020 12:41					
Client ID:	Run ID: VOA5_362656	SeqNo: 5606655		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.72	4.8	48.5	0	90.2	77 - 121			
Ethylbenzene	43.59	4.8	48.5	0	89.9	76 - 122			
Toluene	43.18	4.8	48.5	0	89.0	77 - 121			
Xylenes, Total	131	4.8	145.5	0	90.0	77 - 124			
Surr: Toluene-d8	47.18	4.8	48.5	0	97.3	85 - 116			
Surr: 1,2-Dichloroethane-d4	48.99	4.8	48.5	0	101	71 - 136			
Surr: 4-Bromofluorobenzene	48.02	4.8	48.5	0	99.0	79 - 119			
Surr: Dibromofluoromethane	48.87	4.8	48.5	0	101	78 - 119			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362656 (0)		Instrument: VOA5		Method: VOLATILES ORGANICS BY SW8260C					
MSD		Sample ID: HS20060091-05MSD		Units: ug/Kg		Analysis Date: 03-Jun-2020 13:06			
Client ID:		Run ID: VOA5_362656		SeqNo: 5606656		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.02	4.8	48.5	0	92.8	77 - 121	43.72	2.92	20
Ethylbenzene	44.92	4.8	48.5	0	92.6	76 - 122	43.59	3.01	20
Toluene	44.39	4.8	48.5	0	91.5	77 - 121	43.18	2.75	20
Xylenes, Total	135.8	4.8	145.5	0	93.3	77 - 124	131	3.57	20
Surr: Toluene-d8	47.87	4.8	48.5	0	98.7	85 - 116	47.18	1.45	20
Surr: 1,2-Dichloroethane-d4	46.73	4.8	48.5	0	96.4	71 - 136	48.99	4.71	20
Surr: 4-Bromofluorobenzene	48.08	4.8	48.5	0	99.1	79 - 119	48.02	0.119	20
Surr: Dibromofluoromethane	48.39	4.8	48.5	0	99.8	78 - 119	48.87	0.973	20

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362682 (0)		Instrument: VOA6		Method: VOLATILES ORGANICS BY METHOD 8260C					
MBLK	Sample ID: VBLKW-200604	Units: UG/L		Analysis Date: 04-Jun-2020 12:49					
Client ID:	Run ID: VOA6_362682	SeqNo: 5607021		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1-Dichloroethene	0.50	1.0							U
1,2-Dichloroethane	0.50	1.0							U
1,4-Dichlorobenzene	1.0	1.0							U
2-Butanone	1.0	2.0							U
Benzene	0.50	1.0							U
Carbon tetrachloride	1.0	1.0							U
Chlorobenzene	1.0	1.0							U
Chloroform	0.50	1.0							U
Ethylbenzene	1.0	1.0							U
Tetrachloroethene	1.0	1.0							U
Toluene	0.50	1.0							U
Trichloroethene	0.50	1.0							U
Vinyl chloride	0.50	1.0							U
Xylenes, Total	1.0	1.0							U
Surr: 1,2-Dichloroethane-d4	43.07	1.0	50	0	86.1	81 - 118			
Surr: 4-Bromofluorobenzene	50.87	1.0	50	0	102	85 - 114			
Surr: Dibromofluoromethane	44.48	1.0	50	0	89.0	80 - 119			
Surr: Toluene-d8	54.51	1.0	50	0	109	89 - 112			

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362682 (0)		Instrument: VOA6		Method: VOLATILES ORGANICS BY METHOD 8260C						
LCS	Sample ID: VLCSW-200604	Units: UG/L			Analysis Date: 04-Jun-2020 12:01					
Client ID:	Run ID: VOA6_362682	SeqNo: 5607020		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,1-Dichloroethene	20.52	1.0	20	0	103	71 - 131				
1,2-Dichloroethane	20.71	1.0	20	0	104	73 - 128				
1,4-Dichlorobenzene	19.08	1.0	20	0	95.4	79 - 118				
2-Butanone	39.37	2.0	40	0	98.4	56 - 143				
Benzene	20.08	1.0	20	0	100	79 - 120				
Carbon tetrachloride	18.15	1.0	20	0	90.8	72 - 136				
Chlorobenzene	19.41	1.0	20	0	97.0	82 - 118				
Chloroform	21.06	1.0	20	0	105	79 - 124				
Ethylbenzene	19.33	1.0	20	0	96.6	79 - 121				
Tetrachloroethene	18.91	1.0	20	0	94.5	74 - 129				
Toluene	19.81	1.0	20	0	99.1	80 - 121				
Trichloroethene	20.1	1.0	20	0	100	79 - 123				
Vinyl chloride	18.98	1.0	20	0	94.9	58 - 137				
Xylenes, Total	57.73	1.0	60	0	96.2	78 - 122				
Surr: 1,2-Dichloroethane-d4	53.79	1.0	50	0	108	81 - 118				
Surr: 4-Bromofluorobenzene	50.88	1.0	50	0	102	85 - 114				
Surr: Dibromofluoromethane	53.08	1.0	50	0	106	80 - 119				
Surr: Toluene-d8	48.04	1.0	50	0	96.1	89 - 112				

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362682 (0)		Instrument: VOA6		Method: VOLATILES ORGANICS BY METHOD 8260C						
MS	Sample ID: HS20060160-01MS	Units: UG/L			Analysis Date: 04-Jun-2020 18:02					
Client ID:	Run ID: VOA6_362682	SeqNo: 5607715		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,1-Dichloroethene	18.92	1.0	20	0	94.6	71 - 131				
1,2-Dichloroethane	20.15	1.0	20	0	101	73 - 128				
1,4-Dichlorobenzene	21.33	1.0	20	0	107	79 - 118				
2-Butanone	33.78	2.0	40	0	84.5	56 - 143				
Benzene	23.53	1.0	20	2.984	103	79 - 120				
Carbon tetrachloride	20.43	1.0	20	0	102	72 - 136				
Chlorobenzene	21.26	1.0	20	0	106	82 - 118				
Chloroform	18.4	1.0	20	0	92.0	79 - 124				
Ethylbenzene	22.37	1.0	20	0	112	79 - 121				
Tetrachloroethene	24.21	1.0	20	1.024	116	74 - 129				
Toluene	22.49	1.0	20	0.5141	110	80 - 121				
Trichloroethene	21.57	1.0	20	0	108	79 - 123				
Vinyl chloride	16.5	1.0	20	0	82.5	58 - 137				
Xylenes, Total	69.05	1.0	60	3.072	110	78 - 122				
Surr: 1,2-Dichloroethane-d4	43.21	1.0	50	0	86.4	81 - 118				
Surr: 4-Bromofluorobenzene	50.46	1.0	50	0	101	85 - 114				
Surr: Dibromofluoromethane	45.42	1.0	50	0	90.8	80 - 119				
Surr: Toluene-d8	53.37	1.0	50	0	107	89 - 112				

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362682 (0)		Instrument: VOA6		Method: VOLATILES ORGANICS BY METHOD 8260C					
MSD		Sample ID: HS20060160-01MSD		Units: UG/L		Analysis Date: 04-Jun-2020 18:26			
Client ID:		Run ID: VOA6_362682		SeqNo: 5607716		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1-Dichloroethene	18.18	1.0	20	0	90.9	71 - 131	18.92	3.95	20
1,2-Dichloroethane	19.35	1.0	20	0	96.7	73 - 128	20.15	4.04	20
1,4-Dichlorobenzene	20.18	1.0	20	0	101	79 - 118	21.33	5.54	20
2-Butanone	34.19	2.0	40	0	85.5	56 - 143	33.78	1.21	20
Benzene	22.32	1.0	20	2.984	96.7	79 - 120	23.53	5.25	20
Carbon tetrachloride	19.74	1.0	20	0	98.7	72 - 136	20.43	3.4	20
Chlorobenzene	20.13	1.0	20	0	101	82 - 118	21.26	5.49	20
Chloroform	17.62	1.0	20	0	88.1	79 - 124	18.4	4.38	20
Ethylbenzene	20.88	1.0	20	0	104	79 - 121	22.37	6.9	20
Tetrachloroethene	22.63	1.0	20	1.024	108	74 - 129	24.21	6.74	20
Toluene	21.03	1.0	20	0.5141	103	80 - 121	22.49	6.69	20
Trichloroethene	20.2	1.0	20	0	101	79 - 123	21.57	6.55	20
Vinyl chloride	15.89	1.0	20	0	79.4	58 - 137	16.5	3.81	20
Xylenes, Total	64.91	1.0	60	3.072	103	78 - 122	69.05	6.18	20
Surr: 1,2-Dichloroethane-d4	43.29	1.0	50	0	86.6	81 - 118	43.21	0.189	20
Surr: 4-Bromofluorobenzene	50.89	1.0	50	0	102	85 - 114	50.46	0.85	20
Surr: Dibromofluoromethane	45.13	1.0	50	0	90.3	80 - 119	45.42	0.653	20
Surr: Toluene-d8	51.98	1.0	50	0	104	89 - 112	53.37	2.63	20

The following samples were analyzed in this batch: HS20060102-02

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.

Project: KAFB ROS

WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362620 (0)

Instrument: Balance1

Method: PH SOIL BY SW9045D

DUP	Sample ID:	HS20060097-01DUP			Units:	pH Units		Analysis Date:	03-Jun-2020 16:13	
Client ID:		Run ID:	Balance1_362620		SeqNo:	5605796		PrepDate:	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

pH	5.92	0.100					5.98	1.01	10
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Temp Deg C @pH	23.2	0					23.2	0	10
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The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362739 (0)		Instrument: WetChem_HS		Method: REACTIVE SULFIDE					
MBLK	Sample ID: MBLK-R362739	Units: mg/Kg		Analysis Date: 05-Jun-2020 15:00					
Client ID:	Run ID: WetChem_HS_362739	SeqNo: 5608395		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	0	100							U
LCS	Sample ID: LCS-R362739	Units: mg/Kg		Analysis Date: 05-Jun-2020 15:00					
Client ID:	Run ID: WetChem_HS_362739	SeqNo: 5608394		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	80	100	100	0	80.0	20 - 120			J
MS	Sample ID: HS20060102-01MS	Units: mg/Kg		Analysis Date: 05-Jun-2020 15:00					
Client ID: KAFB7-Sediment-060120	Run ID: WetChem_HS_362739	SeqNo: 5608396		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	72	100	100	0	72.0	20 - 120			J
The following samples were analyzed in this batch: HS20060102-01									

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362743 (0)		Instrument: UV-2450		Method: REACTIVE CYANIDE					
MBLK	Sample ID: MBLK-R362743	Units: mg/Kg		Analysis Date: 05-Jun-2020 16:00					
Client ID:	Run ID: UV-2450_362743	SeqNo: 5608434		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Reactive Cyanide	0	100							U
LCS	Sample ID: LCS-R362743	Units: mg/Kg		Analysis Date: 05-Jun-2020 16:00					
Client ID:	Run ID: UV-2450_362743	SeqNo: 5608433		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Reactive Cyanide	0.56	100	10	0	5.60	5 - 100			J
MS	Sample ID: HS20060102-01MS	Units: mg/Kg		Analysis Date: 05-Jun-2020 16:00					
Client ID: KAFB7-Sediment-060120	Run ID: UV-2450_362743	SeqNo: 5608435		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Reactive Cyanide	0.56	100	10	0.01	5.50	5 - 100			J
The following samples were analyzed in this batch: HS20060102-01									

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.

