

Cuba Municipal Waste Disposal Site

ALLEGANY COUNTY, NEW YORK

Periodic Review Report (2025-2026)

NYSDEC Site Number: 902012

Prepared for:

Village of Cuba
17 East Main Street
Cuba, New York 14727



Prepared by:



280 East Broad Street, Suite 170
Rochester, NY 14604

February 2026

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Executive Summary

The Cuba Landfill Site (the "Site") is a 39.78-acre former waste disposal facility located on Jackson Hill Road in the Town of Cuba, Allegany County, New York. The Site is owned by the Village of Cuba and was operated by the Village of Cuba from the 1950s to the 1980s. The New York State Department of Environmental Conservation (NYSDEC) and the Village of Cuba entered into an Order on Consent to close the Cuba Landfill. This Order on Consent required the remedial parties, NYSDEC and the Village of Cuba, to investigate and remediate contaminated media at the Site.

During the Remedial Investigation (RI) conducted at the Site in 1999, waste material, soil, groundwater, air, leachate, and sediment samples were collected to characterize the nature and extent of contamination. Results of the Cuba Landfill RI indicated that Site waste included a source of contamination that presented a threat to the environment and that off-Site contaminant migration was occurring. Analytical results showed that the contaminants of concern, identified as volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs), were present in relatively low concentrations and were typical of unlined landfills that received domestic and industrial waste.

The Record of Decision, dated June 2000, authorized the selected remedy of the installation of a low permeability cap with passive gas venting, an up-gradient surface water diversion, a phytoremediation system for control of leachate, and long-term groundwater monitoring. A series of monitoring wells were installed at the Site during the remedial process as part of the long-term groundwater monitoring program. The monitoring of these wells, among other tasks, is summarized in this Periodic Review Report (PRR).

Operation, maintenance, and monitoring activities associated with the remedial action implementation are conducted at the Cuba Landfill as part of ongoing implementation of the Site Management Plan (SMP). These monitoring activities provide data to evaluate remedy performance, effectiveness, and protectiveness. As a component of the SMP, annual Site inspections are conducted in addition to groundwater, surface water, and landfill gas evaluation events.

Remedy performance monitoring data obtained during this reporting period indicate the remedies implemented continue to perform as expected, are effective, protective, and progressing toward the remedial action objectives during this reporting period. Chlorinated VOC (cVOC) exceedances occurred relative to 6 New York Codes, Rules and Regulations (6 NYCRR) Part 703.5 Class GA Ambient Groundwater Quality Standards (Part 703.5 AWQS) at four (4) wells in March 2025. The data indicate that groundwater VOC concentrations have generally decreased since remedy implementation; inorganic concentrations continue to exhibit fluctuations. As indicated by the data, surface water quality does not appear to be impacted by surface water runoff from the Site. Additionally, an off-Site downgradient private supply well sampled during this reporting period does not appear to be impacted by groundwater from the Site.



1.0 Introduction

This PRR was prepared by Lu Engineers, on behalf of the Village of Cuba, in accordance with the requirements set forth in NYSDEC Department of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines set forth by NYSDEC. The first PRR was required 14 months after the final completion of construction in May 2010. The reporting period for this PRR is from January 25, 2025, to January 25, 2026. The following items are included in this PRR:

- Identification, assessment, and certification of each EC/institutional controls (IC) required by the remedy for the Site.
- Results of the Site inspection and sampling events including applicable inspection forms and other records generated for the Site during the reporting period.
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions.
- Data summary tables of groundwater and surface water contaminants of concern. These include a presentation of past VOC data as part of an evaluation of contaminant concentration trends.
- Laboratory analytical results, and the required laboratory data deliverables for each sample collected during the reporting period have been and will continue to be submitted electronically in a NYSDEC-approved EQUIS format.
- A Site evaluation, which includes the following:
 - I. The compliance of the remedy with the requirements of the Site-specific record of decision (ROD).
 - II. The operation and the effectiveness of each treatment unit, including identification of any needed repairs or modifications.
 - III. Any new conclusions or observations regarding Site contamination based on inspection or lab data generated during monitoring events.
 - IV. Recommendations regarding any necessary changes to the remedy and/or SMP.
 - V. The overall performance and effectiveness of the remedy to date.

2.0 Site Overview

2.1 Introduction

The Cuba Landfill is a 39.78-acre former waste disposal facility located in the Town of Cuba, Allegany County, New York. The Site is bordered to the north by Deep Snow Road and a hay field, and to the west, east, and south by undeveloped wooded lands. The topography of the Site slopes steeply to the south. The landfill ground cover consists primarily of mowed grass. Storm water drainage trenches oriented north-south and lined with rip-rap exist on the western portion of the landfill cap. These swales drain to a storm water detention pond at the toe of the slope. An unnamed intermittent tributary of the north branch of Van Campen Creek closely parallels the eastern border.

The boundaries of the Site are more fully described in the metes and bounds Site description that is a component of the NYSDEC's Declaration of Covenants and Restrictions. The Site is accessed via Jackson Hill Road and the seasonal Deep Snow Road.



The NYSDEC and the Village of Cuba entered into an Order on Consent (No. B9-461-94-09) to close the Cuba Landfill. This Order on Consent required the remedial parties, NYSDEC and the Village of Cuba, to investigate and remediate contaminated media at the Site. In 2013, the Village of Cuba purchased a 10-acre rectangular parcel of land that adjoins the Site to the immediate south. This parcel is not considered part of the definition or boundary of the Site. Off-Site monitoring wells MW-7, MW-10 and MW-10D are contained within the boundary of this 10-acre parcel.

2.2 Background

Starting in the early 1950s, household, commercial, and industrial wastes were disposed of within the Cuba Landfill. The Village of Cuba acquired the Site in 1967 and operated it as an un-permitted municipal landfill. The facility was issued a sanitary landfill permit in 1979 by the NYSDEC and became inactive in approximately 1981. The landfill was inspected on a regular basis by NYSDEC until the Village completed an approved closure plan in 1987.

In 1994, results of Phase II Preliminary Site Assessment (PSA) were completed for the NYSDEC to determine if the Site qualified for the New York State Registry of Inactive Hazardous Waste Disposal Sites (IHWDS). Results of testing at the Site conducted by URS Consultants, Inc. indicated the presence of VOCs in Site groundwater and leachate and confirmed the disposal of hazardous waste including solvents, plating wastes, PCB capacitors, and paint sludges. Based on these findings and the confirmed disposal of hazardous waste including solvents, plating wastes, PCB capacitors, and paint sludges, the Site was reclassified from Class 2a to Class 2 (significant threat to public health or the environment; action required) in 1994.

During the RI conducted at the Site in 1999 and subsequent confirmatory sampling events, waste material/soil, groundwater, air, leachate, and sediment samples were collected to characterize the nature and extent of the contamination. The RI results indicated that the Site was a source of contamination and that there was migration of contaminants off-Site. Analytical testing results showed that contaminants of concern (VOCs and PCBs) were present in relatively low concentrations typical of unlined landfills that receive domestic and industrial waste. The following presents a summary of the RI activities and findings:

- Soil –12 surface soil locations were sampled. Phenol, Aroclor 1260, and several metals including arsenic, beryllium, cobalt, copper, iron, nickel, selenium, and zinc were detected at concentrations above applicable standards, criteria, and guidelines (SCGs).
- Upper Bedrock Groundwater – Predominantly impacted with VOCs in excess of applicable standards. Limited exceedances of SVOCs, pesticides, and metals were detected.
- Surface Water Sediment – One (1) sample from the southwest corner of the property contained phenol, and metals exceeding applicable SCGs. Upgradient and downgradient samples from both tributaries contained similar concentrations of metals.
- Groundwater Springs – Groundwater springs located downgradient and at various off-Site locations contained VOCs, endrin, Aroclor 1260, and metals were detected at concentrations exceeding SCGs.

In 2008, the NYSDEC issued a work authorization to EA Engineering (EA) to provide construction, administration, and inspection services at the Cuba Landfill Site. EA was also retained to provide



inspection services during construction activities, and to prepare the Final Engineering Report (FER) for these activities.

D'Virka and Bartilucci Consulting Engineers was the design engineer of record for the landfill closure. The NYSDEC awarded the landfill closure contract to Modern Environmental Group, Inc. (Modern) for the construction activities. The Site was remediated in accordance with the NYSDEC-approved remedial design dated February 2008. The overall goal of the remedial actions at the Site is protection of human health and the environment and meeting relevant SCGs. Specific remedial action objectives are as follows:

- Eliminate, to the extent practicable, direct human or animal exposure to waste in the landfill.
- Eliminate, to the extent practicable, the migration of contaminants from the landfill to groundwater.
- Reduce, control, or eliminate, to the extent practicable, the generation of leachate within the landfill mass.
- Eliminate, to the extent practicable, ingestion of groundwater affected by the Site that does not meet 6 NYCRR 703.5 Class GA Ambient Water Quality Criteria.
- Eliminate, to the extent practicable, off-Site migration of groundwater that does not meet 6 NYCRR Part 703.5 Class GA Ambient Water Quality Criteria.

After completion of the remedial work as specified within the February 2008 Contract Documents (Contract D006905), residual contamination remained in the subsurface at the Site. Engineering controls (ECs) were incorporated into the Site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment.

In accordance with the New York State Solid Waste Management Facilities Regulations (6NYCRR Part 360-2.15[k][4]) and the Site-specific SMP, environmental monitoring and sampling points have been, and continue to be maintained, monitored, and sampled to evaluate surface water and groundwater quality and assess potential residual impacts to the environment immediately surrounding the landfill to support eventual Site closure.

A chronology of the significant actions/events of the remedial program for the Site is presented in the following table.

CUBA LANDFILL PERIODIC REVIEW REPORT REMEDY IMPLEMENTATION CHRONOLOGY	
Significant Action/Event	Date
Phase I –PSA	October 1990
Phase II –PSA	January 1994
RI Report ⁽¹⁾	July 1999
Feasibility Study Report ⁽²⁾	December 1999
Record of Decision ⁽³⁾	June 2000
Remedial Design Work Plan ⁽⁴⁾	June 2001
Pre-Design Investigation Report	October 2003
Remedy Design Completion	February 2008
NYSDEC Design Approval	April 2008
Project Health and Safety Plan	April 2008
Remedy Implementation	September 2008
Substantial Completion	October 2009



CUBA LANDFILL PERIODIC REVIEW REPORT REMEDY IMPLEMENTATION CHRONOLOGY	
Significant Action/Event	Date
NYSDEC Approval of Remedy Construction Completion (Final Completion)	May 2010
Site-Specific Quality Assurance Project Plan Addendum	January 2011
First Quarterly Report ⁽⁵⁾	April 2011
NYSDEC Site Management Plan Approval	August 2011
Second Quarterly Report ⁽⁵⁾	July 2011
Annual Report No. 1, May 2010 – July 2011 ⁽⁵⁾	September 2011
Declaration of Covenants and Restrictions	October 2011
Periodic Review Report ⁽⁵⁾	November 2011
Third Quarterly Report (July/August 2011 event) ⁽⁵⁾	December 2011
Fourth Quarterly Report (November 2011 event) ⁽⁵⁾	April 2012
Fifth Quarterly Report (February 2012 event) ⁽⁵⁾	June 2012
Sixth Inspection/Monitoring Report (July 2014 event, Lu Engineers)	July 2014
Seventh Inspection/Monitoring Report (November 2014 event, Lu Engineers)	November 2014
Eighth Inspection/Monitoring Report (June 2015 event, Lu Engineers)	February 2016
Ninth Inspection/Monitoring Report (October 2016 event, Lu Engineers)	February 2017
Tenth Inspection/Monitoring Report (March 2017 event, Lu Engineers)	February 2018
Eleventh Inspection/Monitoring Report (May 2018 event, Lu Engineers)	February 2019
NYSDEC Emerging Contaminant Sampling Event	August 2018
Twelfth Inspection/Monitoring Report (September 2019 event, Lu Engineers)	February 2020
Thirteenth Inspection/Monitoring Report (October 2020 event, Lu Engineers)	February 2021
Soil Management Plan Update	October 2021
Fourteenth Inspection/Monitoring Report (March 2021 event, Lu Engineers)	February 2022
Fifteenth Inspection/Monitoring Report (April 2022 event, Lu Engineers)	February 2023
Sixteenth Inspection/Monitoring Report (September 2023 event, Lu Engineers)	February 2024
Seventeenth Inspection/Monitoring Report (November 2024 event, Lu Engineers)	February 2025
Eighteenth Inspection/Monitoring Report (March 2025 event, Lu Engineers)	February 2026

- (1) Dvirka and Bartilucci Consulting Engineers. 1999. Remedial Investigation Report. Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. July.
- (2) Dvirka and Bartilucci Consulting Engineers. 1999. Feasibility Study Report, Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. December.
- (3) New York State Department of Environmental Conservation. 2000. Record of Decision, Village of Cuba Municipal Waste Disposal Site, Village of Cuba, Alleghany County, Site Number 9-02-012. June.
- (4) Dvirka and Bartilucci Consulting Engineers. 2001. Remedial Design Work Plan, Cuba Municipal Waste Disposal Site (Registry No. 9-02-012), Village of Cuba, Alleghany County, New York. June.
- (5) Prepared by EA Science and Technology, an affiliate of EA Engineering, P.C.

3.0 Remedy Performance, Effectiveness, and Protectiveness Evaluation

Post-remedial groundwater sampling indicates that low-level residual groundwater contamination persists at the Site since completion of remedial work. 17 post-remedial sampling events have been conducted in accordance with and as outlined in the SMP from January 2011 to March 2025.

4.0 Institutional Control/Engineering Control Compliance

The Cuba Landfill Site remedies involve the use of both ICs and ECs to protect public health and the environment. The IC/EC Plan is one (1) component of the SMP and is subject to revision by NYSDEC.



ICs/ECs include the following:

Institutional Controls:

- Land Use Restriction
- Groundwater Use Restriction
- Excavation Work Plan
- Soil Vapor Intrusion Evaluation

Engineering Controls:

- Engineered Landfill Cap
- Passive Gas Vents
- Landfill Surface Drainage
- Leachate Phytoremediation
- Site Entrance Gates
- Access Road.

Each of the above-listed controls is described in the attached Table 4-0, which includes a description of the objective of the control, how the performance of the control is monitored, and summarizes the current performance and status of each control. Based on the information in Table 4-0, each of the ICs and ECs at the Cuba Landfill Site remain in place and continue to be effective. The required IC/EC certification has been completed as a component of this report and is included as Appendix E.

5.0 Monitoring Plan Compliance

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected Site media identified in the following table:

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater Monitoring	Annual (rotating quarterly)	Groundwater	EPA Method 8260 VOCs; EPA Method 6010 TAL Metals EPA Method 8270 SIM 1, 4-Dioxane EPA Method 537 PFAS
Surface Water Monitoring	Annual (rotating quarterly)	Surface Water	EPA Method 8260 VOCs; EPA Method 6010 TAL Metals
Private Supply Well (Current Use Unknown)	Annual (rotating quarterly)	Surface Water	EPA Method 8260 VOCs; EPA Method 6010 TAL Metals
Landfill Gas Monitoring	Annual (rotating quarterly)	Organic Vapors	H ₂ S, CO, O ₂ and PID screening
Cover System Monitoring	Annual (rotating quarterly)	Soil/Geotextile Cover System	Visual Inspection, determine applicable maintenance

*The frequency of events will be conducted as specified until otherwise approved by NYSDEC
LEL: lower explosive limit, H₂S: hydrogen sulfide, CO: carbon monoxide, O₂: oxygen

Monitoring activities completed during this reporting period included the following:

- Annual groundwater sampling of 13 monitoring wells (refer to Figure 2) and one (1) off-Site potable water source (spring);
- Annual sampling of four (4) surface water locations;
- Annual landfill gas monitoring;
- Annual inspection of the Site cover system



The monitoring locations, analytical testing requirements and inspection protocols for each monitoring/sampling/inspection event are outlined in the approved SMP.

Site wells were sampled on March 19 and 20, 2025 using sampling methods and procedures outlined in the SMP. Groundwater quality measurements including elevation (Table 3-0), temperature, turbidity, pH, conductivity and oxidation reduction potential (ORP) were collected during the purging process at each well. Purge water from each well was released to the ground surface near the well. At each well, samples were collected for analysis of VOCs and TAL metals. MW-11 is also sampled and analyzed for PFAS/PFOAs and 1,4-dioxane. Samples were submitted to ALS Environmental, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) - certified laboratory located in Rochester, New York. Groundwater monitoring and purge logs are included as Appendix A of this report.

6.0 Monitoring Results

6.1 Groundwater Data

The following constituents were detected in exceedance of 6 NYCRR Part 703.5 Class GA Groundwater Standards at one (1) or more sample locations for the reporting period:

Volatile Organics

- trichloroethene (TCE)
- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,1-dichloroethane (1,1-DCA)
- cis-1,2-dichloroethene (cis-1,2-DCE)
- 1,4-dioxane

Metals

- iron
- manganese
- magnesium
- sodium

Tabulated groundwater and surface water analytical results from the March 2025 monitoring event are attached as Table Group 1. The following provides a comprehensive summary of findings:

- Sampling at 8354 Jackson Hill Road did not identify VOC exceedances relative to Part 703.5.
- No VOC exceedances were identified at the upgradient well MW-1S, consistent with previous sampling events.
- VOC exceedances detected at MW-4 decreased relative to the November 2024 sampling event except cis-1,2-Dichloroethene which slightly increased.
- VOC concentrations at MW-7 were slightly lower relative to the previous reporting periods.
- VOC concentrations at MW-08 generally increased during the March 2025 sampling event; concentrations appear to fluctuate seasonally and have not surpassed levels observed in May 2018.
- No VOC exceedances were identified at downgradient well MW-10D, consistent with previous sampling events.
- VOC concentrations at MW-11 decreased slightly relative to the November 2024 sampling event, and remain generally consistent with prior sampling events.
- Lu Engineers had previously sampled MW-11 for 1,4-dioxane, PFOAs and PFAS in 2018. As



requested by the NYSDEC, MW-11 was re-sampled in April 2022, September 2023, November 2024 and March 2025, which continue to indicate decreased concentrations of 1,4-dioxane, PFOA and PFAS as compared to 2018 results for this well (Table 1-3).

- No VOC exceedances were identified at the downgradient well MW-12, consistent with previous sampling events.
- VOC concentrations at MW-13 slightly decreased relative to the November 2024 sampling event and no exceedances were noted.
- No VOC exceedances were identified at well MW-1D, consistent with the April 2022 sampling event.
- Wells MW-2, MW-3, MW-9, and MW-10 were dry and not sampled during this reporting period.
- Iron and manganese exceedances were frequently detected and generally fluctuated relative to previous sampling events.
- In addition to iron and manganese, magnesium and sodium were detected at concentrations exceeding applicable regulatory criteria at MW-12, but at slightly lower concentrations than November 2024.

Historical sample analytical results trends and graphs are included as Table Group 2.

6.2 Surface Water Data

Surface water sampling identified iron and manganese exceedances. Exceedances of iron and manganese decreased at SW-01 during the March 2025 sampling event relative to 2024. Exceedances of iron and manganese increased at SW-02 during the March 2025 sampling event relative to April 2022 (most recent sampling event at SW-02). Exceedances of iron criteria at SW-03 and SW-04 decreased during the March 2025 sampling event relative to November 2024. No VOCs were detected above minimum laboratory quantitation limits in any of the surface water samples (Table 1-1).

6.3 Leachate Indicator Data

Leachate indicators, other than TAL metals, have not been collected since 2014.

6.4 Landfill Gas Monitoring Data

In addition to groundwater monitoring, all landfill vents were screened for VOCs and combustible gases including H₂S, CO, O₂ using a PID and 4 gas meter in March 2025. Refer to Figure 2 for gas vent locations. No PID detections were observed during the Site-wide inspection, as documented in Appendix D.

6.5 Site Inspections

The landfill cap grades and swales were generally observed to be in good condition during this reporting period. The vegetated cap system appeared to be limiting the amount of surface water infiltration through buried waste and reducing the impact on groundwater quality as determined by water quality parameters. Small areas of exposed geotextile on the Site cap (See Figure 2) were repaired during this reporting period (See Photos 5, 6, 7 and 8 for typical repairs). As previously reported, exposed geotextile in these locations did not appear to suggest a breach or failure of the cover system.

An Import Request Form was submitted to NYSDEC on November 19, 2024. Approval of this form was provided by NYSDEC via email on March 11, 2025. The import request form and approval are included as Appendix F. The imported material is intended for occasional minor repairs to the Site roadways and related surfaces that may experience minor erosion from time-to-time requiring occasional repair on an as-needed basis. As requested by NYSDEC on July 16, 2025 (subsequent to the re-covering of geotextile as noted above), NYSDEC will be notified at least seven (7) days prior to use of any imported material on the Site.

Up to 10 willow trees located in the southwestern area of the Site appear to be stressed and may require replacement. Confirmation of the number of trees that may need replacement will be necessary during the growing season during the 2026-2027 reporting period.

The cover latch on the outer protective casing on MW-4 requires repair.

A copy of the Site-wide Inspection Form is included as Appendix D of this report. It is noted that any recommended repairs are considered minor and do not appear to have compromised the effectiveness of Site ECs.

6.6 Results Summary

In general, the remedy performance monitoring data presented herein indicate that the remedies implemented are performing as expected, are effective and protective, and are progressing towards the remedial action objectives. Groundwater VOC concentrations have generally continued to decrease over time but have fluctuated since 2011 (Table 2-1). The landfill cap is serving to reduce groundwater impacts as determined by previous leachate indicator parameter concentrations. The data also indicate that water quality does not appear to have been impacted from surface water runoff from the Site. These findings generally demonstrate progress towards attaining the remediation goals set forth in the controlling documents and the Record of Decision.

7.0 Conclusions and Recommendations

7.1 Compliance with the Site Management Plan

The controlling document for the Site is the approved SMP (2021). The requirements specified in the SMP have been met during the reporting period of this PRR.

The ROD for the Site requires groundwater use restrictions. NYSDEC placed a Declaration of Covenants and Restrictions on file at the Allegany County Clerk's office that restricts groundwater use in the area around the Site (Table 3-0).

7.2 Performance and Effectiveness of the Remedies

Overall, the remedy performance monitoring data collected during this reporting period indicates that the remedies implemented for both of the operable units are performing generally as expected, are effective and protective. The landfill cap is serving to reduce groundwater impacts as determined by generally stable and/or declining leachate indicator parameter concentrations.

Landfill gas is typical and is not impacting resources. It appears that stream and tributary water quality has not been impacted from surface water discharges from the Site. These factors demonstrate progress towards attaining the remediation goals set forth in the controlling documents and the ROD.



7.3 Future Sampling Schedule and Periodic Review Report Submittals

Based on the analytical data generated during this reporting period, it remains evident that cVOCs, iron, and manganese are the primary contaminants of concern at the Site. Slight increases in concentrations of VOCs and metals in Site monitoring wells are likely related to seasonal fluctuations in groundwater elevations. The general trend of contaminant concentrations continues to suggest that contaminant degradation is occurring. In accordance with the approved SMP for this Site, Lu Engineers will plan to perform the next sampling event during the first quarter of 2026.

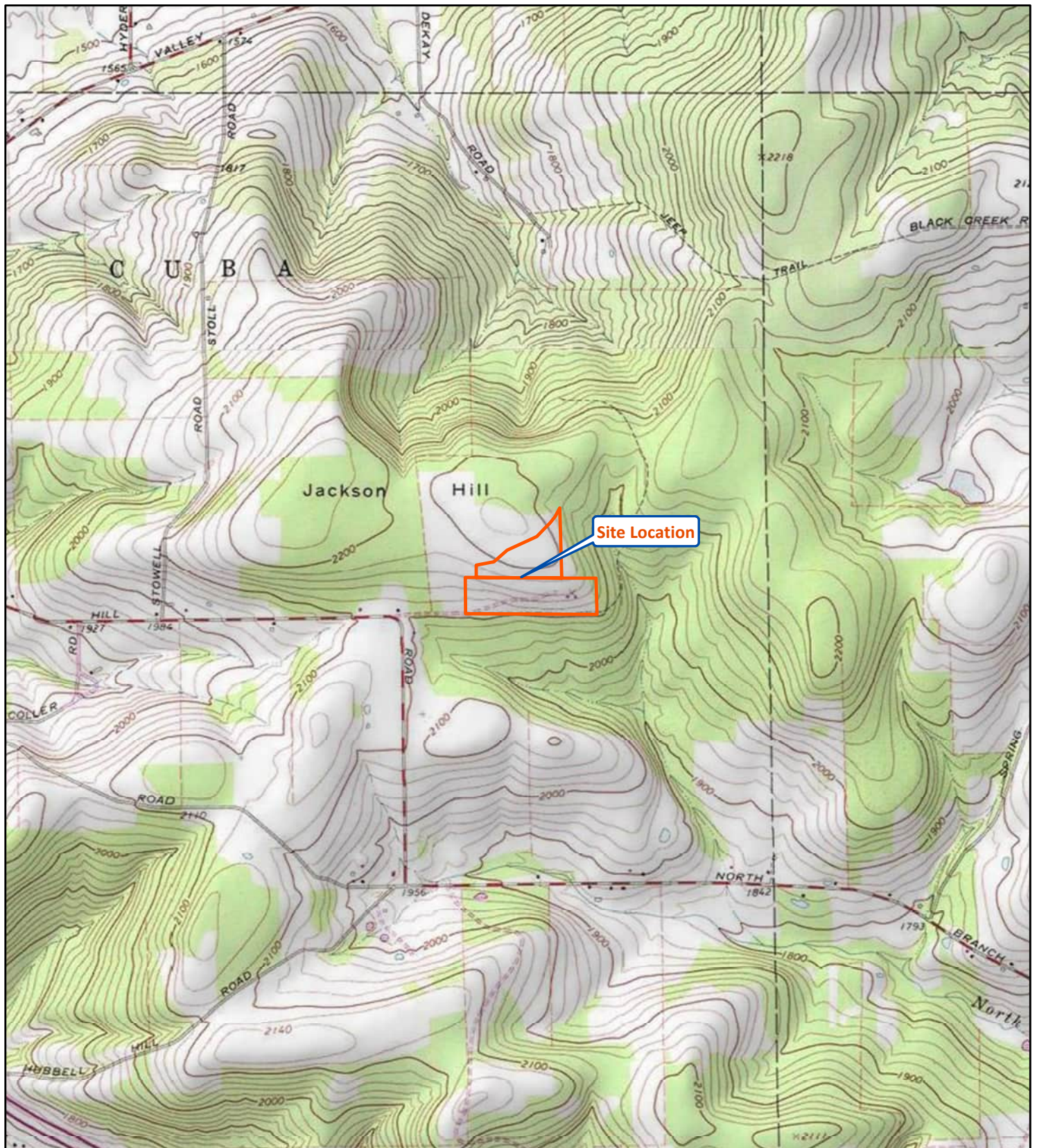
7.4 Recommendations

It is recommended that the next PRR be submitted approximately one (1) year from submittal of this PRR. A final determination of the submittal schedule for future Site reporting requirements will be determined with approval by the NYSDEC.