Project: KAFB ROS

WorkOrder: HS20060102

QC BATCH REPORT

Batch ID: R362773 (0)		Instrument: WetChem_HS		Method: FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B					
DUP	Sample ID: HS20060226-11DUP	Units: °F		Analysis Date: 08-Jun-2020 07:30					
Client ID:	Run ID: WetChem_HS_362773		SeqNo: 5609095		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Flash Point	> 212	50.0					0	0	30

The following samples were analyzed in this batch: HS20060102-01

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060102

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US

Date: 12-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060102

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20060102-01	KAFB7-Sediment-060120	Login	6/2/2020 10:42:40 PM	LFH	VOA004
HS20060102-01	KAFB7-Sediment-060120	Login	6/2/2020 10:42:40 PM	LFH	SPA298
HS20060102-01	KAFB7-Sediment-060120	Login	6/2/2020 10:42:40 PM	LFH	SPA298
HS20060102-01	KAFB7-Sediment-060120	Login	6/2/2020 10:42:40 PM	LFH	SPA298
HS20060102-02	TB-060120	Login	6/2/2020 10:47:02 PM	LFH	VOA010

ALS Houston, US

Date: 12-Jun-20

Sample Receipt Checklist

Work Order ID: HS20060102

Date/Time Received: 02-Jun-2020 09:00

Client Name: CBI-Houston

Received by: Paresh M. GigaCompleted By: /S/ Niles D. Ranchod

02-Jun-2020 22:48

Reviewed by: /S/ RJ Modashia

03-Jun-2020 10:35

eSignature

Date/Time

eSignature

Date/Time

Matrices:

Water/Soil

Carrier name:

FedEx Priority Overnight

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒No ☐Not Present ☐

Custody seals intact on sample bottles?

Yes ☐No ☐Not Present ☒

VOA/TX1005/TX1006 Solids in hermetically sealed vials?

Yes ☐No ☒Not Present ☐

Chain of custody present?

Yes ☒No ☐

1 Page(s)

Chain of custody signed when relinquished and received?

Yes ☒No ☐

COC IDs:501397-IDW-001

Samplers name present on COC?

Yes ☐No ☒

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Container/Temp Blank temperature in compliance?

Yes ☒No ☐

Temperature(s)/Thermometer(s):

3.4C UC/C

IR # 25

Cooler(s)/Kit(s):

45691

Date/Time sample(s) sent to storage:

06/02/2020 11:00PM

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐No ☐N/A ☒

pH adjusted?

Yes ☐No ☐N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

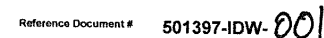
Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



GW Sampling - ALS Houston

Project Manager: Kathleen Romalia

Send Report To: Susan Huang

Phone Number: 925-288-2099

Address: 4005 Port Chicago Hwy

City: Concord, CA 94520

susan.huang@aptim.com

Project Name / Location: KAFB ROS

Purchase Order #: 207025

Shipment Date: 6/1/20

FedEx UPS Number: 189188771240

Lab Destination: ALS Environmental

Mon-Fri DELIVERY

10450 Stancilff Road, Suite 210

Houston, TX 77099

Lab Contact Name: RJ Modashia

Phone #: 281-530-5656

Requested Analyses

BTEX (8260B)

TCLP VOCs (1311 8260B)

TCLP SVOCs (1311 8270D)

TCLP Metals (1311 6010C/7470A)

TCLP Herbicides (1311 8151A)

TCLP Pesticides (1311 8081B)

RCL (Chapter 7, 7.3.4.2)

TPH-DRO/GRO (8015B)

Sampler's Name(s): C. LaChance

Sample ID Number	Location	Date	Time	Method	Matrix	# of Containers	Preservative	Container	Ice							
									4 x 6 oz Jar							
KAFB7-Sediment-060120	KAFB-7	6/1/20	1235	G	SO	4	--		X	X	X	X	X	X	X	
TB-060120	Trp Blank	6/1/20	1300	--	--	2	--		X							
CS 6/1/20																

Turnaround Time: Standard 21 Day

☐ 24-hr

☐ 48-hr

Level Of GC Required: II III IV

All Methods

☐ 3-day

Project Specific unless IV requested

Relinquished By: [Signature]

Date: 6/1/20

Time: 14:00

Received By: [Signature]

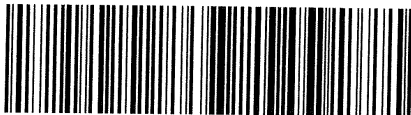
Date: 6/2/2020

Time: 09:00

45691 VIC-
3.40.
f25
C11-0.0

 ALS 10450 Stancil Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	STUDY SEAL Date: 6/1/20 Time: 1400 Name: COL Company:		Seal Broken By: SM Date: 06/02/20
	45691		
	45691		
	02 2020		

TRK# 1891 8877 1240 TUE - 02 JUN 10:30A
 0221 PRIORITY OVERNIGHT
XH SGRA **45691** 77099
 TX-US
 IAH



3910965 02Jun 02:35 MEMH 547C1/F330/A17C



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

June 23, 2020

Susan Huang
Aptim Environmental & Infrastructure, Inc.
2500 City West Blvd., Suite 1700
Houston, TX 77042

Work Order: **HS20060397**

Laboratory Results for: **KAFB ROS**

Dear Susan Huang,

ALS Environmental received 2 sample(s) on Jun 09, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

RJ Modashia
Project Manager

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060397

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20060397-01	KAFB7-WW01-060820	Wastewater		08-Jun-2020 14:55	09-Jun-2020 10:00	☐
HS20060397-02	TB-060820	Water	CG 042320 -77	08-Jun-2020 00:00	09-Jun-2020 10:00	☒

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
Work Order: HS20060397

CASE NARRATIVE

Work Order Comments

- Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.
- The analyses for Bromate and Chlorite 300.1 were subcontracted to ALS Environmental in Middletown, PA. Final report attached

Metals by Method SW6020**Batch ID: 154643****Sample ID: HS20060498-08MS**

- MS and MSD are for an unrelated sample

Sample ID: HS20060498-08PDS

- PDS is for an unrelated sample

Metals by Method SW7470**Batch ID: 154514**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C**Batch ID: R363249**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500H+ B**Batch ID: R363161**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9056**Batch ID: R363038**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E180.1**Batch ID: R363019**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500CL F**Batch ID: R363011**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
 Project: KAFB ROS
 Sample ID: KAFB7-WW01-060820
 Collection Date: 08-Jun-2020 14:55

ANALYTICAL REPORT
 WorkOrder:HS20060397
 Lab ID:HS20060397-01
 Matrix:Wastewater

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		Method:SW6020				Prep:SW3010A / 19-Jun-2020		Analyst: JHD
Arsenic	0.000618	J	0.000400	0.000500	0.00500	mg/L	1	23-Jun-2020 13:32
Barium	0.111		0.00190	0.00250	0.00500	mg/L	1	23-Jun-2020 13:32
Cadmium	0.000500	U	0.000200	0.000500	0.00200	mg/L	1	23-Jun-2020 13:32
Chromium	0.00907		0.000400	0.000500	0.00500	mg/L	1	23-Jun-2020 13:32
Iron	1.62		0.0120	0.0500	0.200	mg/L	1	23-Jun-2020 13:32
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	23-Jun-2020 13:32
Selenium	0.00213	J	0.00110	0.00250	0.00500	mg/L	1	23-Jun-2020 13:32
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	23-Jun-2020 13:32
Sodium	41.0		0.0140	0.0500	0.200	mg/L	1	23-Jun-2020 13:32
MERCURY BY SW7470A		Method:SW7470				Prep:SW7470 / 16-Jun-2020		Analyst: FO
Mercury	0.0530	J	0.0300	0.100	0.200	ug/L	1	16-Jun-2020 17:16
TURBIDITY BY E180.1		Method:E180.1						
Turbidity	16.5		1.00	1.00	1.00	NTU	1	09-Jun-2020 15:50
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C						
Total Dissolved Solids (Residue, Filterable)	356		5.00	5.00	10.0	mg/L	1	12-Jun-2020 14:30
RESIDUAL CHLORINE BY SM4500CL F		Method:SM4500CL F						
Chlorine	0.10	HaU	0.10	0.10	0.10	mg/L	1	10-Jun-2020 17:30
PH BY SM4500H+ B		Method:SM4500H+ B						
pH	7.01	Ha	0.100	0.100	0.100	pH Units	1	12-Jun-2020 15:01
Temp Deg C @pH	21.7	Ha	0	0	0	°C	1	12-Jun-2020 15:01
ANIONS BY SW9056A		Method:SW9056						
Chloride	67.0		0.200	0.500	0.500	mg/L	1	10-Jun-2020 08:00
Nitrogen, Nitrate (As N)	0.835		0.0300	0.100	0.100	mg/L	1	10-Jun-2020 08:00
Nitrogen, Nitrite (As N)	0.100	U	0.0300	0.100	0.100	mg/L	1	10-Jun-2020 08:00
Sulfate	73.9		0.200	0.500	0.500	mg/L	1	10-Jun-2020 08:00
SUBCONTRACT ANALYSIS - ANIONS		Method:NA						
Subcontract Analysis	See Attached		0	0		NA	1	23-Jun-2020 15:32
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		Method:NA						
Subcontract Analysis	See Attached		0	0		NA	1	23-Jun-2020 15:02
SUBCONTRACTED ANALYSIS		Method:NA						
Miscellaneous Analysis	See Attached		0	0		NA	1	23-Jun-2020 15:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US

Date: 23-Jun-20

Weight / Prep Log**Client:** Aptim Environmental & Infrastructure, Inc.**Project:** KAFB ROS**WorkOrder:** HS20060397

Batch ID: 154514	Start Date: 16 Jun 2020 11:00	End Date: 16 Jun 2020 13:00
Method: MERCURY PREP BY 7470A- WATER	Prep Code: HG_WPR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060397-01		10 (mL)	10 (mL)	1

Batch ID: 154643	Start Date: 19 Jun 2020 10:00	End Date: 19 Jun 2020 14:00
Method: WATER - SW3010A	Prep Code: 3010A	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060397-01		10 (mL)	10 (mL)	1

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154514 (0)		Test Name : MERCURY BY SW7470A			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55		16 Jun 2020 11:00	16 Jun 2020 17:16	1
Batch ID: 154643 (0)		Test Name : METALS BY ICPMS BY SW6020A			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55		19 Jun 2020 14:00	23 Jun 2020 13:32	1
Batch ID: R363011 (0)		Test Name : RESIDUAL CHLORINE BY SM4500CL F			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			10 Jun 2020 17:30	1
Batch ID: R363019 (0)		Test Name : TURBIDITY BY E180.1			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			09 Jun 2020 15:50	1
Batch ID: R363038 (0)		Test Name : ANIONS BY SW9056A			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			10 Jun 2020 08:00	1
Batch ID: R363161 (0)		Test Name : PH BY SM4500H+ B			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			12 Jun 2020 15:01	1
Batch ID: R363249 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			12 Jun 2020 14:30	1
Batch ID: R363767 (0)		Test Name : SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			23 Jun 2020 15:02	1
Batch ID: R363773 (0)		Test Name : SUBCONTRACTED ANALYSIS			Matrix: Wastewater	
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			23 Jun 2020 15:32	1
HS20060397-01	KAFB7-WW01-060820	08 Jun 2020 14:55			23 Jun 2020 15:32	1

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: 154514 (0)		Instrument: HG03		Method: MERCURY BY SW7470A					
MBLK	Sample ID: MBLK-154514	Units: ug/L		Analysis Date: 16-Jun-2020 16:30					
Client ID:	Run ID: HG03_363352		SeqNo: 5621648		PrepDate: 16-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	0.100	0.200							U
LCS	Sample ID: LCS-154514	Units: ug/L		Analysis Date: 16-Jun-2020 16:31					
Client ID:	Run ID: HG03_363352		SeqNo: 5621649		PrepDate: 16-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	5.06	0.200	5	0	101	82 - 119			
MS	Sample ID: HS20060202-01MS	Units: ug/L		Analysis Date: 16-Jun-2020 16:35					
Client ID:	Run ID: HG03_363352		SeqNo: 5621651		PrepDate: 16-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	5.08	0.200	5	0.02	101	82 - 119			
MSD	Sample ID: HS20060202-01MSD	Units: ug/L		Analysis Date: 16-Jun-2020 16:37					
Client ID:	Run ID: HG03_363352		SeqNo: 5621652		PrepDate: 16-Jun-2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	5.08	0.200	5	0.02	101	82 - 119	5.08	0	20
The following samples were analyzed in this batch: HS20060397-01									