It is also recommended that any minor erosion be repaired by the Village on an ongoing, as-needed basis once NYSDEC approval for material import has been received.

Due to the sampling and inspection event taking place before the growing season, the status of the willow trees was difficult to verify, but several willow trees were observed to be dead or in distress. To the extent possible, it is recommended that this area be inspected during the next sampling event to determine if there are increased amounts of stressed and/or dead vegetation. A total count of live trees should be completed and replacement of trees should be completed (upon NYSDEC approval to do so) during the 2026-2027 reporting period.





Scale: 1:24,000

Contour Interval: 20 feet

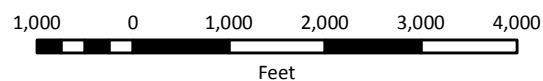


Figure 1. Site Location Plan
Cuba Landfill Site
NYSDEC SITE #902012
Cuba, New York

DATE: February 2019

PROJECT #: 50191-01

DRAWN/CHECKED: BGS/GLA

DATA SOURCE:
ESRI Online Basemap

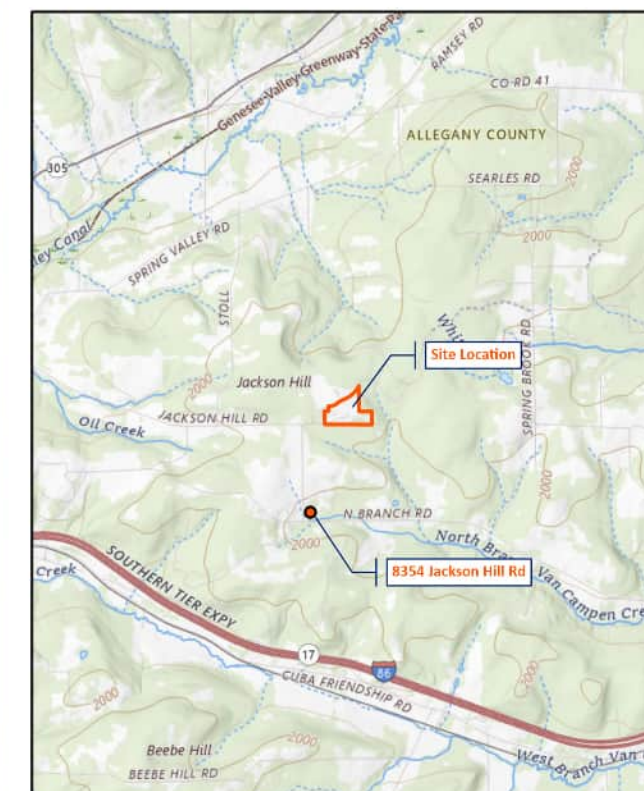
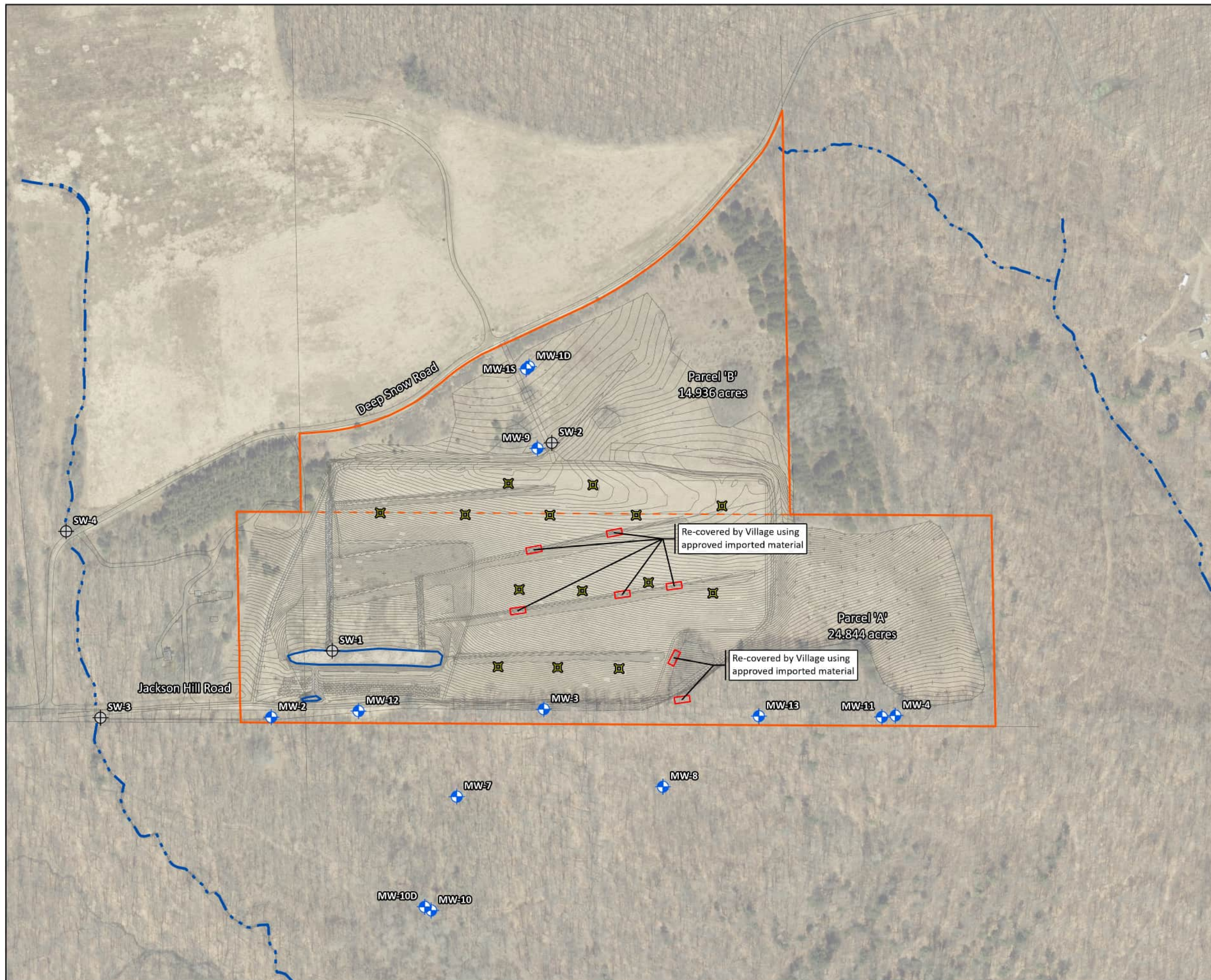


Figure 2:
Site Plan

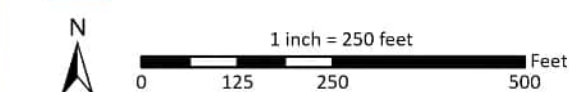
Project:
Cuba Municipal Waste Disposal Site
PRR 2025

Location:
Jackson Hill Road
Cuba, Allegany County, NY



Legend

- Site Boundary
- North Branch, Van Campen Creek
- + Monitoring Wells
- + Surface Water Sample Locations
- Landfill Gas Vent
- ▭ Areas of Exposed Geotextile Material (Approximate)



Drawn/Checked By: MGA/GLA
Lu Project Number: 50191
Date: February 2026
General:
1. Coordinate System: NAD 1983 State Plane NY West FIPS 3103 Feet
2. Scale: 1:3,000 (original document size 11"x17")

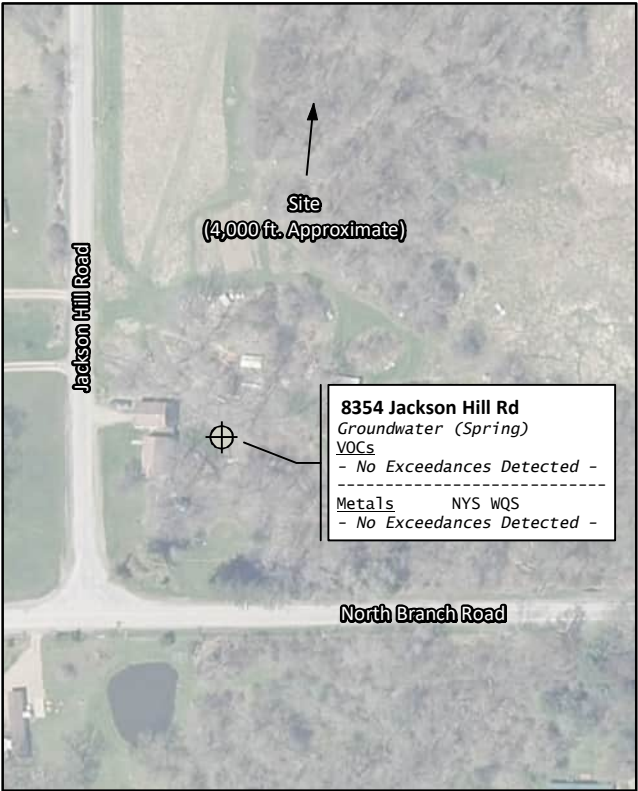
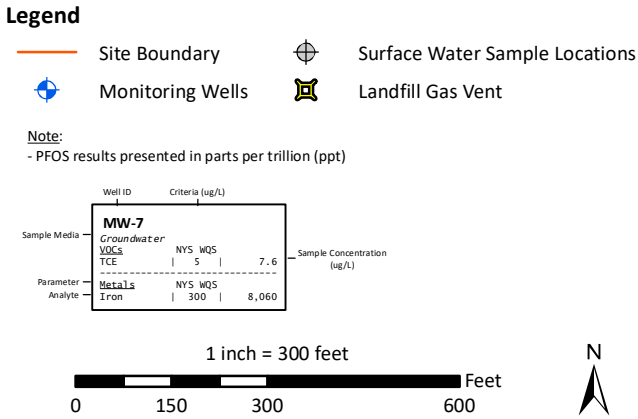


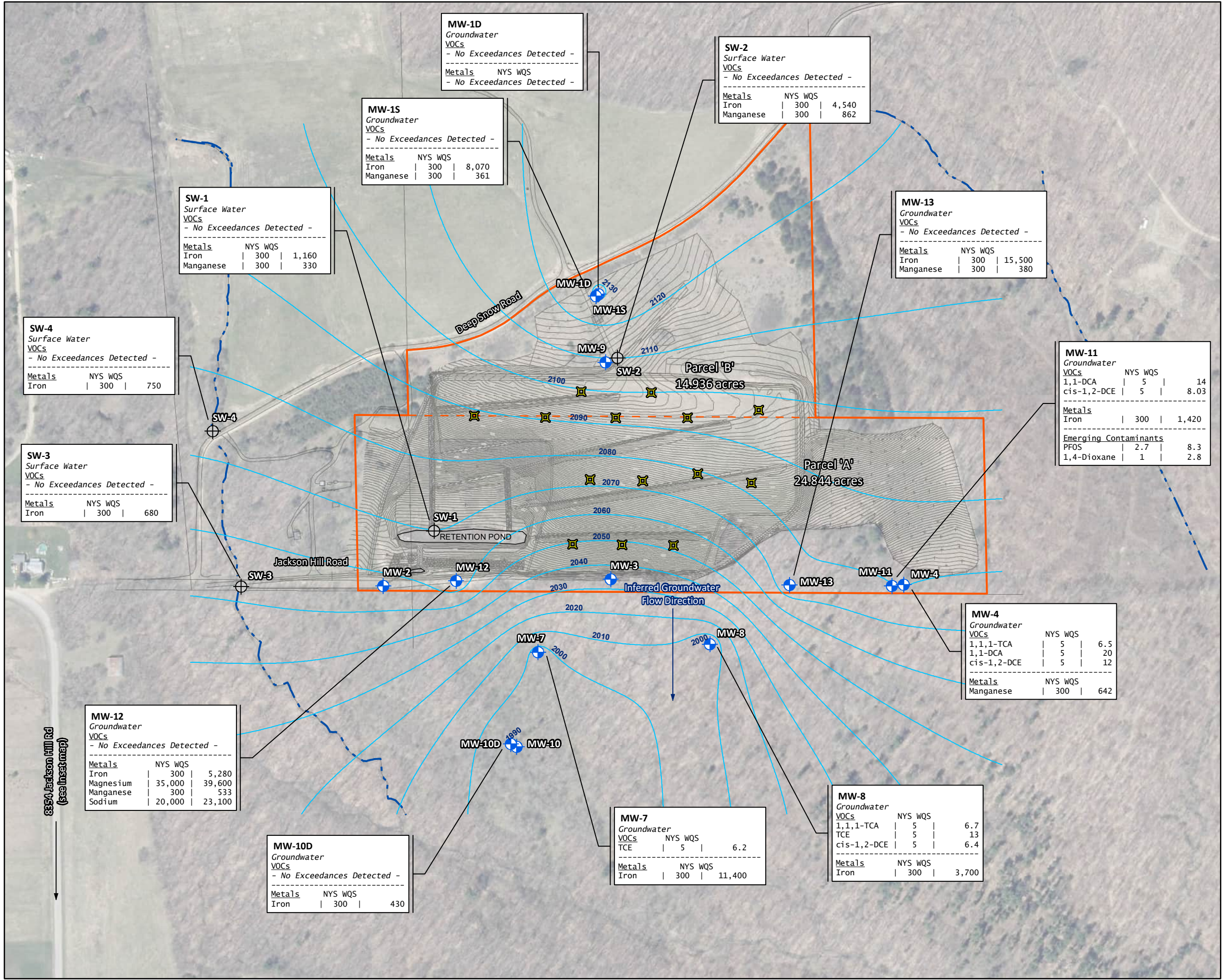
Figure 3:
March 2025 Sample Analytical Results

Project:
Cuba Municipal Waste Disposal Site
PRR 2025-2026

Location:
Jackson Hill Road
Cuba, Allegany County, NY



Drawn/Checked By: MEW/GLA
Lu Project Number: 50191
Date: May 2025
General:
1. Coordinate System: NAD 1983 State Plane NY West FIPS 3103 Feet
2. Scale: 1:3600 (original document size 11"x17")



[March 2025 Results]

Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2025-2026
Groundwater Sample Analytical Results

Table 1-1: Sample Analytical Results - VOCs ¹ Detected Parameters:			Sample ID:	8354 Jackson	MW-1S	MW-1D	MW-2	MW-3	MW-4	MW-7	MW-8	MW-9	MW-10	MW-10D	MW-11	MW-12	MW-13	SW-01	SW-02	SW-03	SW-04											
			Sample Date:	3/20/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/20/2025	3/20/2025	3/19/2025	3/20/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025										
			Matrix	Surface Water	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Surface Water	Surface Water	Surface Water	Surface Water									
EPA 8260 - VOCs	NYSDEC TOGS 1.1.1		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q										
	Surface Water Standard	Groundwater Standard																														
1,1,1-Trichloroethane (TCA)	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	6.5	3.50	6.7	NS	NS	1.5	4.9	<	ND	3.3	<	ND	<	ND	<	ND	<	ND	<	ND		
1,1,2,2-Tetrachloroethane	0.2	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,1,2-Trichloroethane	1.0	1.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,1-Dichloroethane (1,1-DCA)	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	20	1	4.9	NS	NS	0.48 J	14	<	ND	3.3	<	ND	<	ND	<	ND	<	ND	<	ND		
1,1-Dichloroethene (1,1-DCE)	0.7	5.0	<	ND	<	ND	<	ND	NS	NS	2.1	0.49 J	0.41 J	NS	NS	0.22 J	1.3	<	ND	0.26 J	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2,3-Trichlorobenzene	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2,4-Trichlorobenzene	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2-Dibromo-3-chloropropane (DBCP)	0.04	0.04	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2-Dibromoethane	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2-Dichlorobenzene	3.0	3.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2-Dichloroethane	0.6	0.6	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,2-Dichloropropane	1.0	1.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,3-Dichlorobenzene	3.0	3.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
1,4-Dichlorobenzene	3.0	3.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
2-Butanone (MEK)	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
2-Hexanone	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
4-Methyl-2-pentanone	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND		
Acetone	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	6.5	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Benzene	1.0	1.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Bromochloromethane	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Bromodichloromethane	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Bromoform	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Bromomethane	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Carbon Disulfide	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Carbon Tetrachloride	0.4	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Chlorobenzene	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Chloroethane	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	0.46 J	<	ND	<	ND	<	ND	<	ND	<	ND		
Chloroform	7.0	7.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Chloromethane	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Cyclohexane	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Dibromochloromethane	50	50	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Dichlorodifluoromethane (CFC 12)	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Dichloromethane	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Ethylbenzene	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Isopropylbenzene (Cumene)	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Methyl Acetate	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Methyl tert-Butyl Ether	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Methylcyclohexane	--	--	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Styrene	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	
Tetrachloroethene (PCE)	0.7	5.0	<	ND	<	ND	<	ND	NS	NS	0.29 J	<	ND	<	ND	NS	NS	<	ND	1.3	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND
Toluene	5.0	5.0	<	ND	<	ND	<	ND	NS	NS	&																					

Notes

-- Results presented in parts per billion (ppb)

1 -- Surface Water Class A, A-S, AA, AA-S

2 -- Groundwater Class GA

< : Results not detected above minimum laboratory quantitation limit

NS: Well not sampled (dry)

J: Estimated value due to concentration between the MRL and the MDL

	Results exceed surface water quality standard/guidance value
	Results exceed groundwater quality standard/guidance value

Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2025-2026
Groundwater Sample Analytical Results

Table 1-2: Sample Analytical Results - Metals Detected Parameters:			Sample ID:	8354 Jackson	MW-1S	MW-1D	MW-2	MW-3	MW-4	MW-7	MW-8	MW-9	MW-10	MW-10D	MW-11	MW-12	MW-13	SW-01	SW-02	SW-03	SW-04						
			Sample Date:	3/20/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025	3/20/2025	3/20/2025	3/19//2025	3/20/2025	3/19/2025	3/19/2025	3/19/2025	3/19//2025	3/19//2025	3/19/2025	3/19/2025	3/19/2025	3/19/2025					
			Matrix	Surface Water	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Surface Water	Surface Water	Surface Water	Surface Water				
EPA 6010 - Metals	NYSDEC TOGS 1.1.1		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q					
	Surface Water Stand	Groundwater Stand																									
Aluminum, Total	--	--	<	100.0	9,550	170	NS	NS	30.0 J	12,100	4,100	NS	NS	450	1,900	6,190	14,500	140	4,950	880	1,020						
Antimony, Total	3.0	3.0	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND				
Arsenic, Total	50	25	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND				
Barium, Total	1,000	1,000		37	138	5 J	NS	NS	22	120	66	NS	NS	34	22	106	141	15 J	47	11 J		9 J					
Beryllium, Total	3.0	3.0	<	ND	0.3	ND	NS	NS	<	ND	<	0.4 J	ND	NS	NS	<	ND	<	ND	<	ND	<	ND				
Cadmium, Total	5.0	5.0	<	ND	0.6 J	ND	NS	NS	<	ND	2.50 J	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND				
Calcium, Total	--	--		19,000	37,500	20800	NS	NS	36,700	52,200	38,100	NS	NS	44,900	35,300	77,000	30,800	28,000	11,800	3,600		2,400					
Chromium, Total	50	50	<	ND	11	ND	NS	NS	<	ND	14	5 J	NS	NS	<	ND	2 J	7.0 J	18	<	ND	5 J	2 J	ND			
Cobalt, Total	5	--	<	ND	4 J	ND	NS	NS	<	ND	<	5 J	2 J	NS	NS	<	ND	<	ND	3.0 J	6 J	<	ND	ND			
Copper, Total	200	200	<	ND	9 J	ND	NS	NS	<	ND	99	7 J	NS	NS	<	ND	<	ND	<	7.0 J	8 J	<	ND	<	ND		
Iron, Total	300	300	<	ND	8,070	120	NS	NS	<	ND	11,400	3,700	NS	NS	430	1,420	5,280	15,500	1,160	4,540	680		750				
Lead, Total	50	25	<	ND	8 J	ND	NS	NS	<	ND	18 J	<	ND	NS	NS	<	ND	<	ND	5 J	4 J	<	ND J	<	ND	<	ND
Magnesium, Total	35,000	35,000		4,500	7,600	9600	NS	NS	9,200	26,200	14,800	NS	NS	19,700	8,700	39,600	7,100	8,200	2,400	900 J		600 J					
Manganese, Total	300	300	<	ND	361	12	NS	NS	642	344	71	NS	NS	169	101	533	380	330	862	20		14					
Mercury, Total	0.7	0.7	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND
Nickel, Total	100	100		5.0 J	56	12 J	NS	NS	12 J	53 J	30 J	NS	NS	14 J	20 J	45	72 J	7 J	23 J	7 J		6 J					
Potassium, Total	--	--		1,900	3,900	1200 J	NS	NS	2,300	4,800	2,700	NS	NS	1,900 J	2,300	5,700	4,700	2,000	3,400	1,400 J		1,400 J					
Selenium, Total	10	10	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND
Silver, Total	50	50	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND
Sodium, Total	--	20,000		22,700	2,300	3600	NS	NS	3,100	6,600	5,200	NS	NS	16,300	2,900	23,100	2,900	7,700	800 J	2,200		2,200					
Thallium, Total	0.50	0.50	<	ND	<	ND	ND	NS	NS	<	ND	<	ND	NS	NS	<	ND	<	ND	<	ND	<	ND	<	ND	<	ND
Vanadium, Total	14.0	--	<	ND	13 J	ND	NS	NS	<	ND	15 J	6 J	NS	NS	<	ND	3 J	8 J	18 J	<	ND	7 J	1 J		1 J		
Zinc, Total	2,000	2,000		6 J	55	3 J	NS	NS	3 J	88	18 J	NS	NS	9.0 J	6 J	18 J	38	4 J	<	20.00	5 J		5 J				

Notes

– Results presented in parts per billion (ppb)

1 – Surface Water Class A, A-S, AA, AA-S

2 – Groundwater Class GA

< : Results not detected above minimum laboratory quantitation limit

NS: Well not sampled (dry)

J: Estimated value due to concentration between the MRL and the MDL

*: guidance value

	Results exceed surface water quality standard/guidance value
	Results exceed groundwater quality standard/guidance value

Table 1-3: Sample Analytical Results - Emerging Contaminants Detected Parameters:	Sample ID:	MW-11	
	Sample Date:	3/18/2025	
	Matrix	Groundwater	
EPA 537 - Perfluorinated Compounds	NYSDEC PFAS Under Part 375	Result	Q
	Groundwater Standard		
Perfluorobutanesulfonic acid (PFBS)	10*	< ND	
Perfluorohexanesulfonic acid (PFHxS)	10*	< ND	
Perfluoroheptanesulfonic acid (PFHpS)	10*	< ND	
Perfluorooctanesulfonic acid (PFOS)	2.7	8.03	
Perfluorodecane sulfonic acid	10*	< ND	
Perfluorobutanoic acid (PFBA)	10*	< ND	
Perfluoropentanoic acid (PFPeA)	10*	0.363	J
Perfluorohexanoic acid (PFHxA)	10*	0.745	J
Perfluoroheptanoic acid (PFHpA)	10*	< ND	
Perfluorooctanoic acid (PFOA)	6.7	3.03	
Perfluorononanoic acid (PFNA)	10*	< ND	
Perfluorodecanoic acid (PFDA)	10*	< ND	
Perfluoroundecanoic acid	10*	< ND	
Perfluorododecanoic acid	10*	< ND	
Perfluorotridecanoic acid	10*	< ND	
Perfluorotetradecanoic acid	10*	< ND	
6:2 Fluorotelomer sulfonate	10*	< ND	
8:2 Fluorotelomer sulfonate	10*	< ND	
Perfluorooctanesulfonate	10*	< ND	
Perfluorooctane sulfonamide	10*	< ND	
N-methyl perfluorooctanesulfonamidoacetic acid	10*	< ND	
N-ethyl perfluorooctanesulfonamidoacetic acid	10*	< ND	
EPA 8270 - SIM-Semi-volatile Organics		Result	Q
1,4-Dioxane	1.0 (ppb)	2.8	

Notes:

1- Results presented in parts per trillion (ppt) unless otherwise indicated

*- NYSDEC Guidance Value

< : Results not detected above minimum laboratory quantitation limit

Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses.