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: 154643 (0)		Instrument: ICPMS05		Method: METALS BY ICPMS BY SW6020A					
MBLK	Sample ID: MBLK-154643	Units: mg/L		Analysis Date: 23-Jun-2020 13:17					
Client ID:	Run ID: ICPMS05_363745	SeqNo: 5631768		PrepDate: 19-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.000500	0.00500							U
Barium	0.00250	0.00500							U
Cadmium	0.000500	0.00200							U
Chromium	0.000500	0.00500							U
Iron	0.0500	0.200							U
Lead	0.00100	0.00500							U
Selenium	0.00250	0.00500							U
Silver	0.000500	0.00500							U
Sodium	0.01444	0.200							J

LCS	Sample ID: LCS-154643	Units: mg/L		Analysis Date: 23-Jun-2020 13:11					
Client ID:	Run ID: ICPMS05_363745	SeqNo: 5631766		PrepDate: 19-Jun-2020		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.04981	0.00500	0.05	0	99.6	84 - 116			
Barium	0.04994	0.00500	0.05	0	99.9	86 - 114			
Cadmium	0.05017	0.00200	0.05	0	100	87 - 115			
Chromium	0.04826	0.00500	0.05	0	96.5	85 - 116			
Iron	4.755	0.200	5	0	95.1	87 - 118			
Lead	0.04742	0.00500	0.05	0	94.8	88 - 115			
Selenium	0.05066	0.00500	0.05	0	101	80 - 120			
Silver	0.05015	0.00500	0.05	0	100	85 - 116			
Sodium	4.799	0.200	5	0	96.0	85 - 117			

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: 154643 (0)		Instrument: ICPMS05		Method: METALS BY ICPMS BY SW6020A					
MS		Sample ID: HS20060498-08MS		Units: mg/L		Analysis Date: 23-Jun-2020 13:25			
Client ID:		Run ID: ICPMS05_363745		SeqNo: 5631771		PrepDate: 19-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.04858	0.00500	0.05	0.001705	93.7	84 - 116			
Barium	1.182	0.00500	0.05	1.246	-128	86 - 114			SO
Cadmium	0.04562	0.00200	0.05	0.000129	91.0	87 - 115			
Chromium	0.04607	0.00500	0.05	0.000391	91.4	85 - 116			
Iron	68.61	0.200	5	68.38	4.67	87 - 118			SO
Lead	0.04545	0.00500	0.05	0.000052	90.8	88 - 115			
Selenium	0.04772	0.00500	0.05	-0.00002	95.5	80 - 120			
Silver	0.04538	0.00500	0.05	0.000008	90.7	85 - 116			
Sodium	142.4	0.200	5	143.5	-22.6	85 - 117			SO

MSD		Sample ID: HS20060498-08MSD		Units: mg/L		Analysis Date: 23-Jun-2020 13:27			
Client ID:		Run ID: ICPMS05_363745		SeqNo: 5631772		PrepDate: 19-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.05012	0.00500	0.05	0.001705	96.8	84 - 116	0.04858	3.13	20
Barium	1.21	0.00500	0.05	1.246	-70.5	86 - 114	1.182	2.4	20 SO
Cadmium	0.04831	0.00200	0.05	0.000129	96.4	87 - 115	0.04562	5.74	20
Chromium	0.04751	0.00500	0.05	0.000391	94.2	85 - 116	0.04607	3.09	20
Iron	70.93	0.200	5	68.38	51.1	87 - 118	68.61	3.33	20 SO
Lead	0.04948	0.00500	0.05	0.000052	98.8	88 - 115	0.04545	8.48	20
Selenium	0.0485	0.00500	0.05	-0.00002	97.0	80 - 120	0.04772	1.6	20
Silver	0.04658	0.00500	0.05	0.000008	93.1	85 - 116	0.04538	2.61	20
Sodium	146.4	0.200	5	143.5	57.2	85 - 117	142.4	2.76	20 SO

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: 154643 (0)		Instrument: ICPMS05		Method: METALS BY ICPMS BY SW6020A					
PDS		Sample ID: HS20060498-08PDS		Units: mg/L		Analysis Date: 23-Jun-2020 13:30			
Client ID:		Run ID: ICPMS05_363745		SeqNo: 5631773		PrepDate: 19-Jun-2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.113	0.00500	0.1	0.001705	111	80 - 120			
Barium	1.204	0.00500	0.1	1.246	-41.6	80 - 120			SO
Cadmium	0.106	0.00200	0.1	0.000129	106	80 - 120			
Chromium	0.1086	0.00500	0.1	0.000391	108	80 - 120			
Iron	73.82	0.200	10	68.38	54.4	80 - 120			SO
Lead	0.1057	0.00500	0.1	0.000052	106	80 - 120			
Selenium	0.1125	0.00500	0.1	-0.00002	113	80 - 120			
Silver	0.1003	0.00500	0.1	0.000008	100	80 - 120			
Sodium	144.2	0.200	10	143.5	7.08	80 - 120			SO
SD		Sample ID: HS20060498-08SD		Units: mg/L		Analysis Date: 23-Jun-2020 13:22			
Client ID:		Run ID: ICPMS05_363745		SeqNo: 5631770		PrepDate: 19-Jun-2020		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Arsenic	0.00250	0.0250		0.001705			0.001705	0 10	U
Barium	1.206	0.0250		1.246			1.246	3.18 10	
Cadmium	0.00250	0.0100		0.000129			0.000129	0 10	U
Chromium	0.00250	0.0250		0.000391			0.000391	0 10	U
Iron	70.45	1.00		68.38			68.38	3.04 10	
Lead	0.00500	0.0250		0.000052			0.000052	0 10	U
Selenium	0.0125	0.0250		-0.00002			-0.00002	0 10	U
Silver	0.00250	0.0250		0.000008			0.000008	0 10	U
Sodium	146.1	1.00		143.5			143.5	1.83 10	

The following samples were analyzed in this batch: HS20060397-01

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: R363011 (0)		Instrument: WetChem_HS		Method: RESIDUAL CHLORINE BY SM4500CL F					
MBLK	Sample ID: MBLK-R363011	Units: mg/L		Analysis Date: 10-Jun-2020 17:30					
Client ID:	Run ID: WetChem_HS_363011		SeqNo: 5614012		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chlorine	0.10	0.10							U
LCS	Sample ID: LCS-R363011	Units: mg/L		Analysis Date: 10-Jun-2020 17:30					
Client ID:	Run ID: WetChem_HS_363011		SeqNo: 5614011		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chlorine	2.9	0.10	3.095	0	93.7	85 - 115			
LCSD	Sample ID: LCSD-R363011	Units: mg/L		Analysis Date: 10-Jun-2020 17:30					
Client ID:	Run ID: WetChem_HS_363011		SeqNo: 5614010		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chlorine	3	0.10	3.095	0	96.9	85 - 115	2.9	3.39	20
MS	Sample ID: HS20060397-01MS	Units: mg/L		Analysis Date: 10-Jun-2020 17:30					
Client ID: KAFB7-WW01-060820	Run ID: WetChem_HS_363011		SeqNo: 5614013		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chlorine	2.8	0.10	3.095	0	90.5	80 - 120			
The following samples were analyzed in this batch: HS20060397-01									

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: R363019 (0)		Instrument: WetChem_HS		Method: TURBIDITY BY E180.1					
MBLK	Sample ID: MBLK-R363019	Units: NTU		Analysis Date: 09-Jun-2020 15:50					
Client ID:	Run ID: WetChem_HS_363019		SeqNo: 5614530		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Turbidity	1.00	1.00							U
LCS	Sample ID: LCS-R363019	Units: NTU		Analysis Date: 09-Jun-2020 15:50					
Client ID:	Run ID: WetChem_HS_363019		SeqNo: 5614529		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Turbidity	10.6	1.00	10	0	106	90 - 110			
DUP	Sample ID: HS20060397-01DUP	Units: NTU		Analysis Date: 09-Jun-2020 15:50					
Client ID: KAFB7-WW01-060820	Run ID: WetChem_HS_363019		SeqNo: 5614531		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Turbidity	16.4	1.00					16.5	0.608	20
The following samples were analyzed in this batch: HS20060397-01									

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: R363038 (0)		Instrument: ICS-Integrion		Method: ANIONS BY SW9056A					
MBLK	Sample ID: WBLKW1-060920	Units: mg/L		Analysis Date: 10-Jun-2020 08:55					
Client ID:	Run ID: ICS-Integrion_363038	SeqNo: 5614887		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	0.500	0.500							U
Nitrogen, Nitrate (As N)	0.100	0.100							U
Nitrogen, Nitrite (As N)	0.100	0.100							U
Sulfate	0.2245	0.500							J

LCS	Sample ID: WLCSW1-060920	Units: mg/L		Analysis Date: 10-Jun-2020 11:02					
Client ID:	Run ID: ICS-Integrion_363038	SeqNo: 5614890		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	19.87	0.500	20	0	99.3	80 - 120			
Nitrogen, Nitrate (As N)	3.892	0.100	4	0	97.3	80 - 120			
Nitrogen, Nitrite (As N)	4.337	0.100	4	0	108	80 - 120			
Sulfate	19.57	0.500	20	0	97.8	80 - 120			

MS	Sample ID: HS20060078-10MS	Units: mg/L		Analysis Date: 10-Jun-2020 04:23					
Client ID:	Run ID: ICS-Integrion_363038	SeqNo: 5614874		PrepDate:		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	167.7	5.00	100	67.83	99.9	80 - 120			
Nitrogen, Nitrate (As N)	21.37	1.00	20	1.737	98.1	80 - 120			
Nitrogen, Nitrite (As N)	22.88	1.00	20	0	114	80 - 120			
Sulfate	293.1	5.00	100	195	98.1	80 - 120			

MSD	Sample ID: HS20060078-10MSD	Units: mg/L		Analysis Date: 10-Jun-2020 04:41					
Client ID:	Run ID: ICS-Integrion_363038	SeqNo: 5614875		PrepDate:		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	167.8	5.00	100	67.83	99.9	80 - 120	167.7	0.0358	20
Nitrogen, Nitrate (As N)	21.36	1.00	20	1.737	98.1	80 - 120	21.37	0.0468	20
Nitrogen, Nitrite (As N)	22.82	1.00	20	0	114	80 - 120	22.88	0.263	20
Sulfate	292.8	5.00	100	195	97.8	80 - 120	293.1	0.0925	20

The following samples were analyzed in this batch: HS20060397-01

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.

Project: KAFB ROS

WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: R363161 (0)

Instrument: WetChem_HS

Method: PH BY SM4500H+ B

DUP	Sample ID: HS20060404-01DUP	Units: pH Units			Analysis Date: 12-Jun-2020 15:01				
Client ID:	Run ID: WetChem_HS_363161	SeqNo: 5617454			PrepDate:			DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

pH	7.93	0.100					7.83	1.27	10
----	------	-------	--	--	--	--	------	------	----

Temp Deg C @pH	21.1	0					21.2	0.473	10
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The following samples were analyzed in this batch: HS20060397-01

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

QC BATCH REPORT

Batch ID: R363249 (0)		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C					
MBLK	Sample ID: WBLK-061220	Units: mg/L		Analysis Date: 12-Jun-2020 14:30					
Client ID:	Run ID: Balance1_363249	SeqNo: 5619213		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)		5.00	10.0	U					
LCS	Sample ID: WLCS-061220	Units: mg/L		Analysis Date: 12-Jun-2020 14:30					
Client ID:	Run ID: Balance1_363249	SeqNo: 5619214		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)		996	10.0	1000	0	99.6	85 - 115		
DUP	Sample ID: HS20060637-01DUP	Units: mg/L		Analysis Date: 12-Jun-2020 14:30					
Client ID:	Run ID: Balance1_363249	SeqNo: 5621015		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)		30800	10.0			30880	0.259	5	
DUP	Sample ID: HS20060625-04DUP	Units: mg/L		Analysis Date: 12-Jun-2020 14:30					
Client ID:	Run ID: Balance1_363249	SeqNo: 5619212		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)		2672	10.0			2676	0.15	5	
The following samples were analyzed in this batch:		HS20060397-01							

ALS Houston, US

Date: 23-Jun-20

Client: Aptim Environmental & Infrastructure, Inc.
Project: KAFB ROS
WorkOrder: HS20060397

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US

Date: 23-Jun-20

Sample Receipt Checklist

Work Order ID: HS20060397

Date/Time Received: 09-Jun-2020 10:00

Client Name: CBI-Houston

Received by: Nilesh D. RanchodCompleted By: /S/ Jared R. Makan

09-Jun-2020 13:16

Reviewed by:

eSignature

Date/Time

eSignature

Date/Time

Matrices: WaterCarrier name: FedEx Priority Overnight

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒No ☐Not Present ☐

Custody seals intact on sample bottles?