Results exceed groundwater quality standard/guidance value

[Trend Analyses]

Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
VOC Result Trends

Table 2-1 VOC Result Trends

Detected Parameters	Well ID:		MW-1S																MW-1D																
	Timeline:		Pre-Remediation		Post-Remediation														Pre-Remediation		Post-Remediation														
	Date:		Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/18/25	Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/18/25	
	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
	Surface Water																																	Groundwater	
EPA 8260 - VOCs																																			
Acetone	50	50	< ND	< ND	< ND	2.21	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	2.60 J	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND
Chloroethane	5.0	5.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
cis-1,2-Dichloroethene	5.0	5.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
1,1-Dichloroethane	5.0	5.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	0.19	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
1,1-Dichloroethene	0.7	5.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
1,1,1-Trichloroethane	5.0	5.0	1.00	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	0.20	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
Tetrachloroethene	0.7	5.0	1.00	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
Trichloroethene	5.0	5.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	
Vinyl Chloride	0.3	2.0	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	NS	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	

Detected Parameters	Well ID:		MW-2																	MW-3															
	Timeline:		Pre-Remediation		Post-Remediation															Pre-Remediation		Post-Remediation													
	Date:		Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/18/25	Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/18/25	
	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
	Surface Water																																	Groundwater	
EPA 8260 - VOCs																																			
Acetone	50	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	14.0	433	NS	< ND	NS	< ND	NS	NS	NS	NS	NS	NS	NS	NS		
Chloroethane	5.0	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	4.00	20.6	NS	56.2	NS	14.0	NS	NS	NS	NS	NS	NS	NS	NS		
cis-1,2-Dichloroethene	5.0	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.31	NS	NS	NS	NS	NS	< ND	622	NS	< ND	NS	79.0	NS	NS	NS	NS	NS	NS	NS	NS		
1,1-Dichloroethane	5.0	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	11.0	81.6	NS	86.4	NS	27.0	NS	NS	NS	NS	NS	NS	NS	NS		
1,1-Dichloroethene	0.7	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	65.0	7.20	NS	4.8	NS	< ND	NS	NS	NS	NS	NS	NS	NS	NS		
1,1,1-Trichloroethane	5.0	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	240	73.8	NS	84.8	NS	33.0	NS	NS	NS	NS	NS	NS	NS	NS		
Tetrachloroethene	0.7	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	< ND	< ND	NS	< ND	NS	< ND	NS	NS	NS	NS	NS	NS	NS	NS		
Trichloroethene	5.0	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	290	99.8	NS	162	NS	210	NS	NS	NS	NS	NS	NS	NS	NS		
Vinyl Chloride	0.3	2.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	< ND	NS	NS	NS	NS	NS	< ND	< ND	NS	< ND	NS	< ND	NS	NS	NS	NS	NS	NS	NS	NS		

Detected Parameters	Well ID:		MW-4																	MW-7															
	Timeline:		Pre-Remediation		Post-Remediation															Pre-Remediation		Post-Remediation													
	Date:		Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/18/25	Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/25/21	4/12/22	9/14/23	11/14/24	3/19/25	
	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
	Surface Water	Groundwater																																	
EPA 8260 - VOCs																																			
Acetone	50	50	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	7.90 B	< ND	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	< ND	< ND	NS	< ND	< ND	5.4 B	< ND	< ND	< ND	< ND	< ND	< ND	
Chloroethane	5.0	5.0	< ND	5.62	6.22	2.12	11.0	12.0	< ND	9.60	6.00	6.40	4.40	0.90 J	< ND	1.1	.41 J	< ND	NS	NS	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	
cis-1,2-Dichloroethene	5.0	5.0	< ND	13.4	10.2	10.1	18.0	21.0	20.0	12.0	10.0	29.0	32.0	14.0	14.0	30.0	6.1	12.0	NS	NS	< ND	3.22	< ND	< ND	< ND	NS	2.90	2.80	3.00	3.50	3.10	3.30	3.00	2.90	2.40
1,1-Dichloroethane	5.0	5.0	100	85.5	84.6	62.7	79.0	68.0	100	38.0	30.0	57.0	77.0	34.0	25.0	63.0	43.0	20.0	NS	NS	< ND	1.53	< ND	< ND	NS	1.30 J	1.30 J	1.60	1.80	1.50	1.40	1.50	1.40	1.00	
1,1-Dichloroethene	0.7	5.0	1.00	3.62	3.95	3.08	6.90	7.70	6.00	3.10	3.30	6.20	7.20	3.40	2.40	5.60	3.30	2.10	NS	NS	< ND	0.55	< ND	< ND	NS	0.56	0.62	ND	0.83 J	0.89 J	1.0	0.66 J	.50 J	.49 J	
1,1,1-Trichloroethane	5.0	5.0	12.0	30.1	24.5	19.7	24.0	32.0	30.0	12.0	10.0	19.0	17.0	12.0	6.20	19.0	7.6	6.5	NS	NS	5.90	5.63	< ND	< ND	NS	4.50	4.40	4.40	4.50	4.10	4.40	3.90	3.50	3.50	
Tetrachloroethene	0.7	5.0	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	0.46 J	0.68 J	0.33 J	0.33 J	< ND	.29 J	NS	NS	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	
Trichloroethene	5.0	5.0	4.00	14.1	6.22	6.75	< ND	< ND	6.40	5.30	4.30	2.50	2.2	4.30	3.30	3.50	2.20	3.90	NS	NS	6.90	7.55	6.90	7.10	NS	6.40	6.30	7.30	7.10	7.60	6.20	6.90	6.20	6.20	
Vinyl Chloride	0.3	2.0	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	3.6	< ND	1.40	2.40	1.10	0.88 J	NS	NS	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	

Cuba Municipal Waste Disposal Site (#902012)
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VOC Result Trends

Table 2-1 (continued) VOC Result Trends

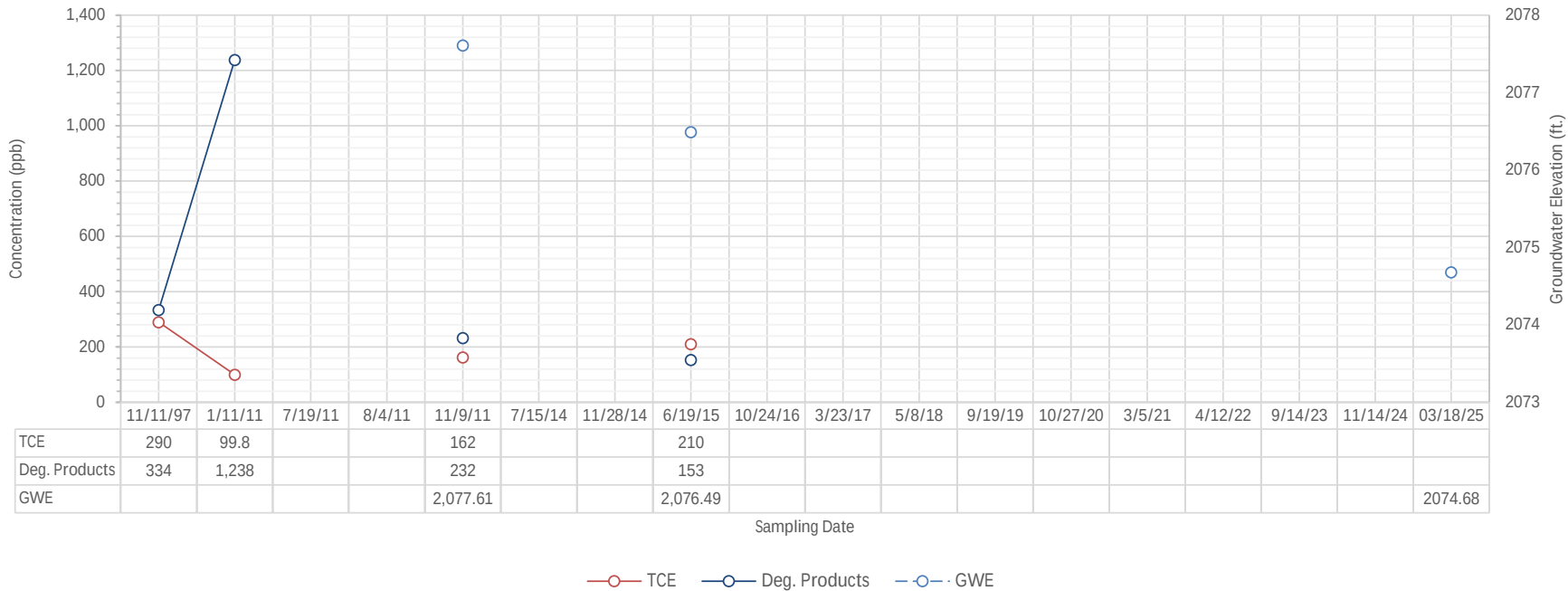
Detected Parameters	Well ID:		MW-10D																	MW-11															
	Timeline:		Pre-Remediation Nov. 1997	Post-Remediation																Pre-Remediation Nov. 1997	Post-Remediation														
	Date:			Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/15/24	3/19/25	Jan. 2011		7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/14/24	3/18/25	
	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
	Surface Water	Groundwater																																	
EPA 8260 - VOCs																																			
Acetone	50	50	NS	NS	< ND	6.66	< ND	< ND	< ND	< ND	5.70	< ND	< ND	< ND	< ND	< ND	< ND	6.5	NS	5.45	< ND	1.81	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND		
Chloroethane	5.0	5.0	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	2.23	< ND	1.17	< ND	< ND	< ND	1.50 J	< ND	2.10	1.50	1.30	< ND	0.36 J	.46 J	.46 J		
cis-1,2-Dichloroethene	5.0	5.0	NS	NS	< ND	0.69	< ND	< ND	< ND	< ND	< ND	< ND	0.83 J	0.86 J	0.61 J	0.87 J	.74 J	.77 J	NS	4.87	9.10	4.17	< ND	8.10	< ND	7.00	7.30	3.6	12.0	12.0	11.0	6.5	23	8.3	
1,1-Dichloroethane	5.0	5.0	NS	NS	< ND	0.50	< ND	< ND	< ND	< ND	< ND	< ND	0.61 J	0.66 J	0.47 J	0.67 J	.65 J	< ND	NS	50.5	53.0	44.0	25.0	39.0	< ND	24.0	26.0	8.8	30.0	28.0	23.0	14.0	37	14	
1,1-Dichloroethene	0.7	5.0	NS	NS	< ND	0.18	< ND	< ND	< ND	< ND	< ND	< ND	0.20 J	0.28 J	ND	0.23 J	.22 J	< ND	NS	1.61	ND	1.48	ND	ND	< ND	1.40	2.10	< ND	2.20	2.80	2.00	0.83 J	2.5	1.3	
1,1,1-Trichloroethane	5.0	5.0	NS	NS	< ND	1.66	< ND	< ND	< ND	0.99	< ND	1.60	1.60	1.60	1.00	1.60	1.30	< ND	NS	13.9	15.0	12.8	6.0	11.0	< ND	6.40	7.90	2.50	4.90	5.80	5.30	2.40	6.9	4.9	
Tetrachloroethene	0.7	5.0	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	1.45	< ND	2.92	< ND	< ND	< ND	1.60	1.40	ND	1.10	1.00	1.10	0.80 J	2.8	1.9	
Trichloroethene	5.0	5.0	NS	NS	< ND	0.70	< ND	< ND	< ND	0.64	0.41 J	< ND	0.70 J	0.90 J	0.87 J	0.96 J	.73 J	.83 J	NS	4.03	< ND	4.27	< ND	< ND	< ND	< ND	4.00	4.50	1.30	3.10	3.60	3.20	2.00	5.1	4.1
Vinyl Chloride	0.3	2.0	NS	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	0.67 J	0.72 J	0.43 J	< ND	.75 J	< ND	

Detected Parameters	Well ID:		MW-12																	MW-13														
	Timeline:		Pre-Remediation	Post-Remediation																Pre-Remediation	Post-Remediation													
	Date:		Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/15/24	3/18/25	Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/14/24	3/18/25
EPA 8260 - VOCs	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	Surface Water	Groundwater																																
Acetone	50	50	NS	5.22	< ND	2.41	< ND	< ND	< ND	1.70	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	6.21	< ND	1.61	< ND	< ND	< ND	< ND	1.70 J	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND
Chloroethane	5.0	5.0	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	0.61	< ND	0.37	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	
cis-1,2-Dichloroethene	5.0	5.0	NS	1.29	< ND	1.47	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	0.44 J	< ND	< ND	NS	14.7	12.0	17.1	11.0	7.40	9.70	6.10	4.40	6.50	NS	6.50	5.40	5.40	6.1	3.4	
1,1-Dichloroethane	5.0	5.0	NS	2.10	< ND	2.14	< ND	< ND	< ND	0.70 J	< ND	< ND	0.21 J	0.53 J	0.69 J	0.36 J	.29 J	< ND	NS	21.4	15.0	20.0	14.0	9.30	12.000	6.60	5.40	6.40	NS	6.50	4.90	5.40	5.9	3.3
1,1-Dichloroethene	0.7	5.0	NS	0.32	< ND	0.21	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	1.06	< ND	1.67	< ND	< ND	< ND	0.93	0.43 J	ND	NS	0.39 J	0.54 J	0.40 J	.47 J	.26 J	
1,1,1-Trichloroethane	5.0	5.0	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	0.23 J	0.35 J	0.36 J	.20 J	< ND	NS	27.4	16.0	24.7	14.0	11.0	11.0	9.00	5.30	6.60	NS	6.50	5.70	4.60	4.6	3.3
Tetrachloroethene	0.7	5.0	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	7.39	6.40	6.55	5.70	5.40	6.00	5.90	4.50	4.60	NS	4.40	3.60	4.20	3.8	3.2	
Trichloroethene	5.0	5.0	NS	1.33	< ND	1.45	< ND	< ND	< ND	0.78	0.28 J	< ND	0.30 J	0.44 J	0.59 J	0.60 J	.31 J	< ND	NS	17.8	13.0	15.9	13.0	9.90	12.00	9.50	6.40	8.10	NS	7.50	5.70	6.50	6.8	4.5
Vinyl Chloride	0.3	2.0	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	< ND	NS	< ND	< ND	< ND	< ND	< ND	

Detected Parameters	Well ID:		SW-1																SW-2															
	Timeline:		Pre-Remediation	Post-Remediation															Pre-Remediation	Post-Remediation														
	Date:		Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/15/24	3/18/25	Nov. 1997	Jan. 2011	7/19/11	11/9/11	11/28/14	6/19/15	10/24/16	3/23/17	5/8/18	9/19/19	10/27/20	3/5/21	4/12/22	9/14/23	11/15/24	3/18/25
	NYSDEC TOGS 1.1.1		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	Surface Water	Groundwater																																
EPA 8260 - VOCs																																		
Acetone	50	50	NS	NS	< ND	NS	< ND	< ND	< ND	1.80 J	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	NS	< ND	NS	< ND	< ND	NS	NS	NS	< ND	5.50	< ND	NS	NS	< ND	
Chloroethane	5.0	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
cis-1,2-Dichloroethene	5.0	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
1,1-Dichloroethane	5.0	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
1,1-Dichloroethene	0.7	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
1,1,1-Trichloroethane	5.0	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
Tetrachloroethene	0.7	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
Trichloroethene	5.0	5.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	
Vinyl Chloride	0.3	2.0	NS	NS	< ND	NS	< ND	< ND	< ND	< ND	< ND	NS	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	< ND	< ND	NS	NS	NS	< ND	< ND	< ND	NS	NS	< ND	

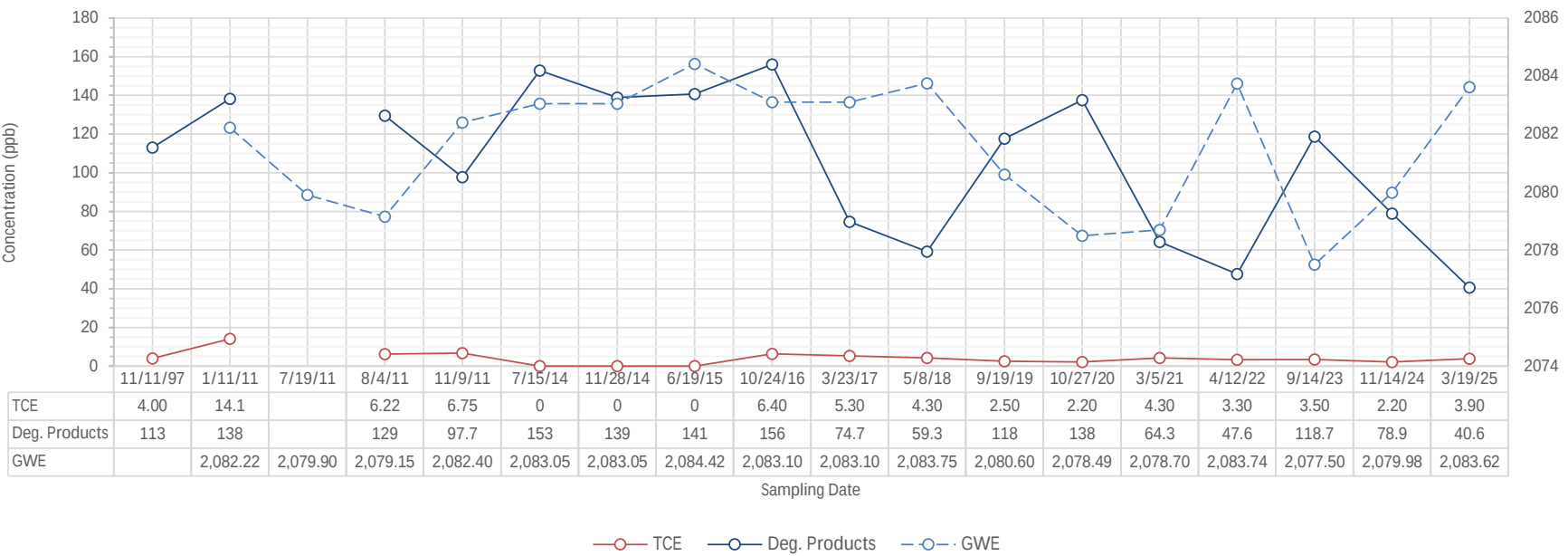
Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
VOC Result Trends

MW-03



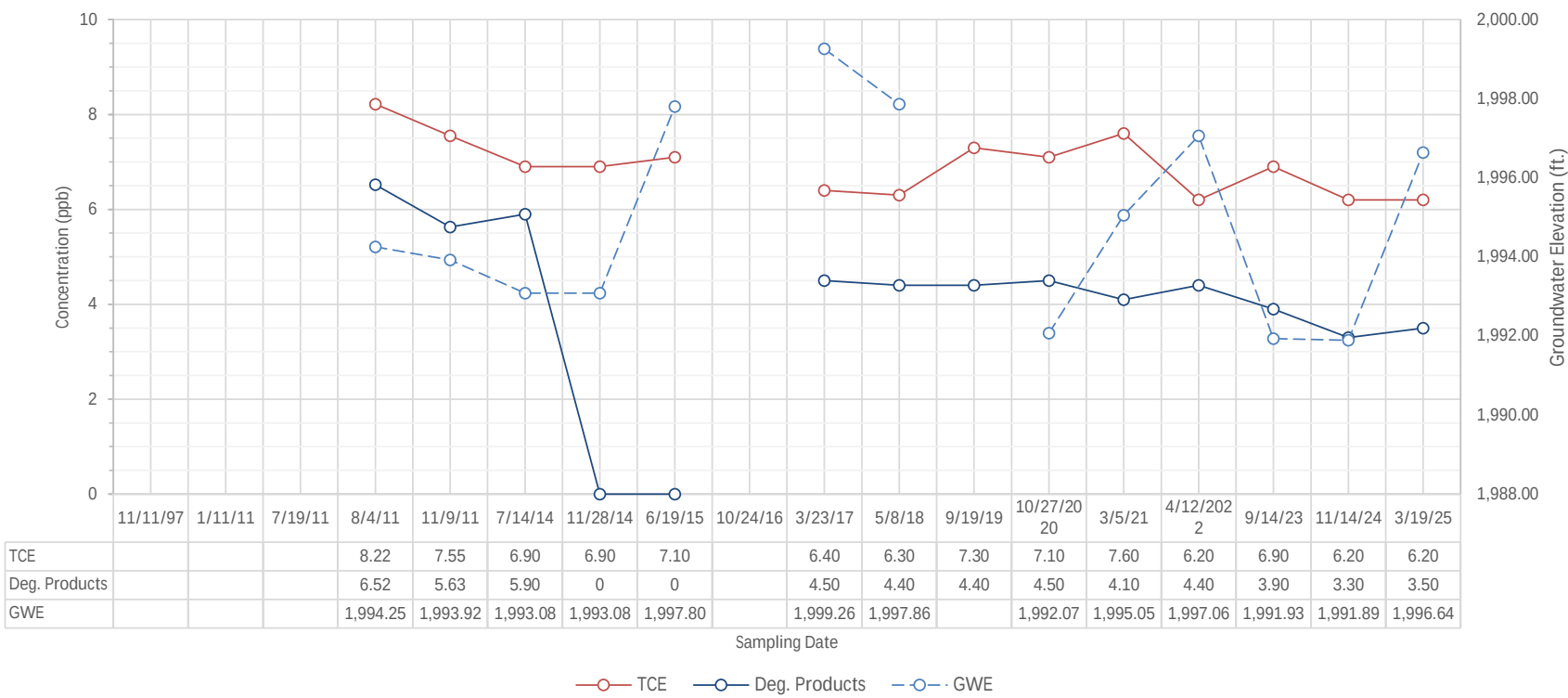
Groundwater Quality Standard (GWQS):
TCE - 5.0 ppb

MW-04



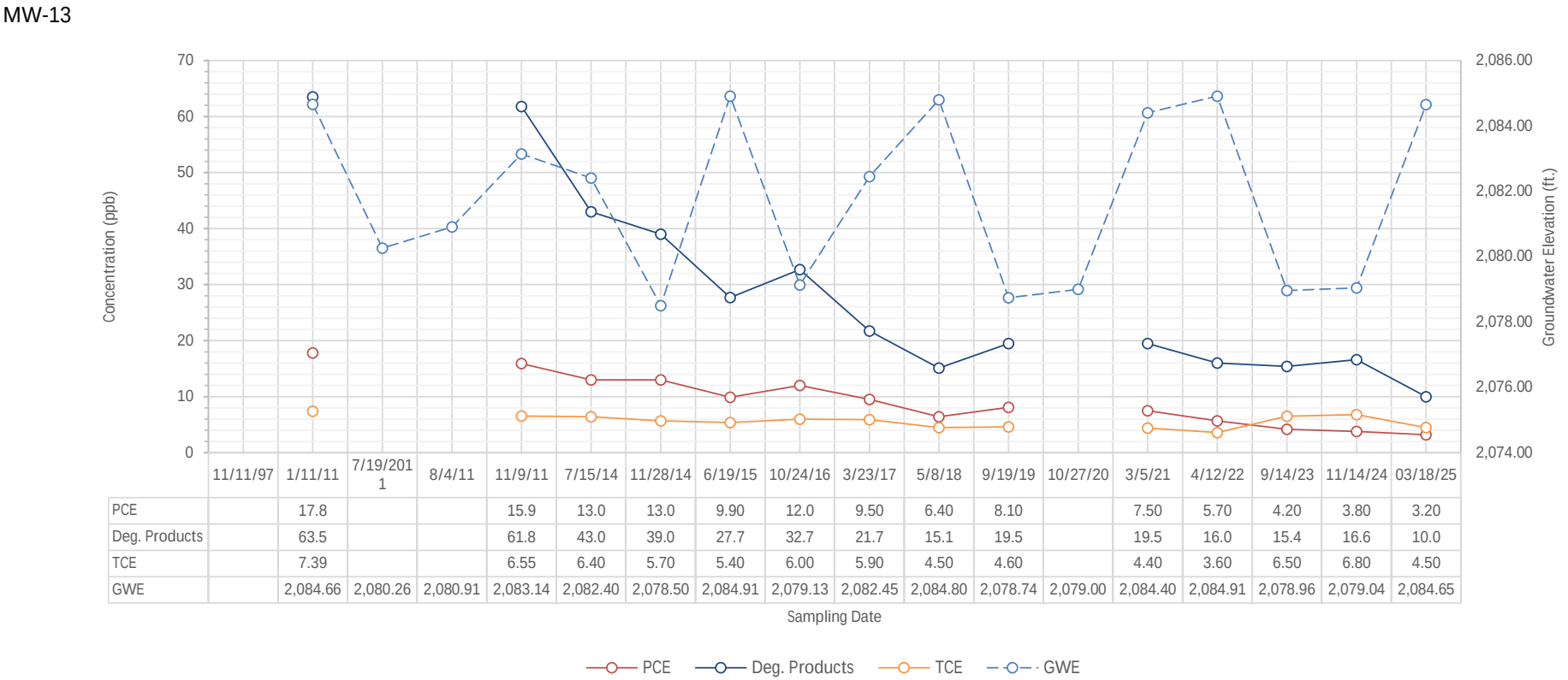
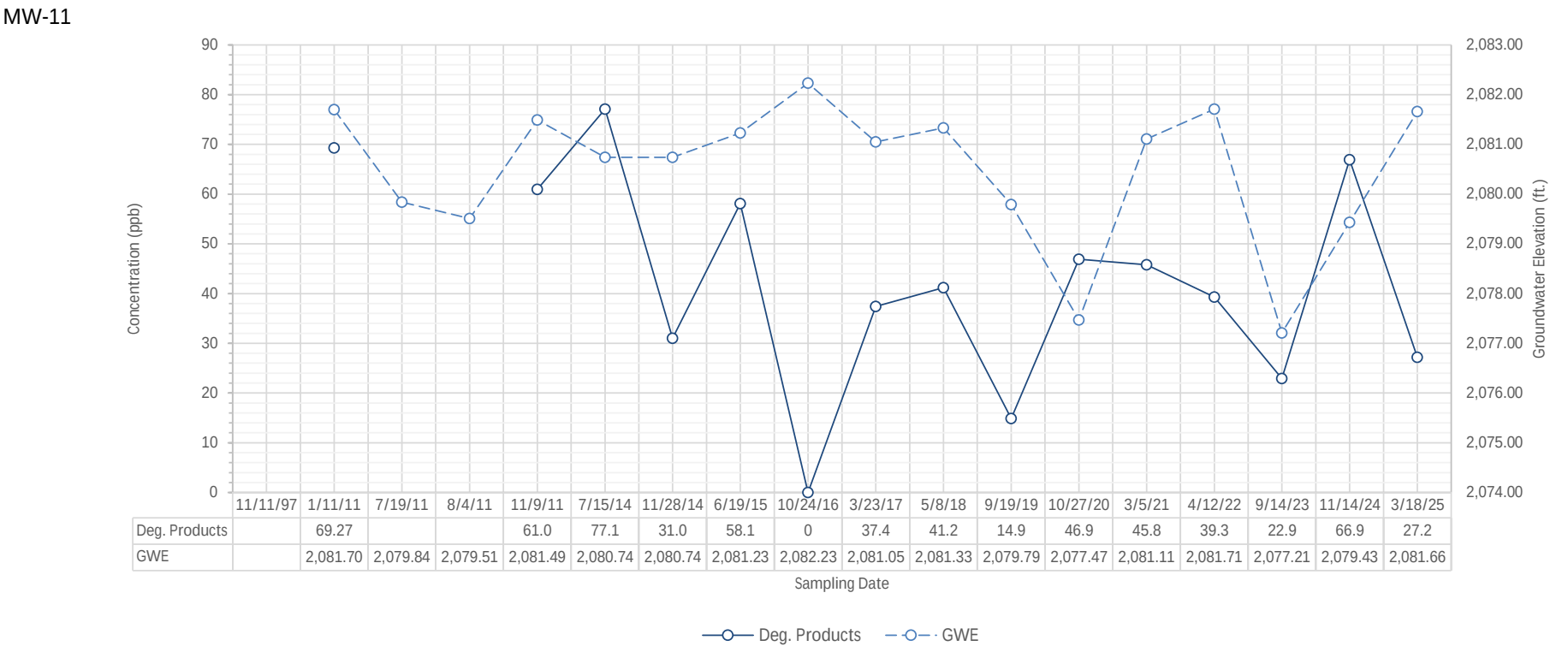
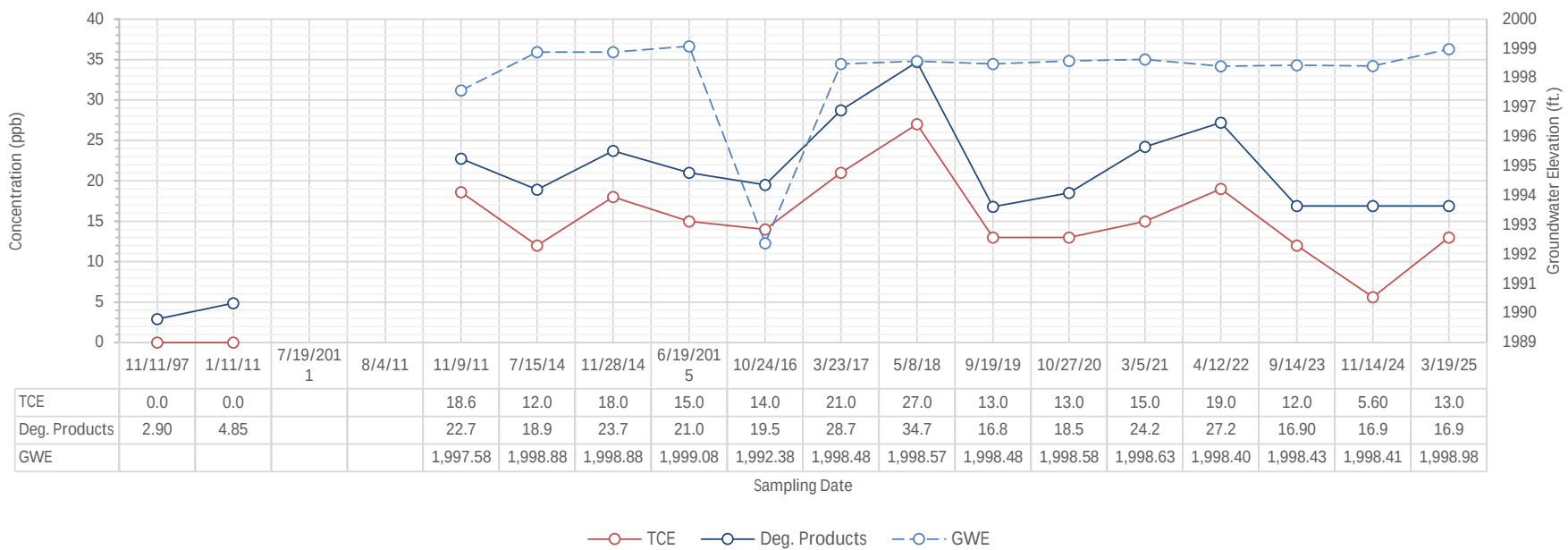
GWQS:
TCE - 5.0 ppb