Yes ☐No ☐Not Present ☒

VOA/TX1005/TX1006 Solids in hermetically sealed vials?

Yes ☐No ☐Not Present ☒

Chain of custody present?

Yes ☒No ☐

1 Page(s)

Chain of custody signed when relinquished and received?

Yes ☒No ☐

Samplers name present on COC?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Container/Temp Blank temperature in compliance?

Yes ☒No ☐

Temperature(s)/Thermometer(s):

5.8°C/5.8°C UC/C

IR25

Cooler(s)/Kit(s):

46076

Date/Time sample(s) sent to storage:

06/09/2020 13:17

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☒N/A ☐

pH adjusted by:

Login Notes: Trip Blank received, placed on hold.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



CHAIN OF CUSTODY

Reference Document # 501397-IDW-002

GW Sampling - ALS Houston

Project Manager: Kathleen Romalia

Send Report To: Susan Huang

Phone Number: 925-288-2099

Address: 4005 Port Chicago Hwy

City: Concord, CA 94520

susan.huang@aptim.com

Project Number: 501397
Project Name / Location: KAFB ROS

Purchase Order #: 207025

Shipment Date: 6/8/2020

FedEx Number: 125102973031

Lab Destination: ALS Environmental
Mon-Fri DELIVERY
10450 Stancliff Road, Suite 210
Houston, TX 77099

Lab Contact Name: RJ Modashia

Phone #: 281-530-5656

Requested Analyses

Anions (Nitrate/Nitrite, Sulfate, Chloride)	Chlorine	Total Metals	pH	Turbidity	TDS
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Sampler's Name(s): C. LaChance

Sample ID Number	Location	Date	Time	Method	Matrix	# of containers	Preservative	Ice
KAFB7-WW01-060820							Container	4 x 8 oz Jar
KAFB7-WW01-060820 a 4/8/20	KAFB-7	6/8/20	1455	G	WW	3	---	X X X X X X
TB-060820	Trip Blank	6/8/20	1500	---	LQ	2	---	
QAL 6/8/20								

Turnaround Time: Standard 21 Day	☐ 24-hr	☐ 48-hr	Level of QC Required:	I	II	III	IV	Project Specific: unless IV requested
Relinquished By: <i>[Signature]</i>	All Methods ☐ 3-day		Date: 6/8/20	Received By: <i>[Signature]</i>		Date: 6.9.20		
Relinquished By: <i>[Signature]</i>			Time: 1530			Time: 10:00		

46076

41C 5.8

IR #25 10/0

Apim Environmental & Infrastructure, Inc.
KAFB ROS

HS20060397



 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL Date: 6/9/20 Name: COL Company: ARTI	CUSTODY SEAL Time: 1530 Seal Broken By: Jm Date: 6/9/20
	CUSTODY SEAL Date: 6/9/20 Name: COL Company: ARTI	CUSTODY SEAL Time: 1530 Seal Broken By: Jm Date: 6/9/20

FedEx TRK# 1251 0297 3631 XH SGRA  #632033 06/08 56BJ1/C7BD/FE4R	TUE - 09 JUN 10:30A PRIORITY OVERNIGHT 77099 TX - US IAH
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June 23, 2020

Service Request No:E2000511

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20060397

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory June 11, 2020
For your reference, these analyses have been assigned our service request number **E2000511**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

22 of 91

ALS Environmental

Client: ALS Houston
Project: HS20060397
Sample Matrix: W

Service Request No.: E2000511
Date Received: 06/11/20

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 06/11/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion**Precision and Accuracy:**

EQ2000238: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS/DLCS recoveries are within QC limits; MS/MSD was performed on an unrelated sample.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US
Project: HS20060397

Service Request:E2000511

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
E2000511-001	KAFB7-WW01-060820	6/8/2020	1455

Service Request Summary

Folder #: E2000511
Client Name: ALS Environmental - US
Project Name: HS20060397
Project Number:
Report To: RJ Modashia
 ALS Laboratory Group
 10450 Stancliff Road
 Houston, TX 77099-4338
 USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 06/11/20
Internal Due Date: 6/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20060397
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved

Location: EHRMS-AirArch 4

Pressure Gas:

				HOUST ON
				CIO4 DOD/6850
Lab Samp No.	Client Samp No	Matrix	Collected	
E2000511-001	KAFB7-WW01-060820	Ground Water	06/08/20 1455	IV

Service Request Summary

Folder #: E2000511
Client Name: ALS Environmental - US
Project Name: HS20060397
Project Number:
Report To: RJ Modashia
 ALS Laboratory Group
 10450 Stancliff Road
 Houston, TX 77099-4338
 USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 06/11/20
Internal Due Date: 6/23/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20060397
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-AirArch 4
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Semivola GCMS	CIO4 DOD/6850	1	Level IV due 6/30,level II 6/23

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte $> 40\%$ difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
- i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient



State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	2020	4/30/2021
Illinois Environmental Protection Agency	2000322020-4	5/9/2021
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13 (2020)	4/30/2021
Nevada Department of Conservation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Conservation	04016-2020	4/30/2021
Texas Commission on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com



10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: Dept of Defense

COC ID: 14068

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff Road Suite 210
Houston, TX 77084

Phone: +1 281 530 5656

**CUSTOMER
INFORMATION:**

Company: ALS Houston
Contact: RJ Modashia
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: RJ.Modashia@alsglobal.com
**Alternate
Contact:** Jumoke M. Lawal
Email: jumoke.lawal@alsglobal.com

**INVOICE
INFORMATION:**

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20060397
TSR: Sonia West

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. HS20060397-01	KAFB7-WW01-060820	Wastewater	08 Jun 2020 14:55
Perchlorate, filter at the lab.			19 Jun 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD III (DoD Level III)

Relinquished By:

Date/Time:

Received By:

Date/Time:

Cooler ID(s):

Temperature(s):



Cooler Receipt Form

Project Chemist

CH

Client/Project

ACH-H

Thermometer ID

5/MU4

Date/Time Received:

6/11/20

Initials:

CH

Date/Time Logged in:

6/11/20

Initials

CH1. Method of delivery: ☐ US Mail ☐ Fed Ex ☐ UPS ☐ DHL ☒ ^{ALS} Courier ☐ Client2. Samples received in: ☒ Cooler ☐ Box ☐ Envelope ☐ Other

3. Were custody seals on coolers?

☐ Yes☒ No

If yes, how many and where?

Were they intact?

☐ Yes☐ No☒ N/A

Were they signed and dated?

☐ Yes☐ No☒ N/A4. Packing Material: ☐ Inserts ☒ Baggies ☐ Bubble Wrap ☐ Gel Packs ☒ Wet Ice ☐ Sleeves ☐ Other

5. Foreign or Regulated Soil?

☐ Yes☐ No

Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		6/11/20	1000	CH	31.35	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)?

☒ Yes☐ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)?

☒ Yes☐ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)?

☒ Yes☐ No

9. Were appropriate bottles/containers and volumes received for the requested tests?

☒ Yes☐ No

10. Did sample labels and tags agree with custody documents?

☒ Yes☐ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS
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10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 360212
Team: Semivoa GCMS/GRIVERA

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/17/20 10:43

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000501-001	18CPTMW14_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
2	E2000501-002	18CPTMW24_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
3	E2000501-003	18WW25_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
4	E2000501-004	18WW10_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
5	E2000501-005	MW13_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
6	E2000501-006	CO2_060420	.01	6850/CIO4 DOD			Ground Water	10mL	
7	E2000510-001	LH18/24-SP650_060920_BIX	.01	6850/CIO4 DOD			Ground Water	10mL	
8	E2000511-001	KAFB7-WW01-060820	.01	6850/CIO4 DOD			Ground Water	10mL	
9	E2000535-001	18CPTMW035W_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
10	E2000535-002	MW21_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
11	E2000535-003	18CPTMW07_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
12	E2000538-001	MW5_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
13	E2000538-002	18CPTMW08DW_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
14	E2000538-003	18CPTMW08SW_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
15	E2000538-004	MW23_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
16	E2000538-005	CO1_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
17	E2000538-006	MW16_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
18	E2000538-007	18CPTMW18_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
19	E2000538-008	CO3_060920	.01	6850/CIO4 DOD			Ground Water	10mL	
20	EQ2000238-01	MB		6850/CIO4 DOD			Liquid	10mL	
21	EQ2000238-02	LCS		6850/CIO4 DOD			Liquid	10mL	
22	EQ2000238-03	DLCS		6850/CIO4 DOD			Liquid	10mL	
23	EQ2000238-04	CO1_060920 MS	.01	6850/CIO4 DOD			Liquid	10mL	
24	EQ2000238-05	CO1_060920 DMS	.01	6850/CIO4 DOD			Liquid	10mL	

Spiking Solutions

Name:	Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4	Inventory ID	202037	Logbook Ref:	Sodium Perchlorate	Expires On:	05/22/2021
-------	--	--------------	--------	--------------	--------------------	-------------	------------

EQ2000238-02 100.00µL EQ2000238-03 100.00µL EQ2000238-04 100.00µL EQ2000238-05 100.00µL

Name:	Perchlorate Intermediate Stock1	Inventory ID	209764	Logbook Ref:	Perchlorate Int. Stock1 51820	Expires On:	11/18/2020
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E2000501-001 1.00µL E2000501-002 1.00µL E2000501-003 1.00µL E2000501-004 1.00µL E2000501-005 1.00µL E2000501-006 1.00µL
E2000538-005 1.00µL EQ2000238-01 1.00µL EQ2000238-02 1.00µL EQ2000238-03 1.00µL EQ2000238-04 1.00µL EQ2000238-05 1.00µL

Preparation Information Benchsheet

Prep Run#: 360212
Team: Semivoa GCMS/GRIVERA

Prep Workflow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/17/20 10:43

Preparation Steps

Step: Preparation
 Started: 6/17/20 10:43
 Finished: 6/17/20 16:30
 By: GRIVERA
 Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

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Analytical Results

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Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: KAFB7-WW01-060820
Lab Code: E2000511-001

Service Request: E2000511
Date Collected: 6/ 8/20 1455
Date Received: 6/11/20
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	3.99		0.500	0.250	0.125	5	6/17/20	6/22/20 13:28	360212	684542	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Batch QC
Lab Code: E2000538-005

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	0.887		0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:58	360212	684542	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: EQ2000238-01

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:18	360212	684542	



Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water

Service Request: E2000511
Date Analyzed: 6/22/20

Lab Control Sample Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 360212

Analyte Name	Lab Control Sample EQ2000238-02			Duplicate Lab Control Sample EQ2000238-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perchlorate	0.107	0.100	107	0.114	0.100	114	84 - 119	6	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Lab Control Sample
Lab Code: EQ2000238-02

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	0.107		0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:26	360212	684542	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2000238-03

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	0.114		0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:34	360212	684542	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water

Service Request: E2000511
Date Collected: NA
Date Received: NA
Date Analyzed: 6/22/20