MW-07



Cuba Municipal Waste Disposal Site (#902012)
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VOC Result Trends

MW-08



Cuba Municipal Waste Disposal Site (#902012)
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Inorganic Result Trends

Table 2-2 Inorganics Result Trends

Detected Parameters	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															

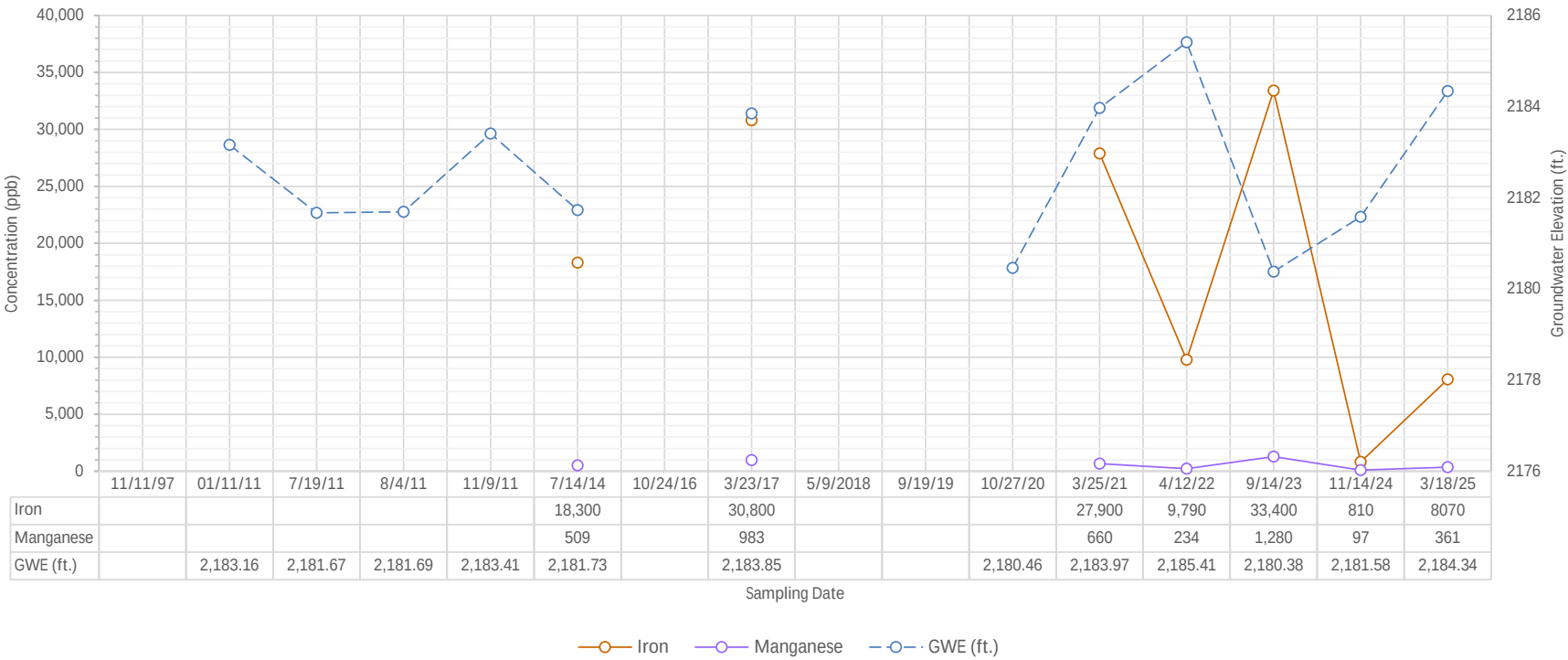
Detected Parameters	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															

Detected Parameters	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															
	Sample ID		MW-1S												MW-1D												MW-2												MW-3												MW-4												MW-7															

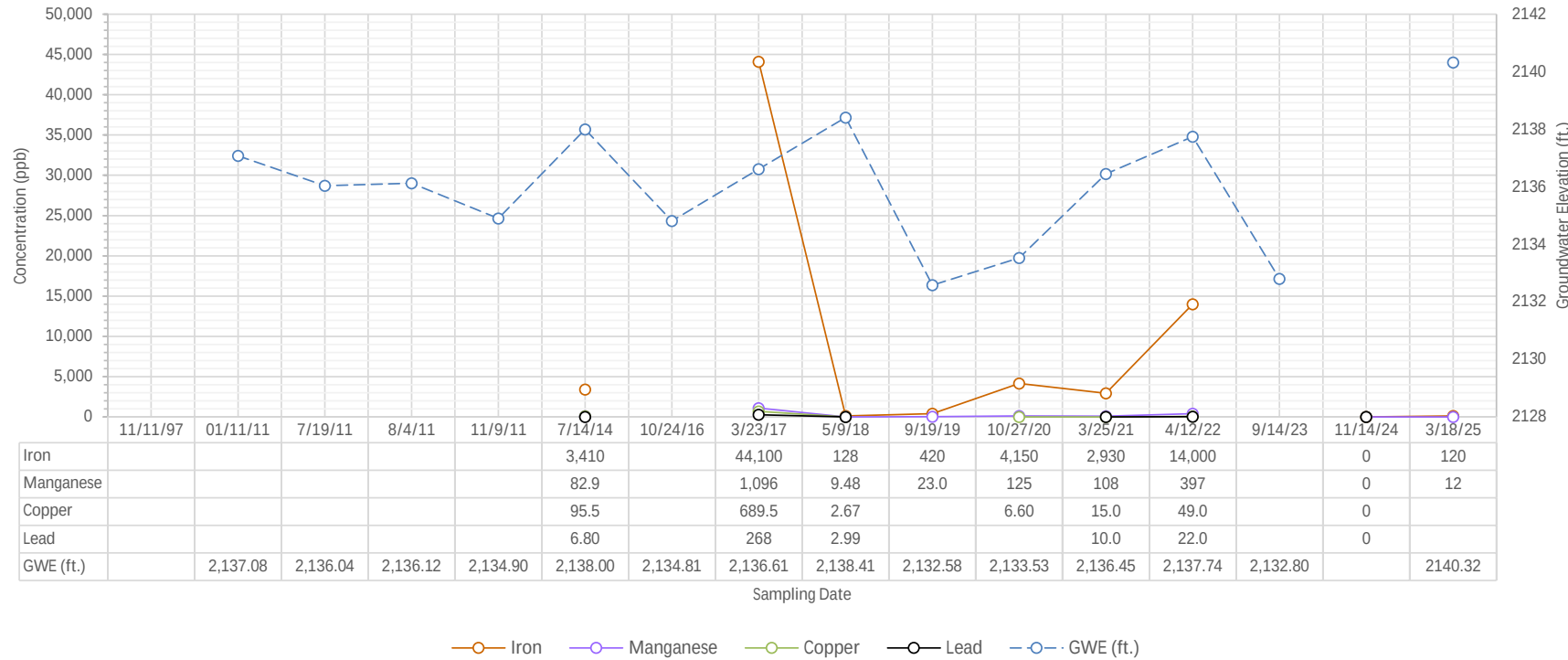
Notes

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Metals Result Trends

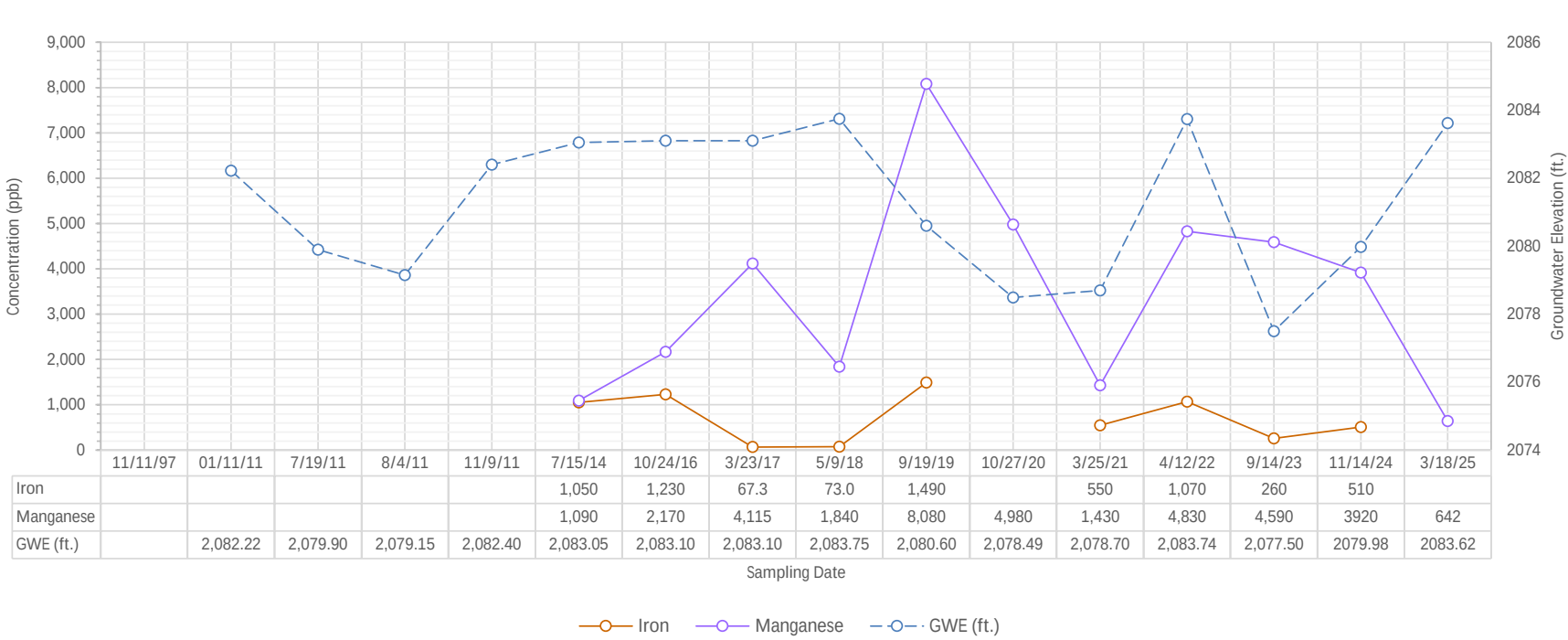
MW-1S



MW-1D

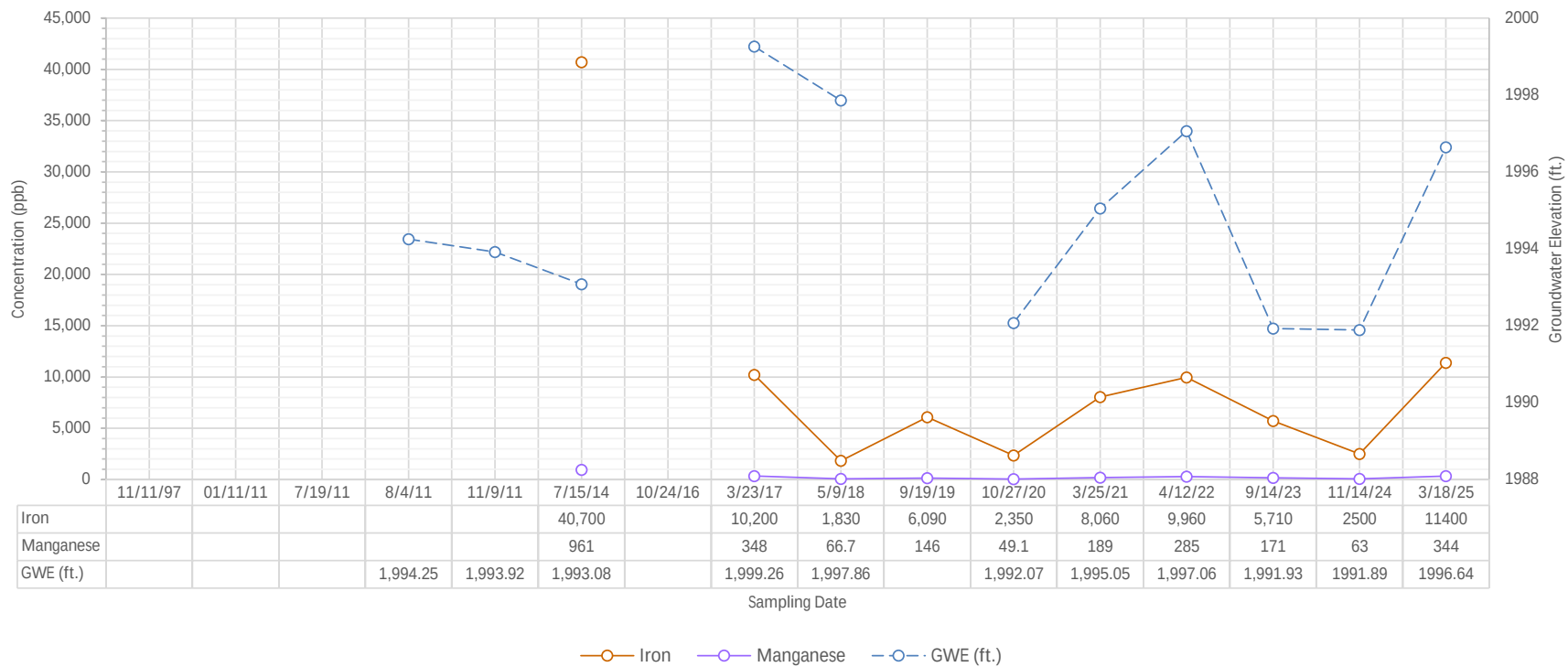


MW-4

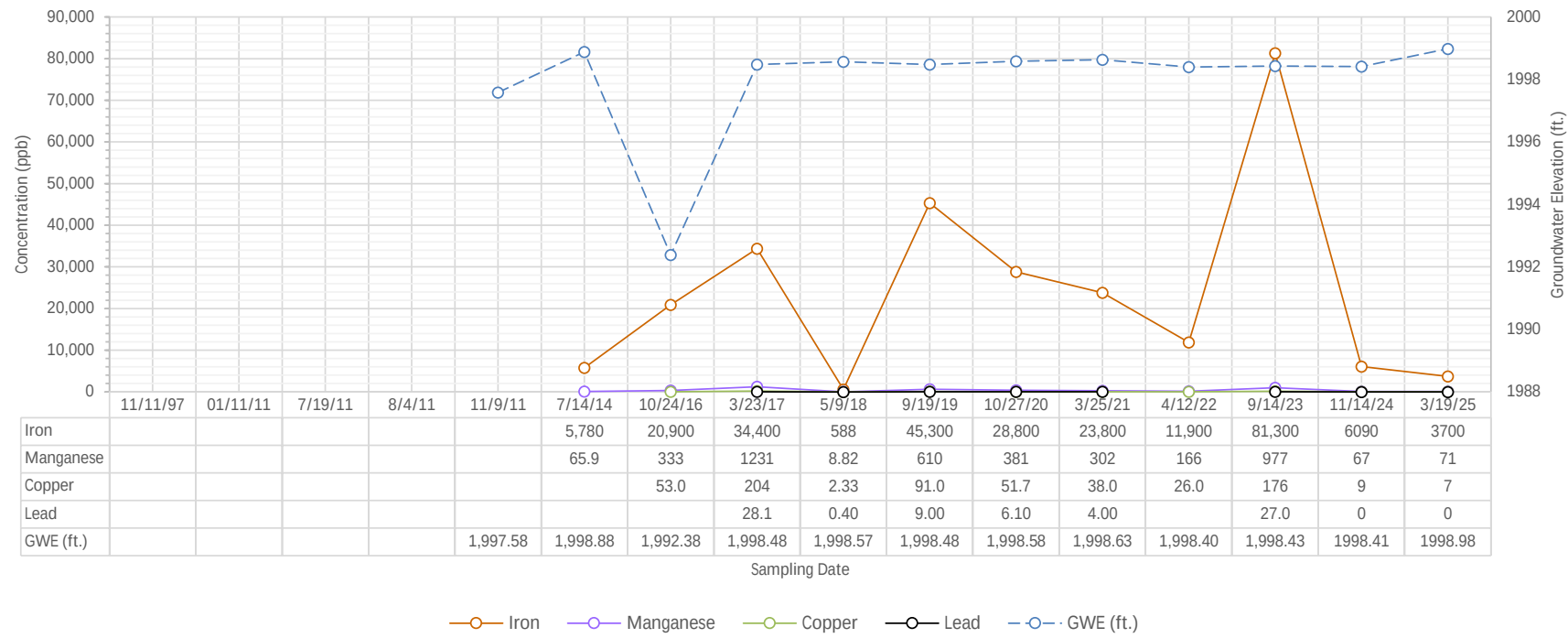


Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
Metals Result Trends

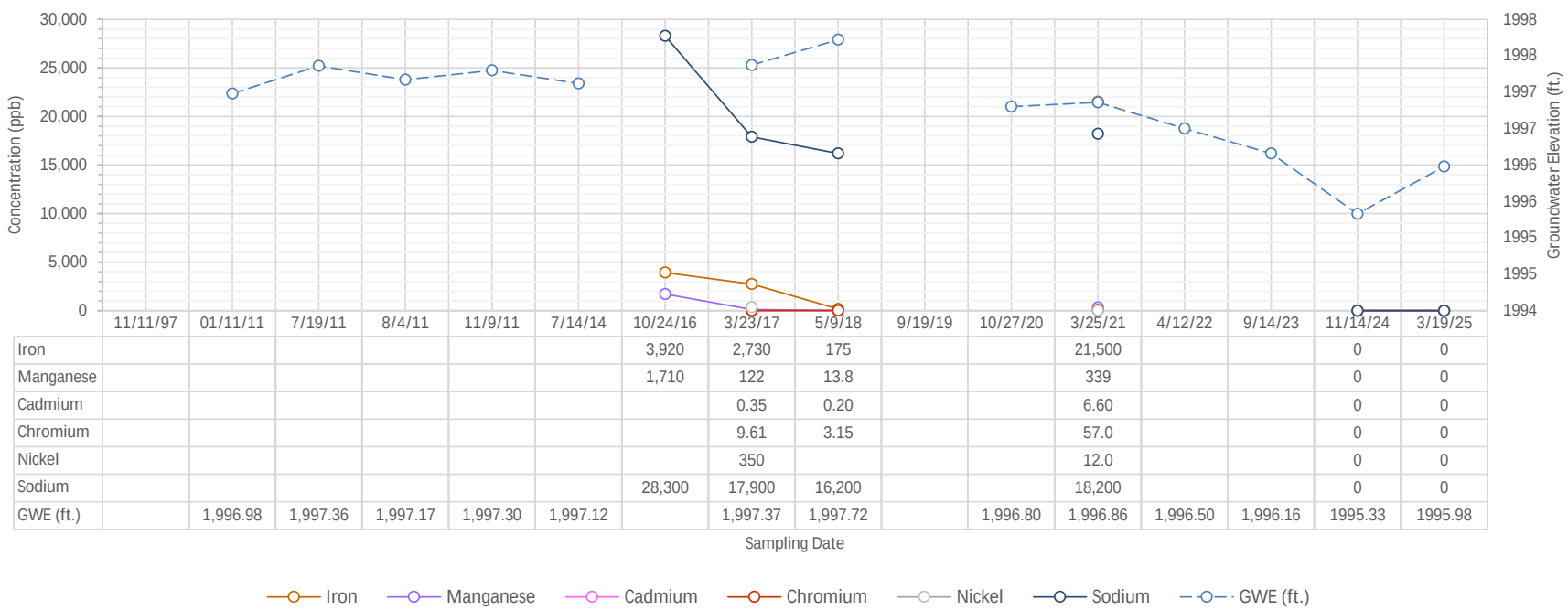
MW-7



MW-8

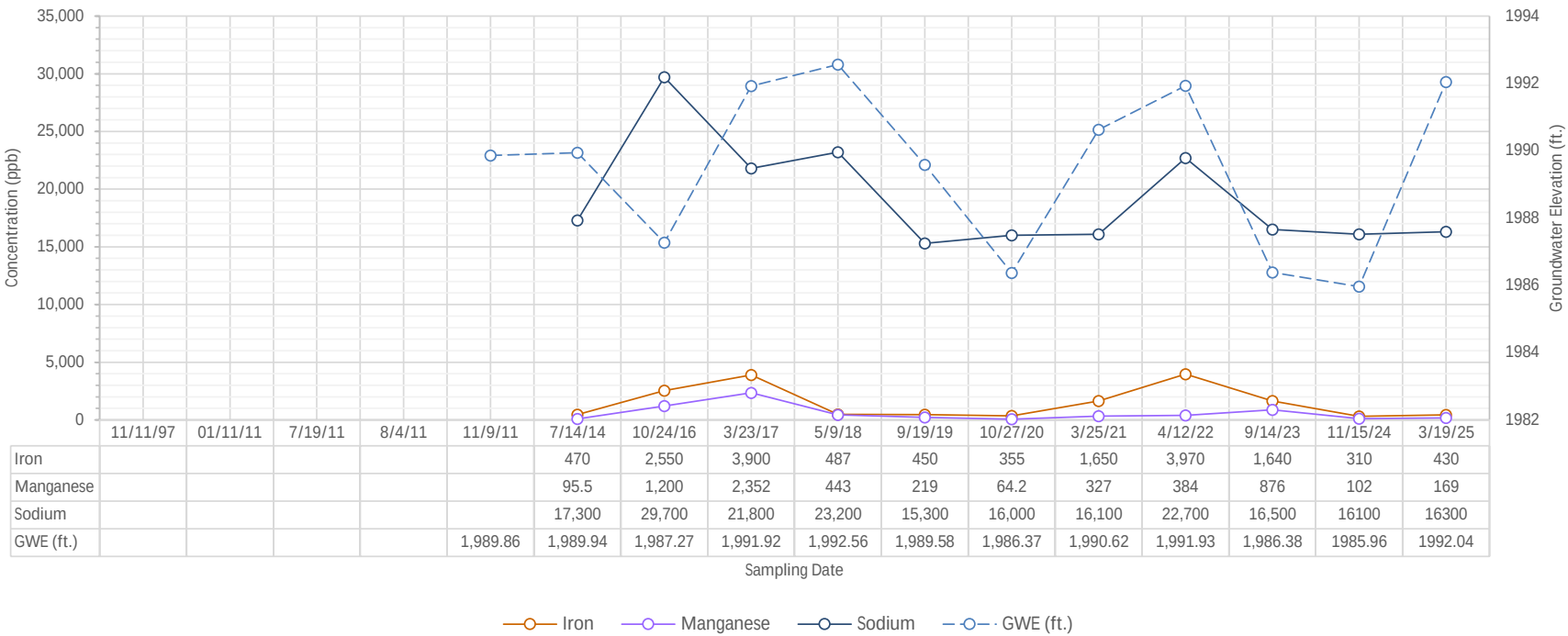


MW-10

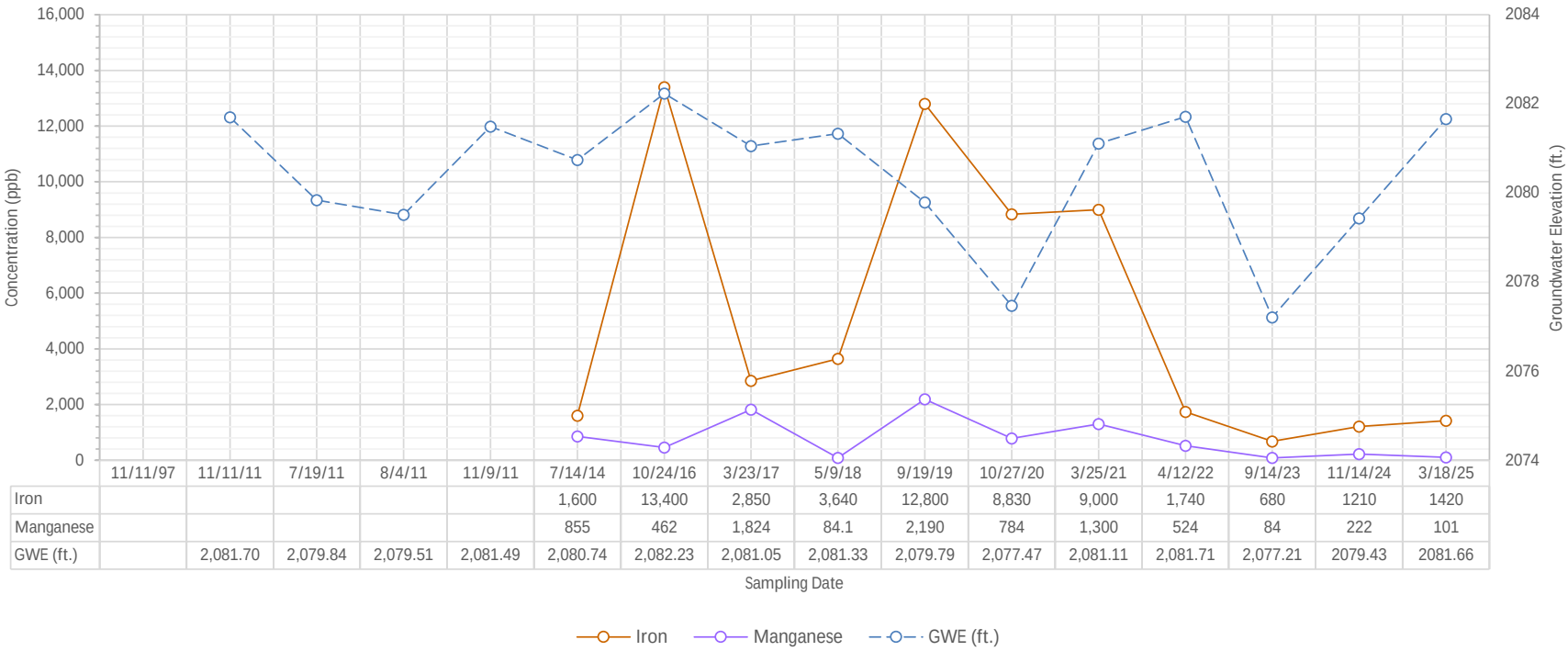


Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
Metals Result Trends

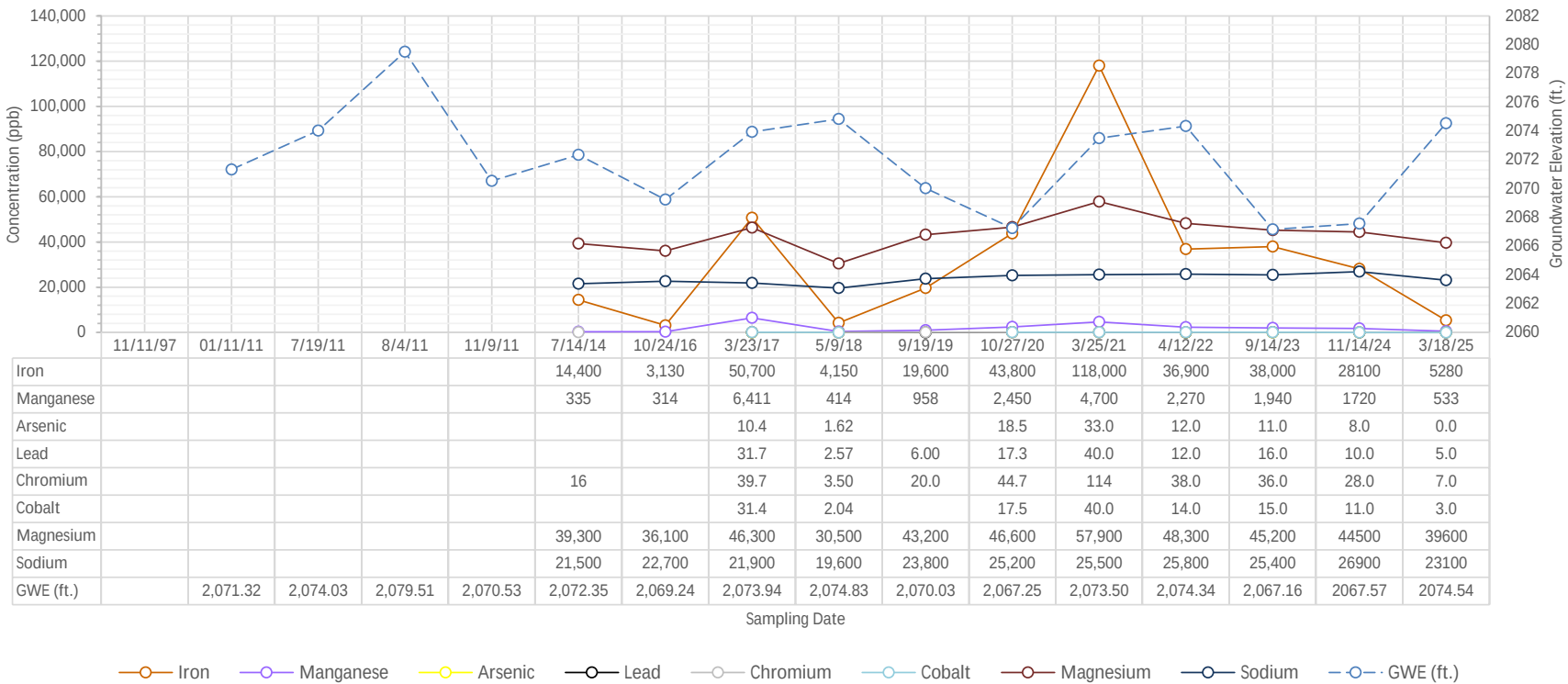
MW-10D



MW-11

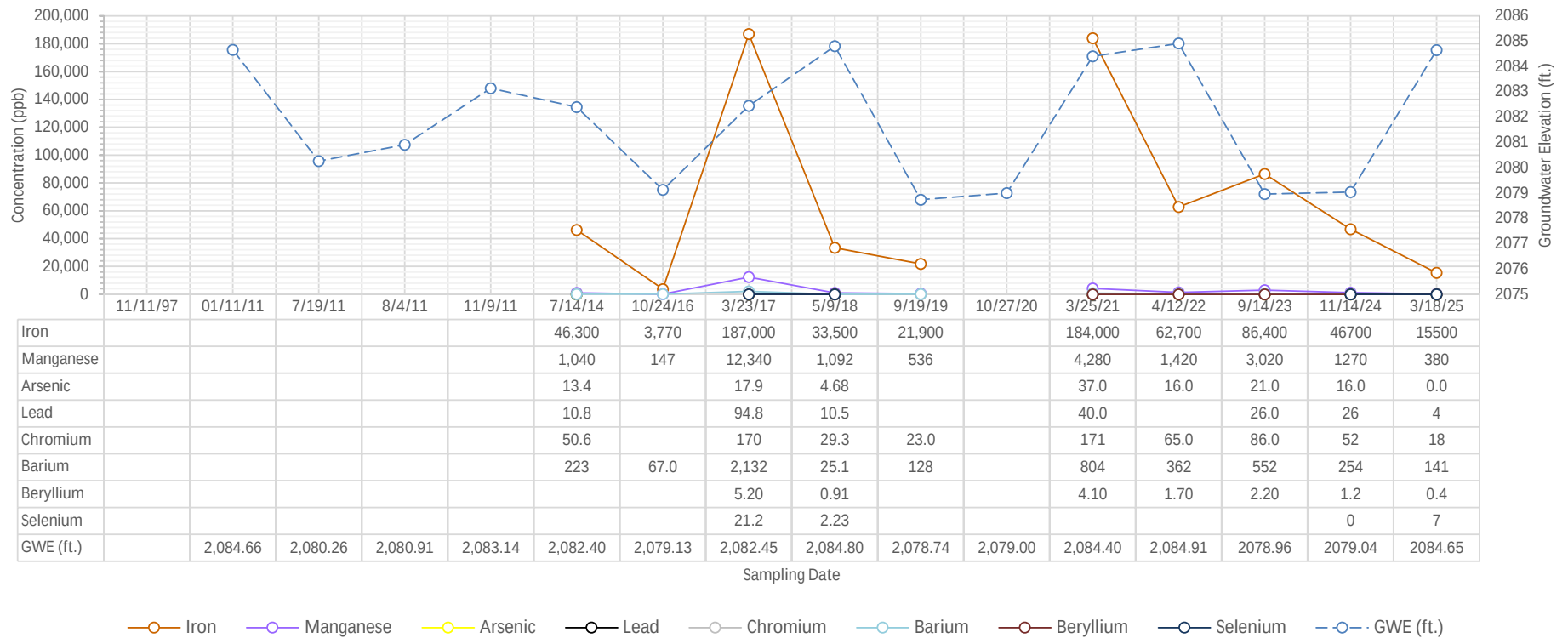


MW-12



Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2022-2023
Metals Result Trends

MW-13



Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
Groundwater Sample Analytical Results

Table 2-3: Emerging Contaminants Result Trends Detected Parameters:	Sample ID:	MW-11		MW-11		MW-11		MW-11		MW-11	
	Sample Date:	8/7/2018		4/12/2022		9/14/2023		11/14/2024		3/18/2025	
	Matrix	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater	
EPA 537 - Perfluorinated Compounds	NYSDEC PFAS Under Part 375	Result		Result		Result		Result		Result	
	Groundwater Standard										
Perfluorobutanesulfonic acid (PFBS)	10*	0.44	J	0.38	J	< ND		< ND		< ND	
Perfluorohexanesulfonic acid (PFHxS)	10*	< ND		1.10	J	< ND		< ND		< ND	
Perfluoroheptanesulfonic acid (PFHpS)	10*	0.34	J	< ND		< ND		< ND		< ND	
Perfluorooctanesulfonic acid (PFOS)	2.7	25.0		7.60		25.0		14.0		8.3	
Perfluorodecenesulfonic acid	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorobutanoic acid (PFBA)	10*	4.40		3.10	J	< ND		< ND		< ND	
Perfluoropentanoic acid (PFPeA)	10*	2.50		1.10		< ND		0.886		0.363	J
Perfluorohexanoic acid (PFHxA)	10*	1.90		1.20	J	< ND		0.844		0.745	J
Perfluoroheptanoic acid (PFHpA)	10*	1.30	J	1.20	J	< ND		< ND		< ND	
Perfluorooctanoic acid (PFOA)	6.7	8.20		4.30		9.30		5.45		3.03	
Perfluorononanoic acid (PFNA)	10*	0.85	J	< ND		< ND		< ND		< ND	
Perfluorodecanoic acid (PFDA)	10*	< ND		< ND		< ND		< ND		< ND	
Perfluoroundecanoic acid	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorododecanoic acid	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorotridecanoic acid	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorotetradecanoic acid	10*	< ND		< ND		< ND		< ND		< ND	
6:2 Fluorotelomer sulfonate	10*	< ND		< ND		< ND		< ND		< ND	
8:2 Fluorotelomer sulfonate	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorooctanesulfonate	10*	< ND		< ND		< ND		< ND		< ND	
Perfluorooctane sulfonamide	10*	0.49	J	< ND		< ND		< ND		< ND	
N-methyl perfluorooctanesulfonamidoacetic acid	10*	< ND		< ND		< ND		< ND		< ND	
N-ethyl perfluorooctanesulfonamidoacetic acid	10*	< ND		< ND		< ND		< ND		< ND	
EPA 8270 - SIM-Semi-volatile Organics	NYSDEC Under Part 375	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,4-Dioxane	1.0 (ppb)	18.0	E	5.40		4.00		10.0		2.8	

Notes:

1- Results presented in parts per trillion (ppt) unless otherwise indicated

*- NYSDEC Guidance Value

< : Results not detected above minimum laboratory quantitation limit

J: Estimated value. The Target analyte concentration is below the quantitation limit (RL), but

above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-

related analyses.

Results exceed groundwater quality standard/guidance value

Cuba Municipal Waste Disposal Site (#902012)
Periodic Review Report 2024-2025
Groundwater Elevations Summary

Table 3-0 Groundwater Elevations: March 2025

Well ID	Casing Elevation	Depth to Water	Groundwater Elevation	Well Depth
MW-1S	2210.85	29.27	2181.58	32.32
MW-1D	2210.61	70.29	2140.32	77.4
MW-2	2099.59	2.38	2097.21	6.78
MW-3	2099.59	22.80	2076.79	23.40
MW-4	2103.60	19.98	2083.62	32.29
MW-7	2075.76	79.12	1996.64	99.95
MW-8	2071.58	72.60	1998.98	78.55
MW-9	2201.21	88.55	2112.66	87.98
MW-10	2051.47	55.4	1996.07	55.49
MW-10D	2051.47	59.43	1992.04	82.93
MW-11	2103.68	22.02	2081.66	32.39
MW-12	2098.24	23.70	2074.54	40.16
MW-13	2106.95	22.30	2084.65	29.7

Notes

Results presented in feet



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Low Flow Groundwater Sampling

Field Record

Project Name Cuba landfill/Monitoring/ inspection
Location ID SW-04 Field Sample SW-04
Activity Time 15:05 Sample Time 15:10

Job # 50191-01
Sampling Event # 10
Date 3/19/25

SAMPLING NOTES

Initial Depth to Water NA feet Measurement Point N Well Diameter _____
Final Depth to Water _____ feet Well Depth _____ feet Well Integrity: _____
Screen Length _____ feet Pump Intake Depth _____ Cap _____
Total Volume Purged _____ gallons PID Well Head _____ Casing _____
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked _____
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar _____
Purge Estimate: _____ gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
15:10	-	-	11.8	7.17	9.66	12.9	0.0336	94.1	Surface water

Purge Observations: _____
Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: Amber Jar
Type of Tubing: N/A
Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID SW-03 Field Sample SW-03
 Activity Time 14:50 Sample Time 15:00

Job # 50191-01
 Sampling Event # 09
 Date 3/19/25

SAMPLING NOTES

Initial Depth to Water NA feet Measurement Point N Well Diameter _____
 Final Depth to Water _____ feet Well Depth _____ feet Well Integrity: _____
 Screen Length _____ feet Pump Intake Depth _____ Cap _____
 Total Volume Purged _____ gallons PID Well Head _____ Casing _____
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked _____
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar _____
 Purge Estimate: _____ gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
15:00	-	-	13.3	7.95	12.26	11.2	0.0464	70.1	Surface water

Purge Observations: _____
 Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: Amber Jar
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES





Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
Location ID SW-01 Field Sample SW-01
Activity Time 14:30 Sample Time 14:35

Job # 50191-01
Sampling Event # 08
Date 3/19/25

SAMPLING NOTES

Initial Depth to Water NA feet Measurement Point N Well Diameter _____
Final Depth to Water _____ feet Well Depth _____ feet Well Integrity: _____
Screen Length _____ feet Pump Intake Depth _____ Cap _____
Total Volume Purged _____ gallons PID Well Head _____ Casing _____
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked _____
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar _____
Purge Estimate: _____ gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
14:35	-	-	14.4	7.54	7.83	10.1	0.250	96.80	Surface water

Purge Observations: _____
Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: Amber Jar
Type of Tubing: N/A
Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES



Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-12 Field Sample MW-12
 Activity Time 13:55 Sample Time 14:10

Job # 50191-01
 Sampling Event # 07
 Date 3/19/25

SAMPLING NOTES

Initial Depth to Water 23.70 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 33.40 feet Well Depth 40.16 feet Well Integrity:
 Screen Length _____ feet Pump Intake Depth _____ Cap X
 Total Volume Purged _____ gallons PID Well Head _____ Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 4.5 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
14:00	29.95	-	13.6	7.36	11.1	13.1	0.712	134.4	1 gal
14:03	31.68	-	12.9	7.44	5.36	86.5	0.700	124.0	2.5 gal
14:05	32.90	-	12.2	7.38	4.00	Over	0.702	118.2	3.5 gal
14:10	33.4	-	13.5	7.44	2.93	Over	0.700	111.7	4.5 gal

Purge Observations: started clear, became more turbid, no odor

Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer

Type of Tubing: N/A

Type of Water Quality Meter: YSI Pro Plus; LaMotte

Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES



Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-10D Field Sample ID MW-10D
 Activity Time 10:00 Sample Time 10:30

Job # 50191-01
 Sampling Event # 0 1
 Date 3/20/25

SAMPLING NOTES

Initial Depth to Water 59.43 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 59.70 feet Well Depth 82.93 feet Well Integrity:
 Screen Length feet Pump Intake Depth Cap X
 Total Volume Purged gallons PID Well Head Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 10 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
10:10	59.50	-	9.8	10.81	14.79	82.2	0.467	37.5	2 gal
10:15	59.70	-	9.3	8.85	2.72	53.4	0.4123	87.9	4 Gal
10:20	59.70	-	9.2	8.26	2.22	70.2	0.414	134.0	6 gal
10:25	59.70	-	9.0	8.04	4.77	Over	0.419	105.9	8 gal
10:30	59.70	-	9.0	7.88	1.63	45.4	0.415	110.5	10 gal

Purge Observations: clear at first, then turbid, no odor
 Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES





dry

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-08 Field Sample ID MW-08
 Activity Time 11:45 Sample Time 12:00

Job # 50191-01
 Sampling Event # 0 2
 Date 3/20/25

SAMPLING NOTES

Initial Depth to Water 72.60 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 76.94 feet Well Depth 78.55 feet Well Integrity:
 Screen Length _____ feet Pump Intake Depth _____ Cap X
 Total Volume Purged _____ gallons PID Well Head _____ Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 1 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
11:55	76.94	-	9.1	9.64	7.32	16.6	0.298	90	1 gal

Purge Observations: _____
 Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-07 Field Sample ID MW-07
 Activity Time 12:05 Sample Time 12:30

Job # 50191-01
 Sampling Event # 03
 Date 3/20/25

SAMPLING NOTES

Initial Depth to Water 79.12 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 29.20 feet Well Depth 99.95 feet Well Integrity:
 Screen Length feet Pump Intake Depth Cap X
 Total Volume Purged gallons PID Well Head Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 8 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
12:16	79.19	-	9.1	7.87	12.66	70.0	0.4235	94.1	2 gal
12:20	79.20	-	9.1	7.77	2.82	25.3	0.4311	101.1	4 gal
12:25	79.20	-	9.1	7.73	3.28	Over	0.4353	105.1	6 gal
12:30	79.20	-	9.1	7.72	3.33	Over	0.4348	111.1	8 gal

Purge Observations: started clear, more turbid later, no odor

Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte

Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-04 Field Sample ID MW-04
 Activity Time 10:30 Sample Time 10:50

Job # 50191-01
 Sampling Event # 0 2
 Date 3/19/25

SAMPLING NOTES

Initial Depth to Water 19.98 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 27.50 feet Well Depth 32.29 feet Well Integrity:
 Screen Length feet Pump Intake Depth Cap X
 Total Volume Purged gallons PID Well Head Casing
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 3 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
10:35	24.20	-	9.9	6.21	4.86	7.44	0.243	123.1	1 gal
10:40	27.50	-	9.5	6.31	3.04	11.7	0.253	139.7	2 gal
10:45	27.50	-	9.3	6.15	2.40	3.91	0.261	159.7	3 gal

Purge Observations: clear, low recharge, no odor

Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte

Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

latch is broken

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-03 Field Sample ID _____
 Activity Time 11:30 Sample Time _____

Job # 50191-01
 Sampling Event # 00
 Date 3/19/25

SAMPLING NOTES

Initial Depth to Water DRY feet Measurement Point N Well Diameter 2"
 Final Depth to Water _____ feet Well Depth 24.75 feet Well Integrity:
 Screen Length _____ feet Pump Intake Depth _____ Cap X
 Total Volume Purged _____ gallons PID Well Head _____ Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: _____ gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments

Purge Observations: dry
 Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	
Metals	2 x 125 ml	

LOCATION NOTES

dry

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Date 3/19/25

Purge Estimate: _____ gallons

[illegible]

Purge Water Containerized:	N/A
----------------------------	-----

Calibrated: yes



Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
Location ID MW-1S Field Sample MW-1S
Activity Time 12:20 Sample Time 12:30

Job # 50191-01
Sampling Event # 06
Date 3/19/25

SAMPLING NOTES

Initial Depth to Water 26.51 feet Measurement Point N Well Diameter 2"
Final Depth to Water 26.77 feet Well Depth 32.32 feet Well Integrity:
Screen Length _____ feet Pump Intake Depth _____ Cap X
Total Volume Purged _____ gallons PID Well Head _____ Casing X
[purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
Purge Estimate: 2.5 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
12:50	26.81	-	11.4	6.87	5.09	Over	0.205	131.2	1 gal
13:00	26.77	-	11.2	6.80	2.46	Over	0.195	127.7	2 gal

Purge Observations: slightly turbid, no sheen, no odor

Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: HDPE Bailer
Type of Tubing: N/A
Type of Water Quality Meter: YSI Pro Plus; LaMotte

Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection Job # 50191-01
 Location ID 8354 Jackson Hill Rd Field Sample ID 8354 Jackson Hill Rd Sampling Event # 0 1
 Activity Time 9:00 Sample Time 9:05 Date 3/20/25

SAMPLING NOTES

Initial Depth to Water NA feet Measurement Point N Well Diameter NA
 Final Depth to Water _____ feet Well Depth _____ feet Well Integrity: _____
 Screen Length _____ feet Pump Intake Depth _____ Cap _____
 Total Volume Purged _____ gallons PID Well Head _____ Casing _____
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked _____
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar _____
 Purge Estimate: _____ gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
9:05	-	-	8.4	7.23	14.26	1.10	269.1	97.1	Surface Water

Purge Observations: clear,

Purge Water Containerized: _____

EQUIPMENT DOCUMENTATION

Type of Pump: Amber Jar

Type of Tubing: N/A

Type of Water Quality Meter: YSI Pro Plus; LaMotte

Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

well was overfull

Low Flow Groundwater Sampling Field Record

Project Name Cuba landfill/Monitoring/ inspection
 Location ID MW-1D Field Sample MW-1D
 Activity Time 12:20 Sample Time 12:30

Job # 50191-01
 Sampling Event # 05
 Date 3/19/25

SAMPLING NOTES

Initial Depth to Water 70.29 feet Measurement Point N Well Diameter 2"
 Final Depth to Water 74.20 feet Well Depth 77.4 feet Well Integrity:
 Screen Length feet Pump Intake Depth Cap X
 Total Volume Purged gallons PID Well Head Casing X
 [purge volume (milliliters per minute) x time duration (minutes) x 0.00026 gal/milliliter] Locked X
 Volume of Water in casing – 2" diameter = 0.163 gallons per foot of depth, 4" diameter = 0.653 gallons per foot of depth Collar X
 Purge Estimate: 1 gallons

PURGE DATA

Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
12:30	74.20	-	12.7	7.05	3.26	10	0.185	112.5	1 gal

Purge Observations: clear, low recharge, no odor
 Purge Water Containerized: N/A

EQUIPMENT DOCUMENTATION

Type of Pump: Amber Jar
 Type of Tubing: N/A
 Type of Water Quality Meter: YSI Pro Plus; LaMotte Calibrated: yes

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	X
Metals	2 x 125 ml	X

LOCATION NOTES

Site Photographs

Cuba Municipal Waste Disposal Site #902012



Photo No. 1 Access Road looking north.



Photo No. 2 Access Road looking south.



Photo No. 3 View of the Site looking east.



Photo No. 4 Uplifted of MW-1S repaired.

Site Photographs

Cuba Municipal Waste Disposal Site #902012



Photo No. 5 View of MW-11 looking south.



Photo No. 6 Access Road culvert east of SW-2.



Photo No. 7 Access Road Willow tree's condition.



Photo No. 8 Access Road culverts west of SW-3.

Site Photographs

Cuba Municipal Waste Disposal Site #902012



Photo No. 5 Typical Recovering of Geotextile above cap.



Photo No. 6 Typical Recovering of Geotextile above cap.



Photo No. 7 Typical Recovering of Geotextile above cap.



Photo No. 8 Typical Recovering of Geotextile above cap.



April 04, 2025

Service Request No:R2502931

Mr. Greg Andrus
LU Engineers
280 East Broad Street
Suite 170
Rochester, NY 14604

Laboratory Results for: Cuba

Dear Mr.Andrus,

Enclosed are the results of the sample(s) submitted to our laboratory March 20, 2025
For your reference, these analyses have been assigned our service request number **R2502931**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7475. You may also contact me via email at Meghan.Pedro@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Meghan Pedro
Project Manager

CC: Michael Andrus

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



ALS Environmental
ALS Group USA, Corp
1565 Jefferson Road, Building 300, Suite 360
Rochester, NY 14623
T : +1 585 288 5380
F : +1 585 288 8475
www.alsglobal.com

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Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Client: LU Engineers
Project: Cuba
Sample Matrix: Water

Service Request: R2502931
Date Received: 03/20/2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an "m" next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of "manipulated" or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or "M" by the result in the "Type" column (anions). The reason for the manual integration is noted on the "after" chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT "Manual Integration."

Sample Receipt:

Fifteen water samples were received for analysis at ALS Environmental on 03/20/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Metals:

When analyzed without dilution, the concentration of one or more elements in one or more samples exceeded the associated single element interference check concentration. As per section 9.9.1 of EPA 6010D, affected samples were diluted to reduce the solution concentration of the high concentration element below the interference check concentration, whether or not the high concentration element was an analyte of interest. The dilution has increased the reporting limits accordingly.

Volatiles by GC/MS:

Method 8260D, 03/28/2025: The Continuing Calibration Verification (CCV) exceeded control limits for one analyte. All detected concentrations for the analyte in samples associated with this CCV should be considered as estimated. The analyte is flagged in the CCV Summary Report.