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name: Batch QC **Units:** µg/L
Lab Code: E2000538-005 **Basis:** NA
Analytical Method: 6850
Prep Method: Method

Analyte Name	Sample Result	Batch QCMS Matrix Spike EQ2000238-04			Batch QCDMS Duplicate Matrix Spike EQ2000238-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perchlorate	0.887	0.983	0.100	96 #	0.982	0.100	95 #	84 - 119	<1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Batch QC
Lab Code: EQ2000238-04
Run Type: Matrix Spike

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	0.983		0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:42	360212	684542	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS20060397
Sample Matrix: Ground Water
Sample Name: Batch QC
Lab Code: EQ2000238-05
Run Type: Duplicate Matrix Spike

Service Request: E2000511
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	0.982		0.100	0.0500	0.0250	1	6/17/20	6/22/20 11:50	360212	684542	



Initial Calibration

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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20200602



Injection Log
LCMS01 - Shimadzu 8050

ICAL Date: 6/2/2020

Cal. Std. xp: 11/18/2020

ICAL ID: EC2000007

1st Review: Kneir

2nd Review: Hvan

Mobile Phases

A: 0.75% Formic Acid/Water 3100807-09

B: MeOH 3100802-01

		File Name	Acquisition Method	Dilution	R	Comments
	null	20200602_001	Perchlorate6850b.lcm	1x	☒	
	null	20200602_002	Perchlorate6850b.lcm	1x	☒	
	null	20200602_003	Perchlorate6850b.lcm	1x	☒	
	null	20200602_004	Perchlorate6850b.lcm	1x	☒	
	null	20200602_005	Perchlorate6850b.lcm	1x	☒	
	IB	20200602_006	Perchlorate6850b.lcm	1x	☒	
	IB	20200602_007	Perchlorate6850b.lcm	1x	☒	
	IB	20200602_008	Perchlorate6850b.lcm	1x	☒	
	PERCHLORATE1	20200602_009	Perchlorate6850b.lcm	1x	☒	3100806-05
	PERCHLORATE2	20200602_010	Perchlorate6850b.lcm	1x	☒	3100806-06
	PERCHLORATE3	20200602_011	Perchlorate6850b.lcm	1x	☒	3100806-07
	PERCHLORATE4	20200602_012	Perchlorate6850b.lcm	1x	☒	3100807-01
	PERCHLORATE5	20200602_013	Perchlorate6850b.lcm	1x	☒	3100807-02
	PERCHLORATE6	20200602_014	Perchlorate6850b.lcm	1x	☒	3100807-03
	PERCHLORATE7	20200602_015	Perchlorate6850b.lcm	1x	☒	3100807-04
	PERCHLORATE8	20200602_016	Perchlorate6850b.lcm	1x	☒	3100807-05
	PERCHLORATE9	20200602_017	Perchlorate6850b.lcm	1x	☒	3100807-06
	PERCHLORATE10	20200602_018	Perchlorate6850b.lcm	1x	☒	3100807-07
	PERCHLORATEICV	20200602_019	Perchlorate6850b.lcm	1x	☒	3100807-08
	null	20200602_020	Perchlorate6850b.lcm	1x	☒	
	null	20200602_021	Perchlorate6850b.lcm	1x	☒	
	IB	20200602_022	Perchlorate6850b.lcm	1x	☒	
	PERCHLORATE7	20200602_023	Perchlorate6850b.lcm	1x	☒	3100807-04
	LODV	20200602_024	Perchlorate6850b.lcm	1x	☒	
	EQ2000215-01	20200602_025	Perchlorate6850b.lcm	1x	☒	do not use
	EQ2000215-02	20200602_026	Perchlorate6850b.lcm	1x	☒	do not use
	EQ2000215-03	20200602_027	Perchlorate6850b.lcm	1x	☒	do not use
	E2000473-001	20200602_028	Perchlorate6850b.lcm	1x	☒	do not use
	ICS	20200602_029	Perchlorate6850b.lcm	1x	☒	
	PERCHLORATE7	20200602_030	Perchlorate6850b.lcm	1x	☒	3100807-04
	EQ2000202-01	20200602_031	Perchlorate6850b.lcm	1x	☒	
	EQ2000202-02	20200602_032	Perchlorate6850b.lcm	1x	☒	
	EQ2000202-03	20200602_033	Perchlorate6850b.lcm	1x	☒	
	E2000442-001	20200602_034	Perchlorate6850b.lcm	1x	☒	
	E2000442-002	20200602_035	Perchlorate6850b.lcm	1x	☒	
	ICS	20200602_036	Perchlorate6850b.lcm	1x	☒	
	PERCHLORATE7	20200602_037	Perchlorate6850b.lcm	1x	☒	3100807-04
	EQ2000209-01	20200602_038	Perchlorate6850b.lcm	1x	☒	
	EQ2000209-02	20200602_039	Perchlorate6850b.lcm	1x	☒	
	EQ2000209-03	20200602_040	Perchlorate6850b.lcm	1x	☒	
	E2000449-001	20200602_041	Perchlorate6850b.lcm	1x	☒	
	E2000451-001	20200602_042	Perchlorate6850b.lcm	1x	☒	
	E2000450-001X500	20200602_043	Perchlorate6850b.lcm	500x	☒	
	PERCHLORATE7	20200602_044	Perchlorate6850b.lcm	1x	☒	3100807-04
	EQ2000210-01	20200602_045	Perchlorate6850b.lcm	1x	☒	
	EQ2000210-02	20200602_046	Perchlorate6850b.lcm	1x	☒	
	EQ2000210-03	20200602_047	Perchlorate6850b.lcm	1x	☒	
	E2000459-001X1000	20200602_048	Perchlorate6850b.lcm	1000x	☒	
	E2000459-002	20200602_049	Perchlorate6850b.lcm	1x	☒	
	E2000459-003X200	20200602_050	Perchlorate6850b.lcm	200x	☒	
	E2000459-004X500	20200602_051	Perchlorate6850b.lcm	500x	☒	
	PERCHLORATE7	20200602_052	Perchlorate6850b.lcm	1x	☒	3100807-04

Initial Calibration - Detailed Report**Calibration ID:** EC2000007**Instrument ID:** E-LCMS-01**Column Name:** 1

#	Lab Code	Sample Name	File Location	Aquisition Date
01	EC2000007-01	PERCHLORATE1	20200602_009	06/02/2020 15:37
02	EC2000007-02	PERCHLORATE2	20200602_010	06/02/2020 15:45
03	EC2000007-03	PERCHLORATE3	20200602_011	06/02/2020 15:53
04	EC2000007-04	PERCHLORATE4	20200602_012	06/02/2020 16:05
05	EC2000007-05	PERCHLORATE5	20200602_013	06/02/2020 16:13
06	EC2000007-06	PERCHLORATE6	20200602_014	06/02/2020 16:21
07	EC2000007-07	PERCHLORATE7	20200602_015	06/02/2020 16:29
08	EC2000007-08	PERCHLORATE8	20200602_016	06/02/2020 16:37
09	EC2000007-09	PERCHLORATE9	20200602_017	06/02/2020 16:44
10	EC2000007-10	PERCHLORATE10	20200602_018	06/02/2020 16:52

Analyte**Curve Fit****Weighting****Perchlorate****Average RF****RSD = 11.36****Average RF = 0.1279**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1628	02	0.5000	0.122	03	0.7000	0.1165	04	1.0000	0.1408
05	2.0000	0.1172	06	5.0000	0.1212	07	10.0000	0.135	08	20.0000	0.1233
09	30.0000	0.12	10	50.0000	0.1202						

Analyte**Perchlorate**

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.127	27.3	02	0.5000	0.477	-4.6	03	0.7000	0.638	-8.9
04	1.0000	1.10	10.1	05	2.0000	1.83	-8.4	06	5.0000	4.74	-5.2
07	10.0000	10.6	5.5	08	20.0000	19.3	-3.6	09	30.0000	28.1	-6.2
10	50.0000	47.0	-6.0								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000007	Instrument ID:	E-LCMS-01
Datafile ID:	20200602_019	Column Name:	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000007-11	T	Average RF	10	10.859	ng/mL	8.6	<= 15

ALS Group Houston

PERCHLORATE1

Date acquired: 6/2/2020 3:37:49 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_009.lcd

Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	6/2/2020 3:37:49 PM	2231	0.12727	20200602_009	2.973	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE1	6/2/2020 3:37:49 PM	137060	1.00000	20200602_009	2.954	25.0000	1.0000	4

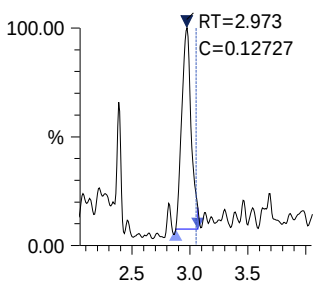
Perchlorate

Conc 0.12727

Area 2231

Q 99.00>83.00 (-)

4.13e2

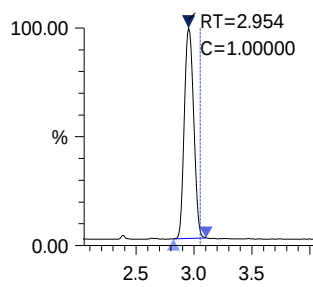
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 137060

ISTD 107.00>89.00 (-)

2.48e4



ALS Group Houston

PERCHLORATE2

Date acquired: 6/2/2020 3:45:42 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_010.lcd

Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	6/2/2020 3:45:42 PM	8464	0.47708	20200602_010	2.954	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE2	6/2/2020 3:45:42 PM	138722	1.00000	20200602_010	2.949	25.0000	1.0000	5

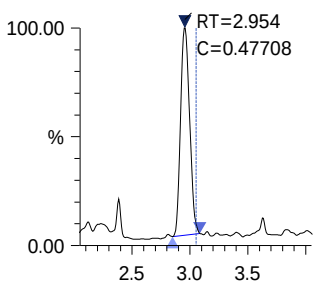
Perchlorate

Conc 0.47708

Area 8464

Q 99.00>83.00 (-)

1.56e3

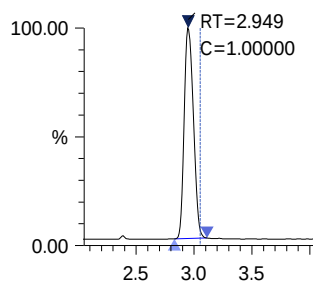
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 138722

ISTD 107.00>89.00 (-)

2.53e4



ALS Group Houston

PERCHLORATE3

Date acquired: 6/2/2020 3:53:36 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_011.lcd

Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	6/2/2020 3:53:36 PM	11656	0.63768	20200602_011	2.950	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE3	6/2/2020 3:53:36 PM	142915	1.00000	20200602_011	2.954	25.0000	1.0000	6

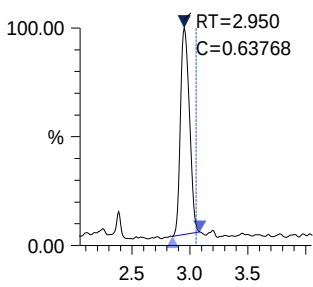
Perchlorate

Conc 0.63768

Area 11656

Q 99.00>83.00 (-)

2.17e3

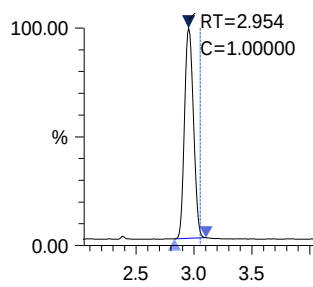
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 142915

ISTD 107.00>89.00 (-)

2.70e4



ALS Group Houston

PERCHLORATE4

Date acquired: 6/2/2020 4:05:28 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_012.lcd

Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	6/2/2020 4:05:28 PM	18119	1.10069	20200602_012	2.916	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE4	6/2/2020 4:05:28 PM	128706	1.00000	20200602_012	2.914	25.0000	1.0000	7