Approved by _____

Date 04/03/2025



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: LU Engineers
Project: Cuba/50191-01

Service Request:R2502931

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2502931-001	MW-11	3/19/2025	1010
R2502931-002	MW-04	3/19/2025	1050
R2502931-003	MW-13	3/19/2025	1110
R2502931-004	MW-1D	3/19/2025	1230
R2502931-005	MW-1S	3/19/2025	1310
R2502931-006	MW-12	3/19/2025	1410
R2502931-007	SW-2	3/19/2025	1210
R2502931-008	SW-1	3/19/2025	1435
R2502931-009	SW-3	3/19/2025	1500
R2502931-010	SW-4	3/19/2025	1510
R2502931-011	8354 Jackson Hill Rd	3/20/2025	0905
R2502931-012	MW-10D	3/20/2025	1030
R2502931-013	MW-08	3/20/2025	1200
R2502931-014	MW-07	3/20/2025	1230
R2502931-015	Trip Blank	3/19/2025	

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 • +1 585 288 5380 • alsglobal.com

Report To:				ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER				Preservative												
Company: LU Engineers				Project Name: Cuba																
Contact: mwaldock@luengineers.com				Project Number: 50191-01																
Email: maddy.waldock/Derek Whitfield				ALS Quote #:																
Phone: (585) 286-0747				SAMPLER'S SIGNATURE: [Signature]																
Address: 280 East Broad St Rochester NY 14604				Email CC: gregandrus@luengineers.com																
				Email CC: mandrus@luengineers.com																
				State Samples Collected (Circle or Write): NY, MA, PA, CT, Other:																
Lab ID (ALS)	Sample Collection Information:			Matrix	Number of Containers	MS/MSD?	GC/MS VOA - 8260 • 624 • 524 • TCLP	GC/MS SVOA - 8270 • 625 • TCLP	Pesticides - 8081 • 608 • TCLP	PCBs - 8082 • 608	Herbicides - 8151 • TCLP	Metals, Total - Select Below	Metals, Dissolved - Field / In-Lab Filter	TC L VOCs 8260	TAL Metals	PFAS	1,4-Dioxane	Hg 7470	Zn	0. None
	Sample ID:	Date	Time																	
	MW-11	11-3-19	10:10	GW	15	✓	X							X	X	X	X	X		
	MW-04	↓	10:50		5		X							X	X			X		
	MW-13		11:10		5		X							X	X			X		
	MW-1D		12:30		5		X							X	X			X		
	MW-1S		13:10		5		X							X	X			X		
	MW-12		14:10		5		X							X	X			X		
	SW-2		12:10		5		X							X	X			X		
	SW-1		14:35		5		X							X	X			X		
	SW-3		15:00		5		X							X	X			X		
	SW-4		15:00		5		X							X	X			X		
Special Instructions / Comments:				Turnaround Requirements				Report Requirements				Metals: RCRA 8•PP 13•TAL 23•TCLP•Other (List)								
				Rush (Surcharges Apply) *Subject to Availability* *Please Check with your PM* ☒ Standard (10 Business Days) Date Required:				Tier II/Cat A - Results/QC ☒ Tier IV/Cat B - Data Validation Report w/. Data EDD: ☒ Yes ___ No EDD Type:				VOA/SVOA Report List: TCL • BTEX • TCLP • CP-51/Stars • THM • Other: Invoice To: Same as Report To PO #: Company:								
Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:		R2502931 5 LU Engineers Cuba								
Signature: [Signature]		[Signature]										[Barcode]								
Printed Name: Madeline Waldock		Madeline Waldock																		
Company: LU Engineers		ALS																		
Date/Time: 8/20/25 14:54		8/20/25 14:54																		

Report To:			ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER						
Company: LV Engineers			Project Name: CUBA						
Contact: Maddy Waldock/Derek Whitfield			Project Number: 50191-01						
Email: mwaldock@lvengineers.com			ALS Quote #:						
Phone: (565) 280-0747			SAMPLER'S SIGNATURE: [Signature]						
Address: 280 East-Broad St Rochester NY, 14604			Email CC: gregendrus@lvengineers.com						
			Email CC: mandrus@lvengineers.com						
			State Samples Collected (Circle or Write): NY, MA, PA, CT, Other:						
Lab ID (ALS)	Sample Collection Information:					Matrix	Number of Containers	MS/MSD?	GC/MS SVOA - 8260 • 8264 • 8265 • 8266 • 8267 • 8268 • 8269 • 8270 • 8271 • 8272 • 8273 • 8274 • 8275 • 8276 • 8277 • 8278 • 8279 • 8280 • 8281 • 8282 • 8283 • 8284 • 8285 • 8286 • 8287 • 8288 • 8289 • 8290 • 8291 • 8292 • 8293 • 8294 • 8295 • 8296 • 8297 • 8298 • 8299 • 8300 • 8301 • 8302 • 8303 • 8304 • 8305 • 8306 • 8307 • 8308 • 8309 • 8310 • 8311 • 8312 • 8313 • 8314 • 8315 • 8316 • 8317 • 8318 • 8319 • 8320 • 8321 • 8322 • 8323 • 8324 • 8325 • 8326 • 8327 • 8328 • 8329 • 8330 • 8331 • 8332 • 8333 • 8334 • 8335 • 8336 • 8337 • 8338 • 8339 • 8340 • 8341 • 8342 • 8343 • 8344 • 8345 • 8346 • 8347 • 8348 • 8349 • 8350 • 8351 • 8352 • 8353 • 8354 • 8355 • 8356 • 8357 • 8358 • 8359 • 8360 • 8361 • 8362 • 8363 • 8364 • 8365 • 8366 • 8367 • 8368 • 8369 • 8370 • 8371 • 8372 • 8373 • 8374 • 8375 • 8376 • 8377 • 8378 • 8379 • 8380 • 8381 • 8382 • 8383 • 8384 • 8385 • 8386 • 8387 • 8388 • 8389 • 8390 • 8391 • 8392 • 8393 • 8394 • 8395 • 8396 • 8397 • 8398 • 8399 • 8400 • 8401 • 8402 • 8403 • 8404 • 8405 • 8406 • 8407 • 8408 • 8409 • 8410 • 8411 • 8412 • 8413 • 8414 • 8415 • 8416 • 8417 • 8418 • 8419 • 8420 • 8421 • 8422 • 8423 • 8424 • 8425 • 8426 • 8427 • 8428 • 8429 • 8430 • 8431 • 8432 • 8433 • 8434 • 8435 • 8436 • 8437 • 8438 • 8439 • 8440 • 8441 • 8442 • 8443 • 8444 • 8445 • 8446 • 8447 • 8448 • 8449 • 8450 • 8451 • 8452 • 8453 • 8454 • 8455 • 8456 • 8457 • 8458 • 8459 • 8460 • 8461 • 8462 • 8463 • 8464 • 8465 • 8466 • 8467 • 8468 • 8469 • 8470 • 8471 • 8472 • 8473 • 8474 • 8475 • 8476 • 8477 • 8478 • 8479 • 8480 • 8481 • 8482 • 8483 • 8484 • 8485 • 8486 • 8487 • 8488 • 8489 • 8490 • 8491 • 8492 • 8493 • 8494 • 8495 • 8496 • 8497 • 8498 • 8499 • 8500 • 8501 • 8502 • 8503 • 8504 • 8505 • 8506 • 8507 • 8508 • 8509 • 8510 • 8511 • 8512 • 8513 • 8514 • 8515 • 8516 • 8517 • 8518 • 8519 • 8520 • 8521 • 8522 • 8523 • 8524 • 8525 • 8526 • 8527 • 8528 • 8529 • 8530 • 8531 • 8532 • 8533 • 8534 • 8535 • 8536 • 8537 • 8538 • 8539 • 8540 • 8541 • 8542 • 8543 • 8544 • 8545 • 8546 • 8547 • 8548 • 8549 • 8550 • 8551 • 8552 • 8553 • 8554 • 8555 • 8556 • 8557 • 8558 • 8559 • 8560 • 8561 • 8562 • 8563 • 8564 • 8565 • 8566 • 8567 • 8568 • 8569 • 8570 • 8571 • 8572 • 8573 • 8574 • 8575 • 8576 • 8577 • 8578 • 8579 • 8580 • 8581 • 8582 • 8583 • 8584 • 8585 • 8586 • 8587 • 8588 • 8589 • 8590 • 8591 • 8592 • 8593 • 8594 • 8595 • 8596 • 8597 • 8598 • 8599 • 8600 • 8601 • 8602 • 8603 • 8604 • 8605 • 8606 • 8607 • 8608 • 8609 • 8610 • 8611 • 8612 • 8613 • 8614 • 8615 • 8616 • 8617 • 8618 • 8619 • 8620 • 8621 • 8622 • 8623 • 8624 • 8625 • 8626 • 8627 • 8628 • 8629 • 8630 • 8631 • 8632 • 8633 • 8634 • 8635 • 8636 • 8637 • 8638 • 8639 • 8640 • 8641 • 8642 • 8643 • 8644 • 8645 • 8646 • 8647 • 8648 • 8649 • 8650 • 8651 • 8652 • 8653 • 8654 • 8655 • 8656 • 8657 • 8658 • 8659 • 8660 • 8661 • 8662 • 8663 • 8664 • 8665 • 8666 • 8667 • 8668 • 8669 • 8670 • 8671 • 8672 • 8673 • 8674 • 8675 • 8676 • 8677 • 8678 • 8679 • 8680 • 8681 • 8682 • 8683 • 8684 • 8685 • 8686 • 8687 • 8688 • 8689 • 8690 • 8691 • 8692 • 8693 • 8694 • 8695 • 8696 • 8697 • 8698 • 8699 • 8700 • 8701 • 8702 • 8703 • 8704 • 8705 • 8706 • 8707 • 8708 • 8709 • 8710 • 8711 • 8712 • 8713 • 8714 • 8715 • 8716 • 8717 • 8718 • 8719 • 8720 • 8721 • 8722 • 8723 • 8724 • 8725 • 8726 • 8727 • 8728 • 8729 • 8730 • 8731 • 8732 • 8733 • 8734 • 8735 • 8736 • 8737 • 8738 • 8739 • 8740 • 8741 • 8742 • 8743 • 8744 • 8745 • 8746 • 8747 • 8748 • 8749 • 8750 • 8751 • 8752 • 8753 • 8754 • 8755 • 8756 • 8757 • 8758 • 8759 • 8760 • 8761 • 8762 • 8763 • 8764 • 8765 • 8766 • 8767 • 8768 • 8769 • 8770 • 8771 • 8772 • 8773 • 8774 • 8775 • 8776 • 8777 • 8778 • 8779 • 8780 • 8781 • 8782 • 8783 • 8784 • 8785 • 8786 • 8787 • 8788 • 8789 • 8790 • 8791 • 8792 • 8793 • 8794 • 8795 • 8796 • 8797 • 8798 • 8799 • 8800 • 8801 • 8802 • 8803 • 8804 • 8805 • 8806 • 8807 • 8808 • 8809 • 8810 • 8811 • 8812 • 8813 • 8814 • 8815 • 8816 • 8817 • 8818 • 8819 • 8820 • 8821 • 8822 • 8823 • 8824 • 8825 • 8826 • 8827 • 8828 • 8829 • 8830 • 8831 • 8832 • 8833 • 8834 • 8835 • 8836 • 8837 • 8838 • 8839 • 8840 • 8841 • 8842 • 8843 • 8844 • 8845 • 8846 • 8847 • 8848 • 8849 • 8850 • 8851 • 8852 • 8853 • 8854 • 8855 • 8856 • 8857 • 8858 • 8859 • 8860 • 8861 • 8862 • 8863 • 8864 • 8865 • 8866 • 8867 • 8868 • 8869 • 8870 • 8871 • 8872 • 8873 • 8874 • 8875 • 8876 • 8877 • 8878 • 8879 • 8880 • 8881 • 8882 • 8883 • 8



Cooler Receipt and Preservation Check Form



Project/Client LU Engineers Folder Number _____

Cooler received on 3/20/25 by: MLL COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>N</u>	5a	Did VOA vials have sig* bubbles?	Y <u>N</u> NA
2	Custody papers properly completed (ink, signed)?	Y <u>N</u>	5b	Sig* bubbles: Alk? Y N <u>NA</u> Sulfide? Y N <u>NA</u>	
3	Did all bottles arrive in good condition (unbroken)?	Y <u>N</u>	6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present? Y <u>N</u>		7	Soil VOA received as: Bulk Encore 5035set <u>NA</u>	

8. Temperature Readings Date: 3/20/25 Time: 15:36 ID: IR#12 IR#11 From: Temp Blank Sample Bottle

Temp (°C)	<u>3.9</u>						
Within 0-6°C?	<u>Y</u> N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMD by MLL on 3/20/25 at 15:40
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 3/20/25 Time: 1731 by: RDT

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- Did all bottle labels and tags agree with custody papers? YES NO
- Were correct containers used for the tests indicated? YES NO
- Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
- Were dissolved metals filtered in the field? YES NO N/A
- Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2	<u>226322</u>	HNO ₃	<u>✓</u>		<u>24010872</u>	<u>3/26</u>				
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis.
Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 101424-2AEJ, 122324-3AXA, 102824-16J
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: RDA *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931

Sample Name: MW-11
Lab Code: R2502931-001
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D
8270E SIM

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI
KPROCPIO

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST
KPROCPIO

Sample Name: MW-04
Lab Code: R2502931-002
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: MW-13
Lab Code: R2502931-003
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI
ECASTROVINCI

Analyzed By

ECASTROVINCI
NMANSEN
ECASTROVINCI
KRUEST

Sample Name: MW-1D
Lab Code: R2502931-004
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
6010D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

ECASTROVINCI
NMANSEN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931

Sample Name: MW-1D
Lab Code: R2502931-004
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method
7470A
8260D

Extracted/Digested By
ECASTROVINCI

Analyzed By
ECASTROVINCI
KRUEST

Sample Name: MW-1S
Lab Code: R2502931-005
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method
6010D
7470A
8260D

Extracted/Digested By
ECASTROVINCI
ECASTROVINCI

Analyzed By
NMANSEN
ECASTROVINCI
KRUEST

Sample Name: MW-12
Lab Code: R2502931-006
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method
6010D
7470A
8260D

Extracted/Digested By
ECASTROVINCI
ECASTROVINCI

Analyzed By
NMANSEN
ECASTROVINCI
KRUEST

Sample Name: SW-2
Lab Code: R2502931-007
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method
6010D
7470A
8260D

Extracted/Digested By
ECASTROVINCI
ECASTROVINCI

Analyzed By
NMANSEN
ECASTROVINCI
KRUEST

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931

Sample Name: SW-1
Lab Code: R2502931-008
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: SW-3
Lab Code: R2502931-009
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: SW-4
Lab Code: R2502931-010
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: 8354 Jackson Hill Rd
Lab Code: R2502931-011
Sample Matrix: Water

Date Collected: 03/20/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931

Sample Name: MW-10D
Lab Code: R2502931-012
Sample Matrix: Water

Date Collected: 03/20/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: MW-08
Lab Code: R2502931-013
Sample Matrix: Water

Date Collected: 03/20/25
Date Received: 03/20/25

Analysis Method

6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
KRUEST

Sample Name: MW-07
Lab Code: R2502931-014
Sample Matrix: Water

Date Collected: 03/20/25
Date Received: 03/20/25

Analysis Method

6010D
6010D
7470A
8260D

Extracted/Digested By

ECASTROVINCI
ECASTROVINCI
ECASTROVINCI

Analyzed By

NMANSEN
ECASTROVINCI
ECASTROVINCI
KRUEST

Sample Name: Trip Blank
Lab Code: R2502931-015
Sample Matrix: Water

Date Collected: 03/19/25
Date Received: 03/20/25

Analysis Method

8260D

Extracted/Digested By

Analyzed By

KRUEST



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 10:10
Date Received: 03/20/25 14:54

Sample Name: MW-11
Lab Code: R2502931-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	4.9	1.0	0.20	1	03/28/25 14:20	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 14:20	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 14:20	
1,1-Dichloroethane (1,1-DCA)	14	1.0	0.20	1	03/28/25 14:20	
1,1-Dichloroethene (1,1-DCE)	1.3	1.0	0.20	1	03/28/25 14:20	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 14:20	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 14:20	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 14:20	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 14:20	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 14:20	
Acetone	5.0 U	5.0	5.0	1	03/28/25 14:20	
Benzene	1.0 U	1.0	0.20	1	03/28/25 14:20	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 14:20	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 14:20	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 14:20	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 14:20	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 14:20	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 14:20	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 14:20	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 14:20	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 14:20	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 14:20	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 14:20	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 14:20	
Styrene	1.0 U	1.0	0.20	1	03/28/25 14:20	
Tetrachloroethene (PCE)	1.3	1.0	0.21	1	03/28/25 14:20	
Toluene	1.0 U	1.0	0.20	1	03/28/25 14:20	
Trichloroethene (TCE)	4.1	1.0	0.20	1	03/28/25 14:20	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 14:20	
cis-1,2-Dichloroethene	8.3	1.0	0.23	1	03/28/25 14:20	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 14:20	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 14:20	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 14:20	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 14:20	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 14:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 10:10
Date Received: 03/20/25 14:54

Sample Name: MW-11
Lab Code: R2502931-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85 - 122	03/28/25 14:20	
Dibromofluoromethane	104	80 - 116	03/28/25 14:20	
Toluene-d8	104	87 - 121	03/28/25 14:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 10:50
Date Received: 03/20/25 14:54

Sample Name: MW-04
Lab Code: R2502931-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.5	1.0	0.20	1	03/28/25 14:43	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 14:43	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 14:43	
1,1-Dichloroethane (1,1-DCA)	20	1.0	0.20	1	03/28/25 14:43	
1,1-Dichloroethene (1,1-DCE)	2.1	1.0	0.20	1	03/28/25 14:43	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 14:43	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 14:43	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 14:43	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 14:43	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 14:43	
Acetone	5.0 U	5.0	5.0	1	03/28/25 14:43	
Benzene	1.0 U	1.0	0.20	1	03/28/25 14:43	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 14:43	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 14:43	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 14:43	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 14:43	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 14:43	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 14:43	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 14:43	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 14:43	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 14:43	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 14:43	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 14:43	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 14:43	
Styrene	1.0 U	1.0	0.20	1	03/28/25 14:43	
Tetrachloroethene (PCE)	0.29 J	1.0	0.21	1	03/28/25 14:43	
Toluene	1.0 U	1.0	0.20	1	03/28/25 14:43	
Trichloroethene (TCE)	3.9	1.0	0.20	1	03/28/25 14:43	
Vinyl Chloride	0.88 J	1.0	0.20	1	03/28/25 14:43	
cis-1,2-Dichloroethene	12	1.0	0.23	1	03/28/25 14:43	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 14:43	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 14:43	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 14:43	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 14:43	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 14:43	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 10:50
Date Received: 03/20/25 14:54

Sample Name: MW-04
Lab Code: R2502931-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	85 - 122	03/28/25 14:43	
Dibromofluoromethane	104	80 - 116	03/28/25 14:43	
Toluene-d8	103	87 - 121	03/28/25 14:43	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 11:10
Date Received: 03/20/25 14:54

Sample Name: MW-13
Lab Code: R2502931-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	3.3	1.0	0.20	1	03/28/25 15:06	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 15:06	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:06	
1,1-Dichloroethane (1,1-DCA)	3.3	1.0	0.20	1	03/28/25 15:06	
1,1-Dichloroethene (1,1-DCE)	0.26 J	1.0	0.20	1	03/28/25 15:06	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:06	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 15:06	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 15:06	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 15:06	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 15:06	
Acetone	5.0 U	5.0	5.0	1	03/28/25 15:06	
Benzene	1.0 U	1.0	0.20	1	03/28/25 15:06	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 15:06	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 15:06	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 15:06	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 15:06	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 15:06	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 15:06	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 15:06	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 15:06	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 15:06	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 15:06	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 15:06	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 15:06	
Styrene	1.0 U	1.0	0.20	1	03/28/25 15:06	
Tetrachloroethene (PCE)	3.2	1.0	0.21	1	03/28/25 15:06	
Toluene	1.0 U	1.0	0.20	1	03/28/25 15:06	
Trichloroethene (TCE)	4.5	1.0	0.20	1	03/28/25 15:06	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 15:06	
cis-1,2-Dichloroethene	3.4	1.0	0.23	1	03/28/25 15:06	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 15:06	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 15:06	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 15:06	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 15:06	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 15:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 11:10
Date Received: 03/20/25 14:54

Sample Name: MW-13
Lab Code: R2502931-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	03/28/25 15:06	
Dibromofluoromethane	104	80 - 116	03/28/25 15:06	
Toluene-d8	102	87 - 121	03/28/25 15:06	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 12:30
Date Received: 03/20/25 14:54

Sample Name: MW-1D
Lab Code: R2502931-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:29	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 15:29	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 15:29	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 15:29	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 15:29	
Acetone	5.0 U	5.0	5.0	1	03/28/25 15:29	
Benzene	1.0 U	1.0	0.20	1	03/28/25 15:29	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 15:29	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 15:29	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 15:29	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 15:29	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 15:29	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 15:29	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 15:29	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 15:29	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 15:29	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 15:29	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 15:29	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 15:29	
Styrene	1.0 U	1.0	0.20	1	03/28/25 15:29	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 15:29	
Toluene	1.0 U	1.0	0.20	1	03/28/25 15:29	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 15:29	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 15:29	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 15:29	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 15:29	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 15:29	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 15:29	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 15:29	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 15:29	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 12:30
Date Received: 03/20/25 14:54

Sample Name: MW-1D
Lab Code: R2502931-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	03/28/25 15:29	
Dibromofluoromethane	103	80 - 116	03/28/25 15:29	
Toluene-d8	103	87 - 121	03/28/25 15:29	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 13:10
Date Received: 03/20/25 14:54

Sample Name: MW-1S
Lab Code: R2502931-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 15:52	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 15:52	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 15:52	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 15:52	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 15:52	
Acetone	5.0 U	5.0	5.0	1	03/28/25 15:52	
Benzene	1.0 U	1.0	0.20	1	03/28/25 15:52	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 15:52	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 15:52	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 15:52	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 15:52	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 15:52	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 15:52	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 15:52	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 15:52	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 15:52	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 15:52	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 15:52	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 15:52	
Styrene	1.0 U	1.0	0.20	1	03/28/25 15:52	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 15:52	
Toluene	1.0 U	1.0	0.20	1	03/28/25 15:52	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 15:52	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 15:52	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 15:52	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 15:52	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 15:52	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 15:52	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 15:52	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 15:52	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 13:10
Date Received: 03/20/25 14:54

Sample Name: MW-1S
Lab Code: R2502931-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	03/28/25 15:52	
Dibromofluoromethane	103	80 - 116	03/28/25 15:52	
Toluene-d8	102	87 - 121	03/28/25 15:52	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 14:10
Date Received: 03/20/25 14:54

Sample Name: MW-12
Lab Code: R2502931-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 16:16	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 16:16	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 16:16	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 16:16	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 16:16	
Acetone	5.0 U	5.0	5.0	1	03/28/25 16:16	
Benzene	1.0 U	1.0	0.20	1	03/28/25 16:16	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 16:16	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 16:16	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 16:16	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 16:16	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 16:16	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 16:16	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 16:16	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 16:16	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 16:16	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 16:16	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 16:16	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 16:16	
Styrene	1.0 U	1.0	0.20	1	03/28/25 16:16	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 16:16	
Toluene	1.0 U	1.0	0.20	1	03/28/25 16:16	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 16:16	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 16:16	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 16:16	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 16:16	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 16:16	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 16:16	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 16:16	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 16:16	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 14:10
Date Received: 03/20/25 14:54

Sample Name: MW-12
Lab Code: R2502931-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	03/28/25 16:16	
Dibromofluoromethane	102	80 - 116	03/28/25 16:16	
Toluene-d8	101	87 - 121	03/28/25 16:16	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 12:10
Date Received: 03/20/25 14:54

Sample Name: SW-2
Lab Code: R2502931-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 16:39	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 16:39	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 16:39	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 16:39	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 16:39	
Acetone	5.0 U	5.0	5.0	1	03/28/25 16:39	
Benzene	1.0 U	1.0	0.20	1	03/28/25 16:39	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 16:39	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 16:39	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 16:39	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 16:39	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 16:39	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 16:39	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 16:39	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 16:39	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 16:39	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 16:39	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 16:39	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 16:39	
Styrene	1.0 U	1.0	0.20	1	03/28/25 16:39	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 16:39	
Toluene	1.0 U	1.0	0.20	1	03/28/25 16:39	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 16:39	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 16:39	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 16:39	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 16:39	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 16:39	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 16:39	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 16:39	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 16:39	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 12:10
Date Received: 03/20/25 14:54

Sample Name: SW-2
Lab Code: R2502931-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	03/28/25 16:39	
Dibromofluoromethane	101	80 - 116	03/28/25 16:39	
Toluene-d8	102	87 - 121	03/28/25 16:39	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 14:35
Date Received: 03/20/25 14:54

Sample Name: SW-1
Lab Code: R2502931-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:02	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 17:02	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 17:02	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 17:02	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 17:02	
Acetone	5.0 U	5.0	5.0	1	03/28/25 17:02	
Benzene	1.0 U	1.0	0.20	1	03/28/25 17:02	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 17:02	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 17:02	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 17:02	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 17:02	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 17:02	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 17:02	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 17:02	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 17:02	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 17:02	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 17:02	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 17:02	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 17:02	
Styrene	1.0 U	1.0	0.20	1	03/28/25 17:02	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 17:02	
Toluene	1.0 U	1.0	0.20	1	03/28/25 17:02	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 17:02	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 17:02	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 17:02	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 17:02	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 17:02	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 17:02	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 17:02	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 17:02	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 14:35
Date Received: 03/20/25 14:54

Sample Name: SW-1
Lab Code: R2502931-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	03/28/25 17:02	
Dibromofluoromethane	104	80 - 116	03/28/25 17:02	
Toluene-d8	100	87 - 121	03/28/25 17:02	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 15:00
Date Received: 03/20/25 14:54

Sample Name: SW-3
Lab Code: R2502931-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:25	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 17:25	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 17:25	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 17:25	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 17:25	
Acetone	5.0 U	5.0	5.0	1	03/28/25 17:25	
Benzene	1.0 U	1.0	0.20	1	03/28/25 17:25	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 17:25	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 17:25	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 17:25	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 17:25	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 17:25	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 17:25	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 17:25	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 17:25	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 17:25	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 17:25	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 17:25	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 17:25	
Styrene	1.0 U	1.0	0.20	1	03/28/25 17:25	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 17:25	
Toluene	1.0 U	1.0	0.20	1	03/28/25 17:25	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 17:25	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 17:25	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 17:25	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 17:25	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 17:25	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 17:25	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 17:25	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 17:25	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 15:00
Date Received: 03/20/25 14:54

Sample Name: SW-3
Lab Code: R2502931-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85 - 122	03/28/25 17:25	
Dibromofluoromethane	103	80 - 116	03/28/25 17:25	
Toluene-d8	102	87 - 121	03/28/25 17:25	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 15:10
Date Received: 03/20/25 14:54

Sample Name: SW-4
Lab Code: R2502931-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 17:48	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 17:48	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 17:48	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 17:48	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 17:48	
Acetone	5.0 U	5.0	5.0	1	03/28/25 17:48	
Benzene	1.0 U	1.0	0.20	1	03/28/25 17:48	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 17:48	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 17:48	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 17:48	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 17:48	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 17:48	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 17:48	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 17:48	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 17:48	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 17:48	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 17:48	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 17:48	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 17:48	
Styrene	1.0 U	1.0	0.20	1	03/28/25 17:48	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 17:48	
Toluene	1.0 U	1.0	0.20	1	03/28/25 17:48	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 17:48	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 17:48	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 17:48	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 17:48	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 17:48	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 17:48	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 17:48	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 17:48	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 15:10
Date Received: 03/20/25 14:54

Sample Name: SW-4
Lab Code: R2502931-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85 - 122	03/28/25 17:48	
Dibromofluoromethane	102	80 - 116	03/28/25 17:48	
Toluene-d8	103	87 - 121	03/28/25 17:48	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 09:05
Date Received: 03/20/25 14:54

Sample Name: 8354 Jackson Hill Rd
Lab Code: R2502931-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:11	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 18:11	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 18:11	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 18:11	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 18:11	
Acetone	5.0 U	5.0	5.0	1	03/28/25 18:11	
Benzene	1.0 U	1.0	0.20	1	03/28/25 18:11	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 18:11	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 18:11	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 18:11	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 18:11	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 18:11	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 18:11	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 18:11	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 18:11	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 18:11	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 18:11	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 18:11	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 18:11	
Styrene	1.0 U	1.0	0.20	1	03/28/25 18:11	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 18:11	
Toluene	1.0 U	1.0	0.20	1	03/28/25 18:11	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 18:11	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 18:11	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 18:11	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 18:11	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 18:11	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 18:11	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 18:11	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 18:11	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 09:05
Date Received: 03/20/25 14:54

Sample Name: 8354 Jackson Hill Rd
Lab Code: R2502931-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	03/28/25 18:11	
Dibromofluoromethane	102	80 - 116	03/28/25 18:11	
Toluene-d8	101	87 - 121	03/28/25 18:11	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 10:30
Date Received: 03/20/25 14:54

Sample Name: MW-10D
Lab Code: R2502931-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.5	1.0	0.20	1	03/28/25 18:34	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 18:34	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:34	
1,1-Dichloroethane (1,1-DCA)	0.48 J	1.0	0.20	1	03/28/25 18:34	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 18:34	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:34	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 18:34	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 18:34	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 18:34	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 18:34	
Acetone	6.5	5.0	5.0	1	03/28/25 18:34	
Benzene	1.0 U	1.0	0.20	1	03/28/25 18:34	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 18:34	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 18:34	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 18:34	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 18:34	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 18:34	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 18:34	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 18:34	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 18:34	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 18:34	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 18:34	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 18:34	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 18:34	
Styrene	1.0 U	1.0	0.20	1	03/28/25 18:34	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 18:34	
Toluene	1.0 U	1.0	0.20	1	03/28/25 18:34	
Trichloroethene (TCE)	0.83 J	1.0	0.20	1	03/28/25 18:34	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 18:34	
cis-1,2-Dichloroethene	0.77 J	1.0	0.23	1	03/28/25 18:34	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 18:34	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 18:34	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 18:34	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 18:34	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 18:34	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 10:30
Date Received: 03/20/25 14:54

Sample Name: MW-10D
Lab Code: R2502931-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	03/28/25 18:34	
Dibromofluoromethane	104	80 - 116	03/28/25 18:34	
Toluene-d8	104	87 - 121	03/28/25 18:34	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 12:00
Date Received: 03/20/25 14:54

Sample Name: MW-08
Lab Code: R2502931-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	6.7	1.0	0.20	1	03/28/25 18:57	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 18:57	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:57	
1,1-Dichloroethane (1,1-DCA)	4.9	1.0	0.20	1	03/28/25 18:57	
1,1-Dichloroethene (1,1-DCE)	0.41 J	1.0	0.20	1	03/28/25 18:57	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 18:57	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 18:57	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 18:57	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 18:57	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 18:57	
Acetone	5.0 U	5.0	5.0	1	03/28/25 18:57	
Benzene	1.0 U	1.0	0.20	1	03/28/25 18:57	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 18:57	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 18:57	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 18:57	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 18:57	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 18:57	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 18:57	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 18:57	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 18:57	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 18:57	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 18:57	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 18:57	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 18:57	
Styrene	1.0 U	1.0	0.20	1	03/28/25 18:57	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 18:57	
Toluene	1.0 U	1.0	0.20	1	03/28/25 18:57	
Trichloroethene (TCE)	13	1.0	0.20	1	03/28/25 18:57	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 18:57	
cis-1,2-Dichloroethene	6.4	1.0	0.23	1	03/28/25 18:57	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 18:57	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 18:57	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 18:57	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 18:57	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 18:57	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 12:00
Date Received: 03/20/25 14:54

Sample Name: MW-08
Lab Code: R2502931-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	03/28/25 18:57	
Dibromofluoromethane	103	80 - 116	03/28/25 18:57	
Toluene-d8	101	87 - 121	03/28/25 18:57	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 12:30
Date Received: 03/20/25 14:54

Sample Name: MW-07
Lab Code: R2502931-014

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	3.5	1.0	0.20	1	03/28/25 19:20	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 19:20	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 19:20	
1,1-Dichloroethane (1,1-DCA)	1.0	1.0	0.20	1	03/28/25 19:20	
1,1-Dichloroethene (1,1-DCE)	0.49 J	1.0	0.20	1	03/28/25 19:20	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 19:20	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 19:20	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 19:20	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 19:20	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 19:20	
Acetone	5.0 U	5.0	5.0	1	03/28/25 19:20	
Benzene	1.0 U	1.0	0.20	1	03/28/25 19:20	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 19:20	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 19:20	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 19:20	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 19:20	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 19:20	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 19:20	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 19:20	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 19:20	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 19:20	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 19:20	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 19:20	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 19:20	
Styrene	1.0 U	1.0	0.20	1	03/28/25 19:20	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 19:20	
Toluene	1.0 U	1.0	0.20	1	03/28/25 19:20	
Trichloroethene (TCE)	6.2	1.0	0.20	1	03/28/25 19:20	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 19:20	
cis-1,2-Dichloroethene	2.4	1.0	0.23	1	03/28/25 19:20	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 19:20	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 19:20	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 19:20	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 19:20	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 19:20	

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/20/25 12:30
Date Received: 03/20/25 14:54

Sample Name: MW-07
Lab Code: R2502931-014

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85 - 122	03/28/25 19:20	
Dibromofluoromethane	102	80 - 116	03/28/25 19:20	
Toluene-d8	103	87 - 121	03/28/25 19:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25
Date Received: 03/20/25 14:54

Sample Name: Trip Blank
Lab Code: R2502931-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 13:57	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 13:57	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 13:57	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 13:57	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 13:57	
Acetone	5.0 U	5.0	5.0	1	03/28/25 13:57	
Benzene	1.0 U	1.0	0.20	1	03/28/25 13:57	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 13:57	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 13:57	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 13:57	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 13:57	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 13:57	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 13:57	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 13:57	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 13:57	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 13:57	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 13:57	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 13:57	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 13:57	
Styrene	1.0 U	1.0	0.20	1	03/28/25 13:57	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 13:57	
Toluene	1.0 U	1.0	0.20	1	03/28/25 13:57	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 13:57	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 13:57	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 13:57	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 13:57	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 13:57	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 13:57	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 13:57	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 13:57	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25
Date Received: 03/20/25 14:54

Sample Name: Trip Blank
Lab Code: R2502931-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	85 - 122	03/28/25 13:57	
Dibromofluoromethane	104	80 - 116	03/28/25 13:57	
Toluene-d8	104	87 - 121	03/28/25 13:57	



Semivolatile Organic Compounds by GC/MS

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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25 10:10
Date Received: 03/20/25 14:54

Sample Name: MW-11
Lab Code: R2502931-001

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

Analysis Method: 8270E SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	2.8	0.040	1	03/24/25 19:36	3/24/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tetrahydrofuran-d8 (SUR)	97	64 - 124	03/24/25 19:36	



Metals

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Form 1

Inorganic Analysis Data Sheet

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-11	Collected	Received	Matrix	Prep Method
R2502931-001	03/19/25 1010	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	1900		ug/L	30	100	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Barium, Total	22.0		ug/L	3	20	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	35300		ug/L	300	1000	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	2.0	J	ug/L	2	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Iron, Total	1420		ug/L	70	100	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	8700		ug/L	30	1000	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	101		ug/L	4	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:36	R-CVAA-03_873622	454217
P	Nickel, Total	20.0	J	ug/L	3	40	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	2300		ug/L	400	2000	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	2900		ug/L	300	1000	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	3.0	J	ug/L	0.7	50	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	6.0	J	ug/L	3	20	1	03/25/25 18:20:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-04	Collected	Received	Matrix	Prep Method
R2502931-002	03/19/25 1050	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	30.0	J	ug/L	30	100	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Barium, Total	22.0		ug/L	3	20	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	36700		ug/L	300	1000	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Iron, Total	100	U	ug/L	70	100	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	9200		ug/L	30	1000	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	642		ug/L	4	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:43	R-CVAA-03_873622	454217
P	Nickel, Total	12.0	J	ug/L	3	40	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	2300		ug/L	400	2000	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	3100		ug/L	300	1000	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	3.0	J	ug/L	3	20	1	03/25/25 18:37:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-13	Collected	Received	Matrix	Prep Method
R2502931-003	03/19/25 1110	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	14500		ug/L	30	100	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Barium, Total	141		ug/L	3	20	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	0.4	J	ug/L	0.2	3.0	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	0.4	J	ug/L	0.4	5.0	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	30800		ug/L	300	1000	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	18.0		ug/L	2	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	6.0	J	ug/L	0.9	50	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Copper, Total	8.0	J	ug/L	4	20	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Iron, Total	15500		ug/L	70	100	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Lead, Total	4.0	J	ug/L	4	50	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	7100		ug/L	30	1000	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	380		ug/L	4	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:51	R-CVAA-03_873622	454217
P	Nickel, Total	72.0	J	ug/L	6	80	2	03/28/25 15:59:00	R-ICP-AES-07_874410	454259
P	Potassium, Total	4700		ug/L	400	2000	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	7.0	J	ug/L	7	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	2900		ug/L	300	1000	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	18.0	J	ug/L	0.7	50	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	38.0		ug/L	3	20	1	03/25/25 18:40:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-1D	Collected	Received	Matrix	Prep Method
R2502931-004	03/19/25 1230	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	170		ug/L	30	100	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Barium, Total	5.0	J	ug/L	3	20	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	20800		ug/L	300	1000	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Iron, Total	120		ug/L	70	100	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	9600		ug/L	30	1000	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	12.0		ug/L	4	10	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:53	R-CVAA-03_873622	454217
P	Nickel, Total	12.0	J	ug/L	3	40	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	1200	J	ug/L	400	2000	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/28/25 15:53:00	R-ICP-AES-07_874410	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	3600		ug/L	300	1000	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	3.0	J	ug/L	3	20	1	03/25/25 18:43:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-1S	Collected	Received	Matrix	Prep Method
R2502931-005	03/19/25 1310	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	9550		ug/L	30	100	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Barium, Total	138		ug/L	3	20	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	0.3	J	ug/L	0.2	3.0	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	0.6	J	ug/L	0.4	5.0	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	37500		ug/L	300	1000	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	11.0		ug/L	2	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	4.0	J	ug/L	0.9	50	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Copper, Total	9.0	J	ug/L	4	20	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Iron, Total	8070		ug/L	70	100	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Lead, Total	8.0	J	ug/L	4	50	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	7600		ug/L	30	1000	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	361		ug/L	4	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:56	R-CVAA-03_873622	454217
P	Nickel, Total	56.0		ug/L	3	40	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	3900		ug/L	400	2000	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	2300		ug/L	300	1000	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	13.0	J	ug/L	0.7	50	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	55.0		ug/L	3	20	1	03/25/25 18:53:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-12	Collected	Received	Matrix	Prep Method
R2502931-006	03/19/25 1410	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	6190		ug/L	30	100	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Barium, Total	106		ug/L	3	20	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	0.2	J	ug/L	0.2	3.0	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	77000		ug/L	300	1000	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	7.0	J	ug/L	2	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	3.0	J	ug/L	0.9	50	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Iron, Total	5280		ug/L	70	100	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Lead, Total	5.0	J	ug/L	4	50	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	39600		ug/L	30	1000	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	533		ug/L	4	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:58	R-CVAA-03_873622	454217
P	Nickel, Total	45.0		ug/L	3	40	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	5700		ug/L	400	2000	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	23100		ug/L	300	1000	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	8.0	J	ug/L	0.7	50	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	18.0	J	ug/L	3	20	1	03/25/25 18:56:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

SW-2	Collected	Received	Matrix	Prep Method
R2502931-007	03/19/25 1210	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	4950		ug/L	30	100	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Barium, Total	47.0		ug/L	3	20	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	11800		ug/L	300	1000	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	5.0	J	ug/L	2	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	3.0	J	ug/L	0.9	50	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Copper, Total	4.0	J	ug/L	4	20	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Iron, Total	4540		ug/L	70	100	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	2400		ug/L	30	1000	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	862		ug/L	4	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:01	R-CVAA-03_873622	454217
P	Nickel, Total	23.0	J	ug/L	3	40	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	3400		ug/L	400	2000	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	800	J	ug/L	300	1000	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	7.0	J	ug/L	0.7	50	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	20.0		ug/L	3	20	1	03/25/25 18:59:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

SW-1	Collected	Received	Matrix	Prep Method
R2502931-008	03/19/25 1435	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	140		ug/L	30	100	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Barium, Total	15.0	J	ug/L	3	20	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	28000		ug/L	300	1000	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Iron, Total	1160		ug/L	70	100	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	8200		ug/L	30	1000	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	330		ug/L	4	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:04	R-CVAA-03_873622	454217
P	Nickel, Total	7.0	J	ug/L	3	40	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	2000		ug/L	400	2000	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	7700		ug/L	300	1000	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	4.0	J	ug/L	3	20	1	03/25/25 19:02:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

SW-3	Collected	Received	Matrix	Prep Method
R2502931-009	03/19/25 1500	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	880		ug/L	30	100	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Barium, Total	11.0	J	ug/L	3	20	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	3600		ug/L	300	1000	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	2.0	J	ug/L	2	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Iron, Total	680		ug/L	70	100	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	900	J	ug/L	30	1000	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	20.0		ug/L	4	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:11	R-CVAA-03_873622	454217
P	Nickel, Total	7.0	J	ug/L	3	40	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	1400	J	ug/L	400	2000	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	2200		ug/L	300	1000	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	1.0	J	ug/L	0.7	50	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	5.0	J	ug/L	3	20	1	03/25/25 19:06:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

SW-4	Collected	Received	Matrix	Prep Method
R2502931-010	03/19/25 1510	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	1020		ug/L	30	100	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Barium, Total	9.0	J	ug/L	3	20	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	2400		ug/L	300	1000	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Iron, Total	750		ug/L	70	100	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	600	J	ug/L	30	1000	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	14.0		ug/L	4	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:14	R-CVAA-03_873622	454217
P	Nickel, Total	6.0	J	ug/L	3	40	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	1400	J	ug/L	400	2000	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	2200		ug/L	300	1000	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	1.0	J	ug/L	0.7	50	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	5.0	J	ug/L	3	20	1	03/25/25 19:09:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

8354 Jackson Hill Rd	Collected	Received	Matrix	Prep Method
R2502931-011	03/20/25 0905	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	100	U	ug/L	30	100	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Barium, Total	37.0		ug/L	3	20	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	19000		ug/L	300	1000	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Iron, Total	100	U	ug/L	70	100	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	4500		ug/L	30	1000	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	10.0	U	ug/L	4	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:16	R-CVAA-03_873622	454217
P	Nickel, Total	5.0	J	ug/L	3	40	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	1900	J	ug/L	400	2000	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	22700		ug/L	300	1000	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	6.0	J	ug/L	3	20	1	03/25/25 19:12:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-10D	Collected	Received	Matrix	Prep Method
R2502931-012	03/20/25 1030	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	450		ug/L	30	100	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Barium, Total	34.0		ug/L	3	20	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	44900		ug/L	300	1000	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Iron, Total	430		ug/L	70	100	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	19700		ug/L	30	1000	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	169		ug/L	4	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:19	R-CVAA-03_873622	454217
P	Nickel, Total	14.0	J	ug/L	3	40	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	1900	J	ug/L	400	2000	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	16300		ug/L	300	1000	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	9.0	J	ug/L	3	20	1	03/25/25 19:15:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-08	Collected	Received	Matrix	Prep Method
R2502931-013	03/20/25 1200	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	4100		ug/L	30	100	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Barium, Total	66.0		ug/L	3	20	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	38100		ug/L	300	1000	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	5.0	J	ug/L	2	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	2.0	J	ug/L	0.9	50	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Copper, Total	7.0	J	ug/L	4	20	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Iron, Total	3700		ug/L	70	100	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	14800		ug/L	30	1000	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	71.0		ug/L	4	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:21	R-CVAA-03_873622	454217
P	Nickel, Total	30.0	J	ug/L	3	40	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	2700		ug/L	400	2000	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	5200		ug/L	300	1000	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	6.0	J	ug/L	0.7	50	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	18.0	J	ug/L	3	20	1	03/25/25 19:19:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

MW-07	Collected	Received	Matrix	Prep Method
R2502931-014	03/20/25 1230	03/20/25 1454	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	12100		ug/L	30	100	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Barium, Total	120		ug/L	3	20	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	0.4	J	ug/L	0.2	3.0	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	2.5	J	ug/L	0.4	5.0	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	52500		ug/L	300	1000	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	14.0		ug/L	2	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	5.0	J	ug/L	0.9	50	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Copper, Total	99.0		ug/L	4	20	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Iron, Total	11400		ug/L	70	100	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Lead, Total	18.0	J	ug/L	4	50	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	26200		ug/L	30	1000	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	344		ug/L	4	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 11:24	R-CVAA-03_873622	454217
P	Nickel, Total	53.0	J	ug/L	6	80	2	03/28/25 16:02:00	R-ICP-AES-07_874410	454259
P	Potassium, Total	4800		ug/L	400	2000	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	6600		ug/L	300	1000	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	15.0	J	ug/L	0.7	50	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	88.0		ug/L	3	20	1	03/25/25 19:22:00	R-ICP-AES-07_873976	454259

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

Method Blank	Matrix	Prep Method
R2502931-MB	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
P	Aluminum, Total	100	U	ug/L	30	100	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Antimony, Total	60.0	U	ug/L	27	60	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Arsenic, Total	10.0	U	ug/L	6	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Barium, Total	20.0	U	ug/L	3	20	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Beryllium, Total	3.0	U	ug/L	0.2	3.0	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Cadmium, Total	5.0	U	ug/L	0.4	5.0	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Calcium, Total	1000	U	ug/L	300	1000	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Chromium, Total	10.0	U	ug/L	2	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Cobalt, Total	50.0	U	ug/L	0.9	50	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Copper, Total	20.0	U	ug/L	4	20	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Iron, Total	100	U	ug/L	70	100	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Lead, Total	50.0	U	ug/L	4	50	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Magnesium, Total	1000	U	ug/L	30	1000	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Manganese, Total	10.0	U	ug/L	4	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Nickel, Total	40.0	U	ug/L	3	40	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Potassium, Total	2000	U	ug/L	400	2000	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Selenium, Total	10.0	U	ug/L	7	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Silver, Total	10.0	U	ug/L	0.6	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Sodium, Total	1000	U	ug/L	300	1000	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Thallium, Total	10.0	U	ug/L	8	10	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Vanadium, Total	50.0	U	ug/L	0.7	50	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259
P	Zinc, Total	20.0	U	ug/L	3	20	1	03/25/25 18:14:00	R-ICP-AES-07_873976	454259



Form 1 - Inorganic Analysis Data Sheet

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV), Metals by EPA 6010D (P)

Method Blank	Matrix	Prep Method
R2502931-MB	Water	3005A/3010A

MC	Analyte	Result	Q	Units	DL	LOQ	DF	Analysis Date	Run ID	PrepBatch
CV	Mercury, Total	0.20	U	ug/L	0.08	0.20	1	03/24/25 10:24	R-CVAA-03_873622	454217

MC - Method Class CV - Cold Vapor/AA P - ICP/AES MS - ICP/MS



QC Summary Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		85 - 122	80 - 116	87 - 121
MW-11	R2502931-001	104	104	104
MW-04	R2502931-002	105	104	103
MW-13	R2502931-003	100	104	102
MW-1D	R2502931-004	103	103	103
MW-1S	R2502931-005	99	103	102
MW-12	R2502931-006	101	102	101
SW-2	R2502931-007	101	101	102
SW-1	R2502931-008	96	104	100
SW-3	R2502931-009	102	103	102
SW-4	R2502931-010	104	102	103
8354 Jackson Hill Rd	R2502931-011	96	102	101
MW-10D	R2502931-012	103	104	104
MW-08	R2502931-013	100	103	101
MW-07	R2502931-014	104	102	103
Trip Blank	R2502931-015	102	104	104
Lab Control Sample	RQ2503419-04	104	108	104
Method Blank	RQ2503419-06	100	105	102
MW-11 MS	RQ2503419-07	105	105	102
MW-11 DMS	RQ2503419-08	105	106	102

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25
Date Received: 03/20/25
Date Analyzed: 03/28/25
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-11
Lab Code: R2502931-001
Analysis Method: 8260D
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Matrix Spike RQ2503419-07				Duplicate Matrix Spike RQ2503419-08				RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
1,1,1-Trichloroethane (TCA)	4.9	62.6	50.0	115	64.4	50.0	119	74-127	3	30
1,1,2,2-Tetrachloroethane	1.0 U	47.2	50.0	94	46.8	50.0	94	72-122	<1	30
1,1,2-Trichloroethane	1.0 U	50.4	50.0	101	50.7	50.0	101	82-121	<1	30
1,1-Dichloroethane (1,1-DCA)	14	68.3	50.0	108	69.2	50.0	109	74-132	1	30
1,1-Dichloroethene (1,1-DCE)	1.3	50.8	50.0	99	52.1	50.0	102	71-118	2	30
1,2-Dichloroethane	1.0 U	50.9	50.0	102	51.2	50.0	102	68-130	<1	30
1,2-Dichloropropane	1.0 U	48.5	50.0	97	49.8	50.0	100	79-124	3	30
2-Butanone (MEK)	5.0 U	46.0	50.0	92	46.4	50.0	93	61-137	<1	30
2-Hexanone	5.0 U	48.2	50.0	96	48.4	50.0	97	56-132	<1	30
4-Methyl-2-pentanone	5.0 U	51.5	50.0	103	51.3	50.0	103	60-141	<1	30
Acetone	5.0 U	39.7	50.0	79	40.5	50.0	81	35-183	2	30
Benzene	1.0 U	50.2	50.0	100	50.3	50.0	101	76-129	<1	30
Bromodichloromethane	1.0 U	56.6	50.0	113	58.3	50.0	117	78-133	3	30
Bromoform	1.0 U	56.2	50.0	112	58.2	50.0	116	58-133	4	30
Bromomethane	1.0 U	40.6	50.0	81	42.6	50.0	85	10-184	5	30
Carbon Disulfide	1.0 U	48.2	50.0	96	52.5	50.0	105	59-140	8	30
Carbon Tetrachloride	1.0 U	56.1	50.0	112	58.0	50.0	116	65-135	3	30
Chlorobenzene	1.0 U	49.0	50.0	98	49.6	50.0	99	76-125	1	30
Chloroethane	1.0 U	49.2	50.0	98	50.8	50.0	102	48-146	3	30
Chloroform	1.0 U	50.4	50.0	101	52.0	50.0	104	75-130	3	30
Chloromethane	1.0 U	52.1	50.0	104	53.8	50.0	108	55-160	3	30
Dibromochloromethane	1.0 U	53.7	50.0	107	54.9	50.0	110	72-128	2	30
Dichloromethane	1.0 U	48.4	50.0	97	48.3	50.0	97	73-122	<1	30
Ethylbenzene	1.0 U	51.2	50.0	102	51.7	50.0	103	72-134	<1	30
Styrene	1.0 U	53.5	50.0	107	53.3	50.0	107	74-136	<1	30
Tetrachloroethene (PCE)	1.3	51.4	50.0	100	51.6	50.0	101	72-125	<1	30
Toluene	1.0 U	51.3	50.0	103	51.5	50.0	103	79-119	<1	30
Trichloroethene (TCE)	4.1	56.7	50.0	105	56.3	50.0	104	74-122	<1	30
Vinyl Chloride	1.0 U	56.7	50.0	113	57.9	50.0	116	74-159	2	30
cis-1,2-Dichloroethene	8.3	60.2	50.0	104	61.2	50.0	106	77-127	2	30
cis-1,3-Dichloropropene	1.0 U	55.1	50.0	110	55.9	50.0	112	52-134	1	30
m,p-Xylenes	2.0 U	105	100	105	106	100	106	80-126	<1	30
o-Xylene	1.0 U	52.1	50.0	104	51.2	50.0	102	79-123	2	30

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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25
Date Received: 03/20/25
Date Analyzed: 03/28/25
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW-11
Lab Code: R2502931-001
Analysis Method: 8260D
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike RQ2503419-07			Duplicate Matrix Spike RQ2503419-08			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
trans-1,2-Dichloroethene	1.0 U	51.8	50.0	104	53.1	50.0	106	73-118	2	30
trans-1,3-Dichloropropene	1.0 U	57.2	50.0	114	58.5	50.0	117	71-133	2	30

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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Analyzed: 03/28/25 12:48
Date Extracted:

Method Blank Summary
Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: RQ2503419-06
Analysis Method: 8260D
Prep Method: EPA 5030C

Instrument ID: R-MS-17
File ID: I:\ACQUDATA\MSVOA17\Data\032825\R1344.D\
Analysis Lot: 874253

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2503419-04	I:\ACQUDATA\MSVOA17\Data\032825\R1341.D	03/28/25 11:39
Trip Blank	R2502931-015	I:\ACQUDATA\MSVOA17\Data\032825\R1347.D	03/28/25 13:57
MW-11	R2502931-001	I:\ACQUDATA\MSVOA17\Data\032825\R1348.D	03/28/25 14:20
MW-04	R2502931-002	I:\ACQUDATA\MSVOA17\Data\032825\R1349.D	03/28/25 14:43
MW-13	R2502931-003	I:\ACQUDATA\MSVOA17\Data\032825\R1350.D	03/28/25 15:06
MW-1D	R2502931-004	I:\ACQUDATA\MSVOA17\Data\032825\R1351.D	03/28/25 15:29
MW-1S	R2502931-005	I:\ACQUDATA\MSVOA17\Data\032825\R1352.D	03/28/25 15:52
MW-12	R2502931-006	I:\ACQUDATA\MSVOA17\Data\032825\R1353.D	03/28/25 16:16
SW-2	R2502931-007	I:\ACQUDATA\MSVOA17\Data\032825\R1354.D	03/28/25 16:39
SW-1	R2502931-008	I:\ACQUDATA\MSVOA17\Data\032825\R1355.D	03/28/25 17:02
SW-3	R2502931-009	I:\ACQUDATA\MSVOA17\Data\032825\R1356.D	03/28/25 17:25
SW-4	R2502931-010	I:\ACQUDATA\MSVOA17\Data\032825\R1357.D	03/28/25 17:48
8354 Jackson Hill Rd	R2502931-011	I:\ACQUDATA\MSVOA17\Data\032825\R1358.D	03/28/25 18:11
MW-10D	R2502931-012	I:\ACQUDATA\MSVOA17\Data\032825\R1359.D	03/28/25 18:34
MW-08	R2502931-013	I:\ACQUDATA\MSVOA17\Data\032825\R1360.D	03/28/25 18:57
MW-07	R2502931-014	I:\ACQUDATA\MSVOA17\Data\032825\R1361.D	03/28/25 19:20
MW-11MS	RQ2503419-07	I:\ACQUDATA\MSVOA17\Data\032825\R1364.D	03/28/25 20:29
MW-11DMS	RQ2503419-08	I:\ACQUDATA\MSVOA17\Data\032825\R1365.D	03/28/25 20:52