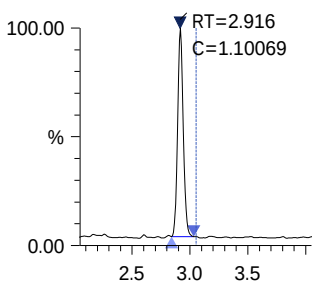
Perchlorate

Conc 1.10069

Area 18119

Q 99.00>83.00 (-)

5.42e3

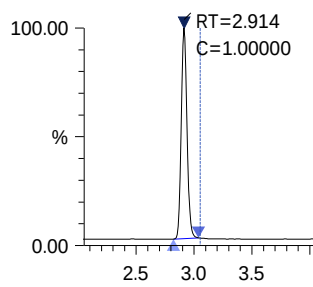
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 128706

ISTD 107.00>89.00 (-)

3.72e4



ALS Group Houston

PERCHLORATE5

Date acquired: 6/2/2020 4:13:21 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_013.lcd

Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	6/2/2020 4:13:21 PM	33971	1.83198	20200602_013	2.953	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE5	6/2/2020 4:13:21 PM	144982	1.00000	20200602_013	2.953	25.0000	1.0000	8

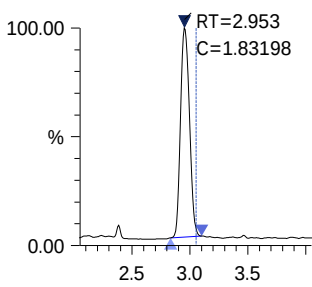
Perchlorate

Conc 1.83198

Area 33971

Q 99.00>83.00 (-)

6.29e3

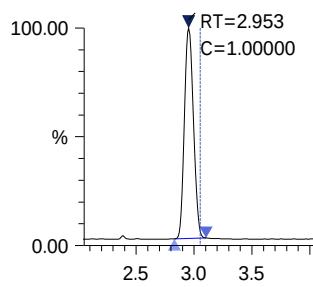
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 144982

ISTD 107.00>89.00 (-)

2.71e4



ALS Group Houston

PERCHLORATE6

Date acquired: 6/2/2020 4:21:16 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_014.lcd

Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	6/2/2020 4:21:16 PM	85178	4.74001	20200602_014	2.952	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE6	6/2/2020 4:21:16 PM	140500	1.00000	20200602_014	2.948	25.0000	1.0000	9

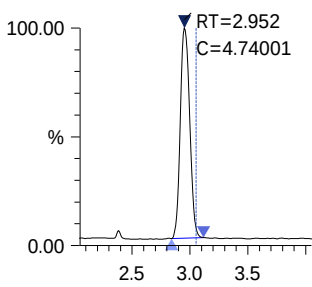
Perchlorate

Conc 4.74001

Area 85178

Q 99.00>83.00 (-)

1.50e4

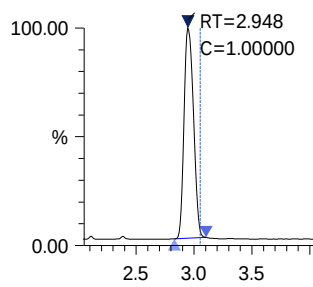
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 140500

ISTD 107.00>89.00 (-)

2.51e4



ALS Group Houston

PERCHLORATE7

Date acquired: 6/2/2020 4:29:10 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_015.lcd

Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	6/2/2020 4:29:10 PM	173998	10.55190	20200602_015	2.953	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE7	6/2/2020 4:29:10 PM	128928	1.00000	20200602_015	2.951	25.0000	1.0000	10

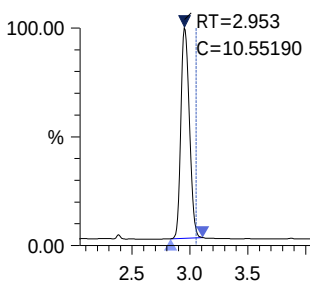
Perchlorate

Conc 10.55190

Area 173998

Q 99.00>83.00 (-)

3.36e4

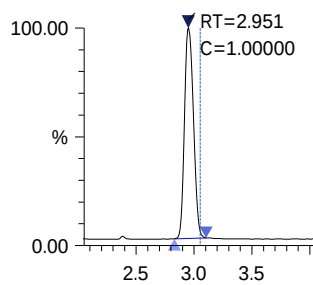
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 128928

ISTD 107.00>89.00 (-)

2.43e4



ALS Group Houston

PERCHLORATE8

Date acquired: 6/2/2020 4:37:02 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_016.lcd

Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	6/2/2020 4:37:02 PM	324944	19.28602	20200602_016	2.955	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	6/2/2020 4:37:02 PM	131734	1.00000	20200602_016	2.953	25.0000	1.0000	11

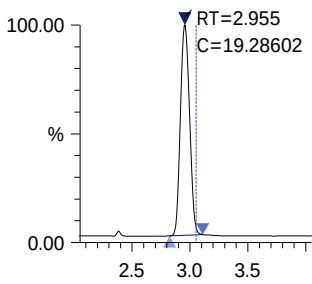
Perchlorate

Conc 19.28602

Area 324944

Q 99.00>83.00 (-)

5.85e4

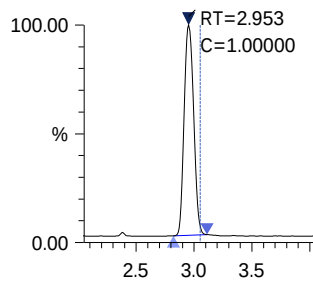
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 131734

ISTD 107.00>89.00 (-)

2.34e4



ALS Group Houston

PERCHLORATE9

Date acquired: 6/2/2020 4:44:57 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_017.lcd

Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	6/2/2020 4:44:57 PM	469066	28.14043	20200602_017	2.952	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	6/2/2020 4:44:57 PM	130327	1.00000	20200602_017	2.953	25.0000	1.0000	12

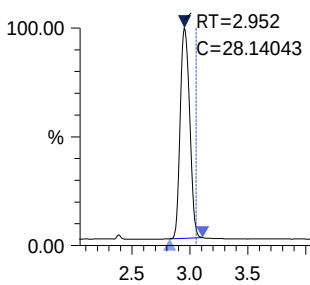
Perchlorate

Conc 28.14043

Area 469066

Q 99.00>83.00 (-)

8.16e4

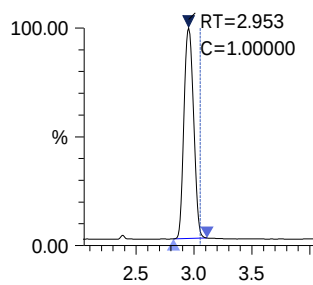
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 130327

ISTD 107.00>89.00 (-)

2.28e4



ALS Group Houston

PERCHLORATE10

Date acquired: 6/2/2020 4:52:49 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_018.lcd

Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	6/2/2020 4:52:49 PM	737362	47.00067	20200602_018	2.955	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	6/2/2020 4:52:49 PM	122661	1.00000	20200602_018	2.952	25.0000	1.0000	13

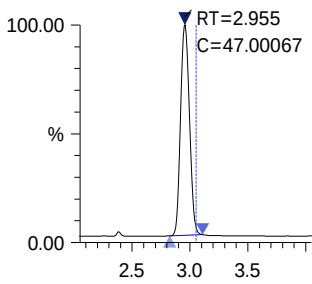
Perchlorate

Conc 47.00067

Area 737362

Q 99.00>83.00 (-)

1.36e5

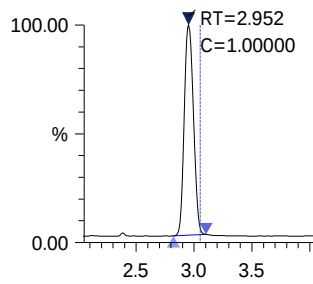
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 122661

ISTD 107.00>89.00 (-)

2.25e4



ALS Group Houston

PERCHLORATEICV

Date acquired: 6/2/2020 5:00:42 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200602\20200602_019.lcd

Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	6/2/2020 5:00:42 PM	180334	10.85928	20200602_019	2.949	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	6/2/2020 5:00:42 PM	129839	1.00000	20200602_019	2.948	25.0000	1.0000	14

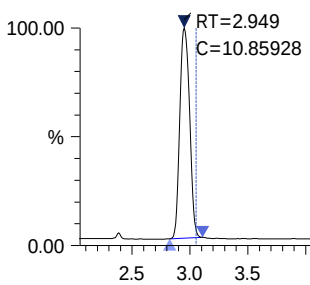
Perchlorate

Conc 10.85928

Area 180334

Q 99.00>83.00 (-)

3.04e4

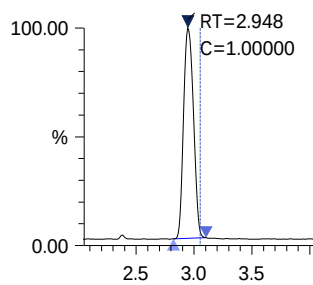
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 129839

ISTD 107.00>89.00 (-)

2.21e4





Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Mobile Phases

A: 0.75% Formic Acid/Water 3100807-09

B: MeOH 3100802-01

[illegible]

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200622\20200622_005

Calibration Date: 6/2/20
Calibration ID: EC2000007
Analysis Lot: 684542
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.5	0.1279	0.1348	5.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200622\20200622_016

Calibration Date: 6/2/20
Calibration ID: EC2000007
Analysis Lot: 684542
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.8	0.1279	0.1377	7.6	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200622\20200622_027

Calibration Date: 6/2/20
Calibration ID: EC2000007
Analysis Lot: 684542
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.7	0.1279	0.1372	7.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200622\20200622_038

Calibration Date: 6/2/20
Calibration ID: EC2000007
Analysis Lot: 684542
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.8	0.1279	0.1381	8.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20 11:03

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200622\20200622_005
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000254-01
Analysis Lot: 684542
Signal ID: 1

Sodium Perchlorate-18O4

	<u>Area</u>	<u>RT</u>
ICAL Average ==>	134,654	2.95
Upper Limit ==>	201,981	4.95
Lower Limit ==>	67,327	0.95

Associated Analyses

Continuing Calibration Verification	EQ2000254-01	159,982	3.02
Method Blank	EQ2000238-01	178,948	3.01
Lab Control Sample	EQ2000238-02	197,036	3.01
Duplicate Lab Control Sample	EQ2000238-03	200,634	3.01
Batch QCMS	EQ2000238-04	174,832	2.98
Batch QCDMS	EQ2000238-05	173,812	2.98
Batch QC	E2000538-005	189,616	2.98

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20 12:29

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200622\20200622_016
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000254-02
Analysis Lot: 684542
Signal ID: 1

Sodium Perchlorate-18O4

	<u>Area</u>	<u>RT</u>
ICAL Average ==>	134,654	2.95
Upper Limit ==>	201,981	4.95
Lower Limit ==>	67,327	0.95

Associated Analyses

Continuing Calibration Verification	EQ2000254-02	178,331	3.01
KAFB7-WW01-060820	E2000511-001	199,337	3.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20 14:45

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200622\20200622_027
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000254-03
Analysis Lot: 684542
Signal ID: 1

Sodium Perchlorate-18O4

	<u>Area</u>	<u>RT</u>
ICAL Average ==>	134,654	2.95
Upper Limit ==>	201,981	4.95
Lower Limit ==>	67,327	0.95

Associated Analyses

Continuing Calibration Verification	EQ2000254-03	184,802	2.96
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Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20060397

Service Request: E2000511
Date Analyzed: 6/22/20 16:13

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200622\20200622_038
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000254-04
Analysis Lot: 684542
Signal ID: 1

Sodium Perchlorate-18O4

	<u>Area</u>	<u>RT</u>
ICAL Average ==>	134,654	2.95
Upper Limit ==>	201,981	4.95
Lower Limit ==>	67,327	0.95

Associated Analyses

Continuing Calibration Verification	EQ2000254-04	199,949	3.01
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Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group Houston

PERCHLORATE7

Date acquired: 6/22/2020 11:03:11 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_005.lcd

Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	6/22/2020 11:03:11 AM	215723	10.54278	20200622_005	3.018	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	6/22/2020 11:03:11 AM	159982	1.00000	20200622_005	3.015	25.0000	1.0000	4

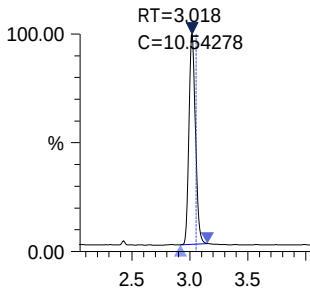
Perchlorate

Conc 10.54278

Area 215723

Q 99.00>83.00 (-)

5.64e4

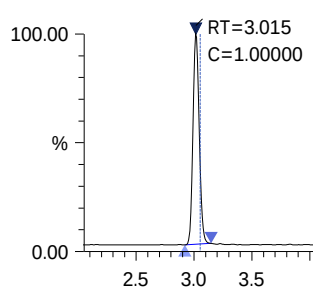
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 159982

ISTD 107.00>89.00 (-)

4.21e4



ALS Group Houston

EQ2000238-01

Date acquired: 6/22/2020 11:18:59 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_007.lcd

Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000238-01	6/22/2020 11:18:59 AM	----	----	20200622_007	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000238-01	6/22/2020 11:18:59 AM	178948	1.00000	20200622_007	3.011	25.0000	1.0000	5

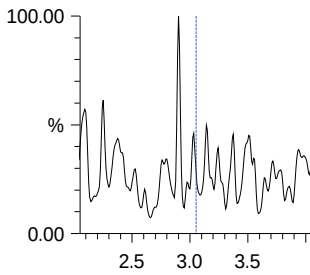
Perchlorate

Conc ----

Area ----

Q 99.00>83.00 (-)

4.46e2

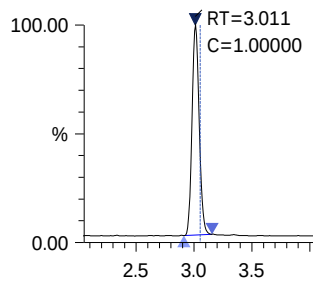
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 178948

ISTD 107.00>89.00 (-)

4.15e4



ALS Group Houston

EQ2000238-02

Date acquired: 6/22/2020 11:26:53 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_008.lcd

Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000238-02	6/22/2020 11:26:53 AM	2706	0.10739	20200622_008	3.009	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000238-02	6/22/2020 11:26:53 AM	197036	1.00000	20200622_008	3.007	25.0000	1.0000	6

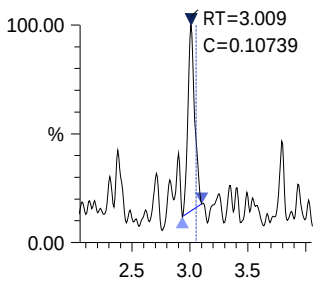
Perchlorate

Conc 0.10739

Area 2706

Q 99.00>83.00 (-)

7.58e2



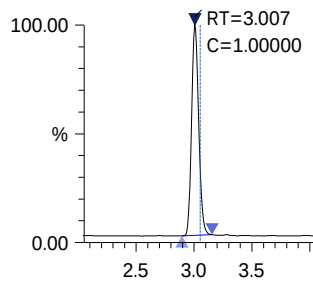
Sodium Perchlorate-18O4_IS

Conc 1.00000

Area 197036

ISTD 107.00>89.00 (-)

4.60e4



ALS Group Houston

EQ2000238-03

Date acquired: 6/22/2020 11:34:45 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_009.lcd

Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000238-03	6/22/2020 11:34:45 AM	2934	0.11434	20200622_009	3.017	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000238-03	6/22/2020 11:34:45 AM	200634	1.00000	20200622_009	3.009	25.0000	1.0000	7

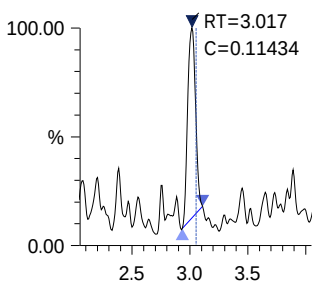
Perchlorate

Conc 0.11434

Area 2934

Q 99.00>83.00 (-)

6.89e2



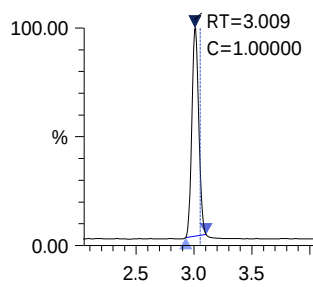
Sodium Perchlorate-18O4_IS

Conc 1.00000

Area 200634

ISTD 107.00>89.00 (-)

4.88e4



ALS Group Houston

EQ2000238-04

Date acquired: 6/22/2020 11:42:37 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_010.lcd

Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000238-04	6/22/2020 11:42:37 AM	21974	0.98267	20200622_010	2.977	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	EQ2000238-04	6/22/2020 11:42:37 AM	174832	1.00000	20200622_010	2.975	25.0000	1.0000	8

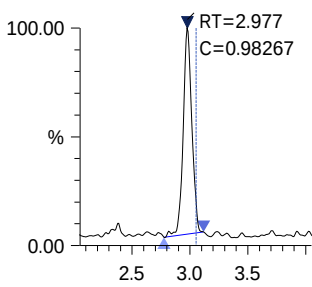
Perchlorate

Conc 0.98267

Area 21974

Q 99.00>83.00 (-)

4.31e3

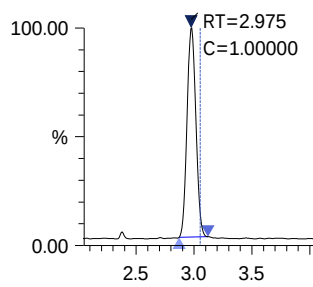
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 174832

ISTD 107.00>89.00 (-)

3.35e4



ALS Group Houston

EQ2000238-05

Date acquired: 6/22/2020 11:50:29 AM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_011.lcd

Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000238-05	6/22/2020 11:50:29 AM	21822	0.98160	20200622_011	2.979	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	EQ2000238-05	6/22/2020 11:50:29 AM	173812	1.00000	20200622_011	2.977	25.0000	1.0000	9

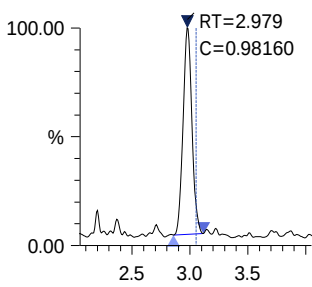
Perchlorate

Conc 0.98160

Area 21822

Q 99.00>83.00 (-)

4.14e3



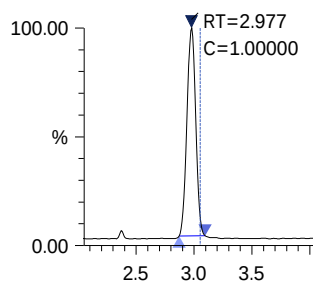
Sodium Perchlorate-18O4_IS

Conc 1.00000

Area 173812

ISTD 107.00>89.00 (-)

3.37e4



ALS Group Houston

PERCHLORATE7

Date acquired: 6/22/2020 12:29:56 PM

Acquired by: System Administrator

Data File: I:\LCMS01\DATA\20200622\20200622_016.lcd

Vial: 4 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	6/22/2020 12:29:56 PM	245490	10.76310	20200622_016	3.012	25.0000	1.0000	4
Sodium Perchlorate-18O4_IS	PERCHLORATE7	6/22/2020 12:29:56 PM	178331	1.00000	20200622_016	3.010	25.0000	1.0000	4

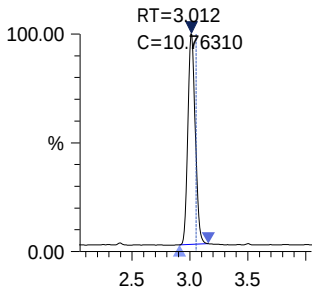
Perchlorate

Conc 10.76310

Area 245490

Q 99.00>83.00 (-)

5.57e4

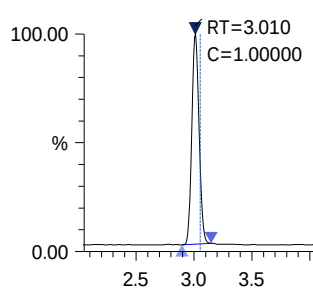
Sodium Perchlorate-18O4
_IS

Conc 1.00000

Area 178331

ISTD 107.00>89.00 (-)

4.07e4





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June 23, 2020

Jumoke Lawal
ALS Environmental-Houston

Certificate of Analysis

Project Name:	DOD REPORTING	Workorder:	3107707
Purchase Order:	HS20060397	Workorder ID:	ALK034 HS20060397

Dear Jumoke Lawal:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, June 10, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Dayna Fisher

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3107707 ALK034|HS20060397

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3107707001	KAFB7-WW01-060820	Water	6/8/2020 14:55	6/10/2020 18:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 3107707 ALK034|HS20060397

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3107707 ALK034|HS20060397

Workorder Comments

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ANALYTICAL RESULTS

Workorder: 3107707 ALK034|HS20060397

Lab ID: **3107707001** Date Collected: 6/8/2020 14:55 Matrix: Water
Sample ID: **KAFB7-WW01-060820** Date Received: 6/10/2020 18:00

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY											
Bromate	10.0U	U,1	ug/L	10.0	10.0	1.9	EPA 300.1		6/16/20 12:23	MBW	B
Chlorite	32.9J	J,2	ug/L	40.0	40.0	11.1	EPA 300.1		6/16/20 12:23	MBW	B

Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3107707 ALK034|HS20060397

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3107707001	1	KAFB7-WW01-060820	EPA 300.1	Bromate
ALS Middletown does not hold DOD certification for this analysis.				
3107707001	2	KAFB7-WW01-060820	EPA 300.1	Chlorite
ALS Middletown does not hold DOD certification for this analysis.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3107707 ALK034|HS20060397

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3107707001	KAFB7-WW01-060820	EPA 300.1		

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QUALITY CONTROL DATA

Workorder: 3107707 ALK034|HS20060397

QC Batch: WETC/239913 Analysis Method: EPA 300.1

QC Batch Method: EPA 300.1

Associated Lab Samples: 3107707001

METHOD BLANK: 3150307

Parameter	Blank Result	Units	Reporting Limit
Bromate	5.0U	ug/L	5.0
Chlorite	20.0U	ug/L	20.0

LABORATORY CONTROL SAMPLE: 3150308

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Bromate	105	ug/L	25	26.3	85 - 115
Chlorite	87.8	ug/L	250	219	85 - 115

MATRIX SPIKE: 3150310 DUPLICATE: 3150311 ORIGINAL: 3108000001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Chlorite	53.23	ug/L	250	274.48	248.45	88.5	78.1	75 - 125	9.96	20

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3107707 ALK034|HS20060397

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3107707001	KAFB7-WW01-060820			EPA 300.1	WETC/239913

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7702
10450 Stancliff
Houston, TX 77
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Subcontract Chain of Custody

SAMPLING STATE: Dept of Defense

COC ID: 14066

SUBCONTRACT TO:

ALS
34 Dogwood Lane
Middletown, PA 17057

Phone: +1 717 702 2244

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: RJ Modashia
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: RJ.Modashia@alsglobal.com
Alternate Contact: Jumoke M. Lawal
Email: jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20060397
TSR: Sonia West

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. HS20060397-01	KAFB7-WW01-060820	Wastewater	08 Jun 2020 14:55
Bromate			19 Jun 2020
Chlorite 300.1	1XP. 100ML UNP DW 6/11/20		19 Jun 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD III (DoD Level III)

Relinquished By: J. MAKIN

Date/Time: 6/10/20 18:00

Received By: Foley

Date/Time: _____

Cooler ID(s): _____

Temperature(s): _____

Rel.: FedEx

RIGHT SOLUTIONS | RIGHT PARTNER

Page 1 of 1

Rec: Went 6/11/20 933



301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Houston Work Order #: 3107707 Initials: DAJ Date: 6/11

- | | | | |
|--|---------------------------------------|--------------------------------------|-------------------------------------|
| 1. Were airbills / tracking numbers present and recorded?..... | NONE | ☒ YES | NO |
| Tracking number: <u>1891 5577 5166</u> | | | |
| 2. Are Custody Seals on shipping containers intact?..... | NONE | ☒ YES | NO |
| 3. Are Custody Seals on sample containers intact?..... | ☒ NONE | YES | NO |
| 4. Is there a COC (Chain-of-Custody) present?..... | | ☒ YES | NO |
| 5. Are the COC and bottle labels complete, legible and in agreement?..... | | ☒ YES | NO |
| 5a. Does the COC contain sample locations?..... | | ☒ YES | NO |
| 5b. Does the COC contain date and time of sample collection for all samples?..... | | ☒ YES | NO |
| 5c. Does the COC contain sample collectors name?..... | <u>Not Listed</u> | YES | ☒ NO |
| 5d. Does the COC note the type(s) of preservation for all bottles?..... | | YES | ☒ NO |
| 5e. Does the COC note the number of bottles submitted for each sample?..... | | YES | ☒ NO |
| 5f. Does the COC note the type of sample, composite or grab?..... | | YES | ☒ NO |
| 5g. Does the COC note the matrix of the sample(s)?..... | | ☒ YES | NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? ¹ | N/A | ☒ YES | NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... | | ☒ YES | NO |
| 8. Are all samples within holding times for the requested analyses?..... | | ☒ YES | NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... | | ☒ YES | NO |
| 10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?..... | ☒ N/A | YES | NO |
| 11. Were the samples received on ice?..... | | ☒ YES | NO |
| 12. Were sample temperatures measured at 0.0-6.0°C..... | | ☒ YES | NO |
| 13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... | | YES | ☒ NO |
| 13a. Are the samples required for SDWA compliance reporting?..... | N/A | YES | NO |
| 13b. Did the client provide a SDWA PWS ID#?..... | N/A | YES | NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... | N/A | YES | NO |
| 13d. Did the client provide the SDWA sample location ID/Description?..... | N/A | YES | NO |
| 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... | N/A | YES | NO |

Cooler #: _____

Temperature (°C): 3 _____

Thermometer ID: 309 _____

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Rev 1/20/2020

Table J-1-1
Non-Hazardous GWM Liquid Investigation-Derived Waste Disposal in Q3 2020

Collection Date	Well ID or Waste Generation Location	Container Type^a	Number of Containers	Estimated Volume (Gallons)	Discharge Date	Effluent Discharge Location
7/2/2020	KAFB-015, KAFB-016, KAFB-003, ST106-VA2	Pail	1	2.5	8/11/2020	Golf Course
8/4/2020	KAFB-015, KAFB-016, KAFB-003, ST106-VA2	Pail	1	3.0	8/11/2020	Golf Course
7/27/2020	Consolidated Drum #5	Poly drum	1	44.0	8/11/2020	Golf Course
7/16/2020	Consolidated Drum #4	Poly drum	1	50.0	8/11/2020	Golf Course
7/15/2020	Consolidated Drum #3	Poly drum	1	53.0	8/11/2020	Golf Course
7/7/2020	Consolidated Drum #1	Poly drum	1	10.0	8/11/2020	Golf Course
7/15/2020	Consolidated Drum #2	Poly drum	1	53.0	8/11/2020	Golf Course
9/1/2020	KAFB-003, KAFB-015, KAFB-016, ST106-VA2	Poly drum	1	4.0	9/3/2020	Golf Course
7/9/2020	Consolidated Drum #2	Pail	1	0.5	9/3/2020	Golf Course
4/23/2020	KAFB-106080	Poly drum	1	15.5	9/3/2020	Golf Course
4/16/2020	Consolidated #4	Jerrican	1	2.5	9/3/2020	Golf Course
4/24/2020	KAFB-106014	Poly drum	1	13	9/3/2020	Golf Course
4/21/2020	KAFB-106067	Poly drum	1	14	9/3/2020	Golf Course
4/28/2020	KAFB-106076	Poly drum	1	13.4	9/3/2020	Golf Course
4/24/2020	KAFB-106006	Poly drum	1	16	9/3/2020	Golf Course
6/23/2020	KAFB-106239	Steel drum	1	45	9/3/2020	Golf Course
6/10/2020	ER-202-04,2628,106	Poly drum	1	25	9/3/2020	Golf Course
6/10/2020	KAFB-2629	Poly drum	1	15.0	9/14/2020	Golf Course
			Total	379.4		

^a Container types are described as follows:

Pail = 5-gallon plastic bucket with press-on plastic cover

Poly Drum = 55-gallon plastic drum sealed with plastic cover and locking-ring steel collar

Jerrican = 5-gallon plastic container with threaded cap

GWM = groundwater monitoring

ID = identification

Q3 = third quarter

Table J-1-2
Non-Hazardous Liquid IDW Disposal from Other Sources in Q3 2020

Collection Date	Well ID or Waste Generation Location	Container Type ^a	Number of Containers	Estimated Volume (Gallons)	Discharge Date	Effluent Discharge Location	Manifest Number
11/14/2019	Q4 Calibration fluid	Poly drum	1	27	9/3/2020	Golf Course	NA
11/7/2018	Fluid Calibration				9/3/2020	Golf Course	NA
5/11/2020	Q2 Calibration Fluid				9/3/2020	Golf Course	NA
9/15/2020	Q2 Calibration Fluid + HCL	Pail	1	4.5	9/16/2020	Golf Course	NA
			Total	31.5			

^a Container types are described as follows:

Pail = 5-gallon plastic bucket with press-on plastic cover

Poly Drum = 55-gallon plastic drum sealed with plastic cover and locking-ring steel collar

ID = Identification

IDW = Investigation Derived Waste

NA = not applicable

Q2 = second quarter

Q3 = third quarter

Q4 = fourth quarter

Table J-1-3
Non-Hazardous Liquid Investigation-Derived Waste Pending Disposal, Q3 2020

Collection Date	Well ID	Container Type	Number of Containers^a	Estimated Volume (Gallons)	Anticipated Disposal Location
NA	None	NA	0	0	NA
			Total	0	

^a No waste pending disposal in this category as of the end of Q3 2020.

ID = identification

NA = not applicable

Q3 = third quarter

Table J-1-4
Non-Hazardous Liquid Investigation-Derived Waste Pending Analysis, Q3 2020

Collection Date	Source	Container Type	Number of Containers^a	Estimated Volume (Gallons)	Anticipated Disposal Location
NA	None	NA	0	0	NA
			Total	0	

^a No waste pending analysis in this category as of the end of Q3 2020.

NA = not applicable

Q3 = third quarter

Table J-1-5
Non-Hazardous Liquid Drilling Investigation-Derived Waste Disposal in Q3 2020

Collection Date	Well ID	Container Type	Number of Containers	Estimated Volume (Gallons)	Discharge Date	Effluent Discharge Location	Disposal Technician	Notes
7/20/2020	KAFB-106IN2	Baker Tank	2	40000.0	8/7/2020	Bosque Farms Pumping Service, DP-605	NA	American Service Industries Manifest #3667
			Total	40,000				

Baker Tank = 20,000 gallon, open top, steel tank

ID = identification

NA = not applicable

Q3 = third quarter

Table J-2-1
Non-Hazardous Solid Waste Disposal in Q3 2020

Collection Date^a	Well ID	Matrix	Container Type	Number of Containers	Estimated Volume^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	NA	0	0	NA	NA	NA	NA
				Total	0				

^a No Q3 2020 waste was generated or disposed of in the category

ID = identification

NA = not applicable

Q3 = third quarter

Table J-2-2a
Non-Hazardous Drilling Solid Investigation-Derived Waste Disposal, Q3 2020

IDW Yard Entry Date	EA Container ID	Matrix	Container Type	Estimated Volume ^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	0	0	NA	NA	NA	NA
			Total	0				

Table J-2-2b
Non-Hazardous Drilling Solid Special Waste Disposal, Q3 2020

IDW Yard Entry Date	EA Container ID	Matrix	Container Type	Estimated Volume ^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	0	0	NA	NA	NA	NA
			Total	0				

^a No Q3 2020 waste was generated or disposed of in this category
IDW = investigation derived waste
ID = identification
yd = cubic yards
Q3 = third quarter
EA = EA Engineering, Science, and Technology, Inc., PBC

Table J-3-1
Hazardous Waste Disposal, Q3 2020

90-Day Entry Date	90-Day Deadline	Well Location/Drum ID	Matrix	Source	Container Type ^a	Estimated Volume (gallons)	Disposal Date	Transporter	Disposal Facility	Manifest Number	Notes
6/29/2020	9/26/2020	KAFB-106028	Water	Well Rehabilitation	Steel Drum	30	9/14/2020	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623	013013813 FLE	—
6/24/2020	9/21/2020	KAFB-106028-WR-1	Water	Well Rehabilitation	Steel Drum	35	9/14/2020	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623	013013813 FLE	Consolidated on 8/17/2020
7/10/2020	10/7/2020	Consolidated Drum #1 Q3 2020	Water	GWM	Jerrican			Clean Earth			
7/14/2020	10/11/2020	KAFB-106005	Water	Well Rehabilitation	Steel Drum	36	9/14/2020	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623	013013813 FLE	—
7/1/2020	9/28/2020	KAFB-106005	Water with sand	Well Rehabilitation	Steel Drum	45	9/14/2020	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623	013013813 FLE	Consolidated on 8/17/20220
7/22/2020	10/19/2020	KAFB-106005-WR-1	Water with sand	Well Rehabilitation	Steel Drum			Clean Earth			
7/22/2020	10/19/2020	KAFB-106005-WR-3	Water with sand	Well Rehabilitation	Steel Drum			Clean Earth			
7/22/2020	10/19/2020	KAFB-106005-WR-2	Water with sand	Well Rehabilitation	Steel Drum	45	9/14/2020	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623	013013813 FLE	—
						Total	191				

^a Container types are described as follows:

Jerrican = 5-gallon plastic container with threaded cap

Steel Drum = 55-gallon steel, open top drum sealed with steel cover and locking-ring steel collar

— = no comments

Clean Earth = Formerly operated as Stericycle Environmental Solutions

GWM = Groundwater monitoring

ID = Identification

TX = Texas

Q3 = third quarter

Table J-3-2
Hazardous Waste Pending Disposal, Q3 2020

90-Day Entry Date	90-Day Deadline	Well Location ID	Matrix	Source	Container Type	Estimated Volume (gallons)^a	Disposal Date	Transporter	Disposal Facility	Manifest Number
NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA
Total						0				

^aNo hazardous waste was pending disposal at the end of Q3 2020

ID = identification

NA = not applicable

Q3 = third quarter

Table J-3-3
2020 Running Total of Hazardous Waste Disposal

2020 Calendar Quarter	Calendar Months	Matrix	Source	Estimated Volume (gallons)	Transporter	Disposal Facility
Q1	January-March	Water	GWM	25	ACT	Advance Chemical Treatment, 6133 Edith Blvd NE, Albuquerque, NM 87112
Q2	April-June	Water	GWM	40	ACT	Advance Chemical Treatment, 6133 Edith Blvd NE, Albuquerque, NM 87112
Q3	July-September	Water and Water with sand	GWM and Well Rehabilitation	191	Clean Earth	Chemical Reclamation Services LLC 405 Powell St Avalon, TX 76623
Q4	October-December	-	-	-	-	-
2020 Running Total				256		

ACT = Advanced Chemical Treatment

Blvd = boulevard

GWM = Groundwater monitoring

NE = northeast

NM = New Mexico

- = to be determined

Q1 = first quarter

Q2 = second quarter

Q3 = third quarter

Q4 = fourth quarter

TX = Texas