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2503419-06

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	03/28/25 12:48	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	03/28/25 12:48	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	03/28/25 12:48	
2-Hexanone	5.0 U	5.0	0.20	1	03/28/25 12:48	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	03/28/25 12:48	
Acetone	5.0 U	5.0	5.0	1	03/28/25 12:48	
Benzene	1.0 U	1.0	0.20	1	03/28/25 12:48	
Bromodichloromethane	1.0 U	1.0	0.20	1	03/28/25 12:48	
Bromoform	1.0 U	1.0	0.25	1	03/28/25 12:48	
Bromomethane	1.0 U	1.0	0.70	1	03/28/25 12:48	
Carbon Disulfide	1.0 U	1.0	0.42	1	03/28/25 12:48	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	03/28/25 12:48	
Chlorobenzene	1.0 U	1.0	0.20	1	03/28/25 12:48	
Chloroethane	1.0 U	1.0	0.23	1	03/28/25 12:48	
Chloroform	1.0 U	1.0	0.51	1	03/28/25 12:48	
Chloromethane	1.0 U	1.0	0.40	1	03/28/25 12:48	
Dibromochloromethane	1.0 U	1.0	0.20	1	03/28/25 12:48	
Dichloromethane	1.0 U	1.0	0.65	1	03/28/25 12:48	
Ethylbenzene	1.0 U	1.0	0.20	1	03/28/25 12:48	
Styrene	1.0 U	1.0	0.20	1	03/28/25 12:48	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	03/28/25 12:48	
Toluene	1.0 U	1.0	0.20	1	03/28/25 12:48	
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	03/28/25 12:48	
Vinyl Chloride	1.0 U	1.0	0.20	1	03/28/25 12:48	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	03/28/25 12:48	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	03/28/25 12:48	
m,p-Xylenes	2.0 U	2.0	0.25	1	03/28/25 12:48	
o-Xylene	1.0 U	1.0	0.20	1	03/28/25 12:48	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	03/28/25 12:48	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	03/28/25 12:48	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2503419-06

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	03/28/25 12:48	
Dibromofluoromethane	105	80 - 116	03/28/25 12:48	
Toluene-d8	102	87 - 121	03/28/25 12:48	

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QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Analyzed: 03/28/25 11:39
Date Extracted:

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample
Lab Code: RQ2503419-04
Analysis Method: 8260D
Prep Method: EPA 5030C

Instrument ID: R-MS-17
File ID: I:\ACQUDATA\MSVOA17\Data\032825\R1341.D\
Analysis Lot: 874253

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2503419-06	I:\ACQUDATA\MSVOA17\Data\032825\R1344.D	03/28/25 12:48
Trip Blank	R2502931-015	I:\ACQUDATA\MSVOA17\Data\032825\R1347.D	03/28/25 13:57
MW-11	R2502931-001	I:\ACQUDATA\MSVOA17\Data\032825\R1348.D	03/28/25 14:20
MW-04	R2502931-002	I:\ACQUDATA\MSVOA17\Data\032825\R1349.D	03/28/25 14:43
MW-13	R2502931-003	I:\ACQUDATA\MSVOA17\Data\032825\R1350.D	03/28/25 15:06
MW-1D	R2502931-004	I:\ACQUDATA\MSVOA17\Data\032825\R1351.D	03/28/25 15:29
MW-1S	R2502931-005	I:\ACQUDATA\MSVOA17\Data\032825\R1352.D	03/28/25 15:52
MW-12	R2502931-006	I:\ACQUDATA\MSVOA17\Data\032825\R1353.D	03/28/25 16:16
SW-2	R2502931-007	I:\ACQUDATA\MSVOA17\Data\032825\R1354.D	03/28/25 16:39
SW-1	R2502931-008	I:\ACQUDATA\MSVOA17\Data\032825\R1355.D	03/28/25 17:02
SW-3	R2502931-009	I:\ACQUDATA\MSVOA17\Data\032825\R1356.D	03/28/25 17:25
SW-4	R2502931-010	I:\ACQUDATA\MSVOA17\Data\032825\R1357.D	03/28/25 17:48
8354 Jackson Hill Rd	R2502931-011	I:\ACQUDATA\MSVOA17\Data\032825\R1358.D	03/28/25 18:11
MW-10D	R2502931-012	I:\ACQUDATA\MSVOA17\Data\032825\R1359.D	03/28/25 18:34
MW-08	R2502931-013	I:\ACQUDATA\MSVOA17\Data\032825\R1360.D	03/28/25 18:57
MW-07	R2502931-014	I:\ACQUDATA\MSVOA17\Data\032825\R1361.D	03/28/25 19:20
MW-11MS	RQ2503419-07	I:\ACQUDATA\MSVOA17\Data\032825\R1364.D	03/28/25 20:29
MW-11DMS	RQ2503419-08	I:\ACQUDATA\MSVOA17\Data\032825\R1365.D	03/28/25 20:52

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dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Analyzed: 03/28/25

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2503419-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260D	21.3	20.0	107	75-125
1,1,2,2-Tetrachloroethane	8260D	19.1	20.0	95	78-126
1,1,2-Trichloroethane	8260D	19.9	20.0	100	82-121
1,1-Dichloroethane (1,1-DCA)	8260D	19.7	20.0	98	80-124
1,1-Dichloroethene (1,1-DCE)	8260D	18.6	20.0	93	71-118
1,2-Dichloroethane	8260D	20.4	20.0	102	71-127
1,2-Dichloropropane	8260D	19.2	20.0	96	80-119
2-Butanone (MEK)	8260D	17.1	20.0	86	61-137
2-Hexanone	8260D	18.9	20.0	95	63-124
4-Methyl-2-pentanone	8260D	20.1	20.0	101	66-124
Acetone	8260D	16.1	20.0	80	40-161
Benzene	8260D	19.6	20.0	98	79-119
Bromodichloromethane	8260D	21.9	20.0	109	81-123
Bromoform	8260D	23.4	20.0	117	65-146
Bromomethane	8260D	16.4	20.0	82	42-166
Carbon Disulfide	8260D	18.5	20.0	92	66-128
Carbon Tetrachloride	8260D	21.5	20.0	108	70-127
Chlorobenzene	8260D	19.2	20.0	96	80-121
Chloroethane	8260D	18.4	20.0	92	62-131
Chloroform	8260D	19.2	20.0	96	79-120
Chloromethane	8260D	19.2	20.0	96	61-143
Dibromochloromethane	8260D	21.8	20.0	109	72-128
Dichloromethane	8260D	18.7	20.0	93	73-122
Ethylbenzene	8260D	19.2	20.0	96	76-120
Styrene	8260D	20.3	20.0	102	80-124
Tetrachloroethene (PCE)	8260D	19.4	20.0	97	72-125
Toluene	8260D	19.7	20.0	99	79-119
Trichloroethene (TCE)	8260D	19.8	20.0	99	74-122
Vinyl Chloride	8260D	21.2	20.0	106	74-159
cis-1,2-Dichloroethene	8260D	19.6	20.0	98	80-121
cis-1,3-Dichloropropene	8260D	22.5	20.0	112	77-122
m,p-Xylenes	8260D	40.1	40.0	100	80-126
o-Xylene	8260D	19.6	20.0	98	79-123

ALS Group USA, Corp.

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QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931**Date Analyzed:** 03/28/25

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L**Basis:**NA**Lab Control Sample**

RQ2503419-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	8260D	19.5	20.0	97	73-118
trans-1,3-Dichloropropene	8260D	23.5	20.0	118	71-133

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931
Date Analyzed: 03/28/25 10:43

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\032825\R1339.D\
Instrument ID: R-MS-17
Analysis Method: 8260D

Lab Code: RQ2503419-02
Analysis Lot: 874253
Signal ID: 1

	1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
	Area	RT	Area	RT	Area	RT
Result ==>	216,254	11.63	480,133	6.18	421,050	9.57
Upper Limit ==>	432,508	11.80	960,266	6.35	842,100	9.74
Lower Limit ==>	108,127	11.46	240,067	6.01	210,525	9.40

Associated Analyses

Lab Control Sample	RQ2503419-04	204208	11.63	473747	6.18	411127	9.57
Method Blank	RQ2503419-06	199029	11.63	470002	6.18	410092	9.57
Trip Blank	R2502931-015	190572	11.63	465528	6.18	400310	9.57
MW-11	R2502931-001	198827	11.63	464760	6.18	405469	9.57
MW-04	R2502931-002	198631	11.63	471750	6.18	410299	9.57
MW-13	R2502931-003	197383	11.63	474569	6.18	405406	9.57
MW-1D	R2502931-004	193250	11.64	467168	6.18	406966	9.57
MW-1S	R2502931-005	197051	11.63	474969	6.18	410080	9.57
MW-12	R2502931-006	188380	11.63	466529	6.18	398023	9.57
SW-2	R2502931-007	193160	11.63	473108	6.18	403763	9.57
SW-1	R2502931-008	193480	11.63	462591	6.18	396172	9.57
SW-3	R2502931-009	195453	11.63	470409	6.18	404738	9.57
SW-4	R2502931-010	191447	11.63	467086	6.18	401760	9.57
8354 Jackson Hill Rd	R2502931-011	177931	11.63	458702	6.18	386537	9.57
MW-10D	R2502931-012	199696	11.63	465028	6.18	408089	9.57
MW-08	R2502931-013	191090	11.64	470308	6.18	403287	9.57
MW-07	R2502931-014	195255	11.63	465492	6.18	402489	9.57
MW-11MS	RQ2503419-07	203108	11.63	461931	6.18	402527	9.57
MW-11DMS	RQ2503419-08	209299	11.64	475090	6.18	415611	9.57

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QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01

Service Request: R2502931
Date Analyzed: 03/28/25 10:43

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\032825\R1339.D\
Instrument ID: R-MS-17
Analysis Method: 8260D

Lab Code: RQ2503419-02
Analysis Lot: 874253
Signal ID: 1

	Pentafluorobenzene	
	Area	RT
Result ==>	287,855	5
Upper Limit ==>	575,710	5.17
Lower Limit ==>	143,928	4.83

Associated Analyses

Lab Control Sample	RQ2503419-04	289655	5.00
Method Blank	RQ2503419-06	282166	5.00
Trip Blank	R2502931-015	279884	5.00
MW-11	R2502931-001	281354	4.99
MW-04	R2502931-002	285456	5.00
MW-13	R2502931-003	287200	5.00
MW-1D	R2502931-004	281918	5.00
MW-1S	R2502931-005	284694	5.00
MW-12	R2502931-006	275908	5.00
SW-2	R2502931-007	281753	4.99
SW-1	R2502931-008	276396	5.00
SW-3	R2502931-009	279264	5.00
SW-4	R2502931-010	278476	5.00
8354 Jackson Hill Rd	R2502931-011	278881	5.00
MW-10D	R2502931-012	282096	5.00
MW-08	R2502931-013	279362	5.00
MW-07	R2502931-014	281960	5.00
MW-11MS	RQ2503419-07	274883	5.00
MW-11DMS	RQ2503419-08	281545	5.00



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931

SURROGATE RECOVERY SUMMARY
1,4-Dioxane by GC/MS

Analysis Method: 8270E SIM
Extraction Method: EPA 3535A

Sample Name	Lab Code	Tetrahydrofuran-d8 (SUR)
		64 - 124
MW-11	R2502931-001	97
Method Blank	RQ2503140-01	100
Lab Control Sample	RQ2503140-02	82
Duplicate Lab Control Sample	RQ2503140-03	100
MW-11 MS	RQ2503140-04	100
MW-11 DMS	RQ2503140-05	92

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: 03/19/25
Date Received: 03/20/25
Date Analyzed: 03/24/25
Date Extracted: 03/24/25

Duplicate Matrix Spike Summary
1,4-Dioxane by GC/MS

Sample Name: MW-11
Lab Code: R2502931-001
Analysis Method: 8270E SIM
Prep Method: EPA 3535A

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike RQ2503140-04			Duplicate Matrix Spike RQ2503140-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,4-Dioxane	2.8	12.8	10.0	100	13.0	10.0	102	33-146	2	30

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.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Analyzed: 03/24/25 18:27
Date Extracted: 03/24/25

Method Blank Summary
1,4-Dioxane by GC/MS

Sample Name: Method Blank
Lab Code: RQ2503140-01

Instrument ID:R-MS-56**File ID:**I:\ACQUDATA\5975E\data\032425\BM91753.D**Analysis Method:** 8270E SIM**Analysis Lot:**873774**Prep Method:** EPA 3535A**Extraction Lot:**454304

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2503140-02	I:\ACQUDATA\5975E\data\032425\BM91754.D\	03/24/25 18:44
Duplicate Lab Control Sample	RQ2503140-03	I:\ACQUDATA\5975E\data\032425\BM91755.D\	03/24/25 19:02
MW-11	R2502931-001	I:\ACQUDATA\5975E\data\032425\BM91757.D\	03/24/25 19:36
MW-11MS	RQ2503140-04	I:\ACQUDATA\5975E\data\032425\BM91758.D\	03/24/25 19:53
MW-11DMS	RQ2503140-05	I:\ACQUDATA\5975E\data\032425\BM91759.D\	03/24/25 20:10

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2503140-01

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

Analysis Method: 8270E SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	1	03/24/25 18:27	3/24/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tetrahydrofuran-d8 (SUR)	100	64 - 124	03/24/25 18:27	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931
Date Analyzed: 03/24/25 18:44
Date Extracted: 03/24/25

Lab Control Sample Summary
1,4-Dioxane by GC/MS

Sample Name: Lab Control Sample
Lab Code: RQ2503140-02
Analysis Method: 8270E SIM
Prep Method: EPA 3535A

Instrument ID: R-MS-56
File ID: I:\ACQUDATA\5975E\data\032425\BM91754.D\
Analysis Lot: 873774
Extraction Lot: 454304

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2503140-01	I:\ACQUDATA\5975E\data\032425\BM91753.D\	03/24/25 18:27
Duplicate Lab Control Sample	RQ2503140-03	I:\ACQUDATA\5975E\data\032425\BM91755.D\	03/24/25 19:02
MW-11	R2502931-001	I:\ACQUDATA\5975E\data\032425\BM91757.D\	03/24/25 19:36
MW-11MS	RQ2503140-04	I:\ACQUDATA\5975E\data\032425\BM91758.D\	03/24/25 19:53
MW-11DMS	RQ2503140-05	I:\ACQUDATA\5975E\data\032425\BM91759.D\	03/24/25 20:10

ALS Group USA, Corp.

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QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01
Sample Matrix: Water

Service Request: R2502931**Date Analyzed:** 03/24/25**Duplicate Lab Control Sample Summary****1,4-Dioxane by GC/MS****Units:**ug/L**Basis:**NA**Lab Control Sample**

RQ2503140-02

Duplicate Lab Control Sample

RQ2503140-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270E SIM	9.12	10.0	91	9.67	10.0	97	58-124	6	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Cuba/50191-01

Service Request:R2502931
Date Analyzed:03/24/25 18:10

Internal Standard Area and RT SUMMARY
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\032425\BM91752.D\
Instrument ID: R-MS-56
Analysis Method: 8270E SIM

Lab Code:RQ2503209-01
Analysis Lot:873774
Signal ID:1

	Toluene-d8	
	Area	RT
Result ==>	368,882	5.7
Upper Limit ==>	737,764	6.20
Lower Limit ==>	184,441	5.20

Associated Analyses

Continuing Calibration Verification	RQ2503209-01	368882	5.70
Method Blank	RQ2503140-01	336480	5.69
Lab Control Sample	RQ2503140-02	350055	5.69
Duplicate Lab Control Sample	RQ2503140-03	330340	5.68
MW-11	R2502931-001	362827	5.70
MW-11MS	RQ2503140-04	336674	5.69
MW-11DMS	RQ2503140-05	336448	5.68



Metals

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Form 2

Calibration Verifications

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Form 2 - Calibration Verifications

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

R-CVAA-03_873622		ICV			CCV			LLCCV			CCV			CCV			CCV		
Units	ppb	Run Date			Run Date			Run Date			Run Date			Run Date			Run Date		
		Run Time			Run Time			Run Time			Run Time			Run Time			Run Time		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Mercury		3.06	102		3.04	101		0.202	101		3.01	100		3.07	102		2.98	99	

R-CVAA-03_873622		LLCCV			CCV														
Units	ppb	Run Date			Run Date														
		Run Time			Run Time														
Analyte		Found	%R	Q	Found	%R	Q												
Mercury		0.208	104		3.03	101													

QC ID	%R Limits	Spiked Analytes
CCV	80 - 120	3.0 - Hg
ICV	90 - 110	3.0 - Hg
LLCCV	70 - 130	0.2 - Hg



Form 2 - Calibration Verifications

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_873976		ICV			CCV			CCV			CCV			CCV			
Units	ppm	Run Date		Run Time	3/25/2025		3/25/2025		3/25/2025		3/25/2025		3/25/2025		3/25/2025		
		15:45:00			18:07:00		18:46:00		19:25:00		19:25:00		19:57:00		19:57:00		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	
Aluminum		9.95	99		10.00	100		9.96	100		9.96	100		9.93	99		
Antimony		4.81	96		4.86	97		4.85	97		4.85	97		4.84	97		
Arsenic		0.956	96		0.965	97		0.962	96		0.965	97		0.960	96		
Barium		9.76	98		9.87	99		9.84	98		9.84	98		9.82	98		
Beryllium		0.248	99		0.250	100		0.249	100		0.249	100		0.249	100		
Cadmium		0.495	99		0.498	100		0.496	99		0.495	99		0.494	99		
Calcium		25.00	100		25.20	101		25.20	101		25.20	101		25.10	101		
Chromium		0.497	99		0.497	99		0.496	99		0.494	99		0.494	99		
Cobalt		2.49	100		2.50	100		2.49	100		2.49	100		2.48	99		
Copper		1.21	97		1.22	98		1.22	97		1.22	98		1.22	98		
Iron		4.88	98		4.91	98		4.90	98		4.90	98		4.88	98		
Lead		0.501	100		0.503	101		0.498	100		0.497	99		0.498	100		
Magnesium		24.40	98		24.70	99		24.70	99		24.70	99		24.70	99		
Manganese		0.722	96		0.728	97		0.726	97		0.726	97		0.724	97		
Nickel		2.02	101		2.04	102		2.03	101		2.03	102		2.03	101		
Potassium		23.80	95		24.10	96		24.00	96		24.00	96		24.00	96		
Selenium		0.473	95		0.486	97		0.476	95		0.476	95		0.484	97		
Silver		0.503	101		0.507	101		0.506	101		0.507	101		0.507	101		
Sodium		24.90	100		25.30	101		25.20	101		25.30	101		25.40	102		
Thallium		0.997	100		0.995	100		0.992	99		0.992	99		0.991	99		
Vanadium		2.52	101		2.54	102		2.54	102		2.54	102		2.54	101		
Zinc		0.973	97		0.973	97		0.968	97		0.965	96		0.963	96		

QC ID	%R Limits	Spiked Analytes
CCV	90 - 110	10.0 - Al, Ba; 5.0 - Sb, Fe; 1.0 - As, Tl, Zn; 0.250 - Be; 0.5 - Cd, Cr, Pb, Se, Ag; 25.0 - Ca, Mg, K, Na; 2.50 - Co, V; 1.25 - Cu; 0.750 - Mn; 2.0 - Ni
ICV	90 - 110	10.0 - Al, Ba; 5.0 - Sb, Fe; 1.0 - As, Tl, Zn; 0.250 - Be; 0.5 - Cd, Cr, Pb, Se, Ag; 25.0 - Ca, Mg, K, Na; 2.50 - Co, V; 1.25 - Cu; 0.750 - Mn; 2.0 - Ni



Form 2 - Calibration Verifications

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_874410		ICV			CCV			CCV			CCV			CCV			CCV		
Units ppm	Run Date	3/28/2025			3/28/2025			3/28/2025			3/28/2025			3/31/2025			3/31/2025		
	Run Time	15:14:00			15:40:00			16:18:00			16:57:00			10:21:00			10:54:00		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Nickel		2.06	103		2.07	103		2.07	104		2.08	104		2.04	102		1.92	96	
Selenium		0.485	97		0.483	97		0.492	98		0.488	98		0.490	98		0.464	93	

QC ID	%R Limits	Spiked Analytes
CCV	90 - 110	2.0 - Ni; 0.5 - Se
ICV	90 - 110	2.0 - Ni; 0.5 - Se



right solutions.
right partner.

Form 3

Blanks

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 3 - Blanks

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

R-CVAA-03_873622			ICB		CCB		CCB		CCB		CCB		CCB	
			Run Date		03/24/25		03/24/25		03/24/25		03/24/25		03/24/25	
			Run Time		08:53		09:54		10:22		10:48		11:09	
			Units		ppb		ppb		ppb		ppb		ppb	
Analyte	DL	LOQ	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Mercury	0.08	0.20	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U

Q - Result Flag * - Result Above Limit



Form 3 - Blanks

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_873976			ICB		CCB		CCB		CCB		CCB		
			03/25/25		03/25/25		03/25/25		03/25/25		03/25/25		
Run Date			15:48		18:11		18:49		19:28		20:01		
Run Time													
Units			ppb		ppb		ppb		ppb		ppb		
Analyte	DL	LOQ	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
Aluminum	30	100	30	U	30	U	30	U	30	U	30	U	
Antimony	27	60	27	U	27	U	27	U	27	U	27	U	
Arsenic	6	10	6	U	6	U	6	U	6	U	6	U	
Barium	3	20	3	U	3	U	3	U	3	U	3	U	
Beryllium	0.2	3.0	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	
Cadmium	0.4	5.0	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	
Calcium	300	1000	300	U	300	U	300	U	300	U	300	U	
Chromium	2	10	2	U	2	U	2	U	2	U	2	U	
Cobalt	0.9	50	0.9	U	0.9	U	0.9	U	0.9	U	0.9	U	
Copper	4	20	4	U	4	U	4	U	4	U	4	U	
Iron	70	100	70	U	70	U	70	U	70	U	70	U	
Lead	4	50	4	U	4	U	4	U	4	U	4	U	
Magnesium	30	1000	30	U	30	U	30	U	30	U	30	U	
Manganese	4	10	4	U	4	U	4	U	4	U	4	U	
Nickel	3	40	3	U	3	U	3	U	3	U	3	U	
Potassium	400	2000	400	U	400	U	400	U	400	U	400	U	
Selenium	7	10	7	U	7	U	7	U	7	U	7	U	
Silver	0.6	10	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	
Sodium	300	1000	300	U	300	U	300	U	300	U	300	U	
Thallium	8	10	8	U	8	U	8	U	8	U	8	U	
Vanadium	0.7	50	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	
Zinc	3	20	3	U	3	U	3	U	3	U	3	U	

Q - Result Flag * - Result Above Limit



Form 3 - Blanks

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_874410			ICB		CCB		CCB		CCB		CCB		CCB	
			Run Date		03/28/25		03/28/25		03/28/25		03/28/25		03/31/25	
			Run Time		15:17		15:43		16:22		17:01		10:24	
			Units		ppb		ppb		ppb		ppb		ppb	
Analyte	DL	LOQ	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Nickel	3	40	3	U	3	U	3	U	3	U	3	U	3	U
Selenium	7	10	7	U	7	U	7	U	7	U	7	U	7	U

Q - Result Flag * - Result Above Limit

Form 5A

Matrix Spike Sample Recovery

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

**ALS Environmental
Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 5A - Matrix Spike Sample Recovery

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

RunID

R-CVAA-03-873622

MW-11 (R2502931-001)					001MS			001DMS							
Sample Matrix		Water		Analysis Batch		873622		Run Date		03/24/25		Run Date		03/24/25	
Result Units		ug/L		Prep Batch		454217		Run Time		10:38		Run Time		10:41	
Prep Method		Method		Prep Date		03/21/25		Prep Amt		25 mL		Prep Amt		25 mL	
Analyte		%R Limits	DF	Sample Result	Spike Added	MS Result	%R	Q	DMS Result	%R	Q	RPD	Q	RPD Limit	
Mercury, Total		75 - 125	1	0.08U	1.00	1.05	105		1.08	108		3		20	

RPD Relative Percent Difference

%R %Recovery

Q %R or RPD Flag

NC Not Calculated

DO Diluted Out

MS\D Matrix Spike \Duplicate

DF Dilution Factor

***** %R or RPD Outside Limits

NS Not Spiked

Amt weight or volume



Form 5A - Matrix Spike Sample Recovery

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

RunID

R-ICP-AES-07-873976

MW-11 (R2502931-001)					001MS			001DMS										
Sample Matrix		Water		Analysis Batch		873976		Run Date		03/25/25		Run Date		03/25/25				
Result Units		ug/L		Prep Batch		454259		Run Time		18:24		Run Time		18:27				
Prep Method		EPA 3005A/3010A		Prep Date		03/22/25		Prep Amt		50 mL		Prep Amt		50 mL				
Analyte	%R Limits	DF	Sample Result	Spike Added	MS Result	%R	Q	DMS Result	%R	Q	RPD	Q	RPD Limit					
Aluminum, Total	75 - 125	1	1900	25000	27400	102		26800	99		2		20					
Antimony, Total	75 - 125	1	27U	500	512	102		506	101		1		20					
Arsenic, Total	75 - 125	1	6U	500	499	100		496	99		1		20					
Barium, Total	75 - 125	1	22	2500	2480	98		2460	97		1		20					
Beryllium, Total	75 - 125	1	0.2U	500	502	100		500	100		1		20					
Cadmium, Total	75 - 125	1	0.4U	500	491	98		488	98		1		20					
Calcium, Total	75 - 125	1	35300	25000	60300	100		59900	98		1		20					
Chromium, Total	75 - 125	1	2J	500	488	97		485	97		1		20					
Cobalt, Total	75 - 125	1	0.9U	500	497	99		493	99		1		20					
Copper, Total	75 - 125	1	4U	500	486	97		484	97		1		20					
Iron, Total	75 - 125	1	1420	5000	6380	99		6070	93		5		20					
Lead, Total	75 - 125	1	4U	500	505	101		499	100		1		20					
Magnesium, Total	75 - 125	1	8700	25000	33600	100		33400	98		1		20					
Manganese, Total	75 - 125	1	101	500	588	97		583	96		1		20					
Nickel, Total	75 - 125	1	20J	500	500	96		496	95		1		20					
Potassium, Total	75 - 125	1	2300	25000	26600	97		26500	96		1		20					
Selenium, Total	75 - 125	1	7U	500	505	101		498	100		1		20					
Silver, Total	75 - 125	1	0.6U	500	503	101		500	100		0		20					
Sodium, Total	75 - 125	1	2900	25000	28300	102		28100	101		1		20					
Thallium, Total	75 - 125	1	8U	500	480	96		477	95		1		20					
Vanadium, Total	75 - 125	1	3J	500	493	98		490	97		1		20					
Zinc, Total	75 - 125	1	6J	500	498	98		495	98		1		20					

RPD Relative Percent Difference

%R %Recovery

Q %R or RPD Flag

NC Not Calculated

DO Diluted Out

MS\D Matrix Spike \Duplicate

DF Dilution Factor

***** %R or RPD Outside Limits

NS Not Spiked

Amt weight or volume



right solutions.
right partner.

Form 5B

Post-Digestion Spike Sample Recovery

Metals by EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 5B - Post-Digestion Spike Sample Recovery

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

MW-11(SDL) (PDS)	Matrix	Units	DF	Analysis Date
RQ2503295-11	Water	ug/L	1	03/25/25 18:30:00

Analyte	Spike Added	Sample Result	Q	PDS Result	Q	%R	Q	%R Limits
Aluminum, Total	25000	1900		26600		98		75-125
Antimony, Total	500	60.0	U	493		93		75-125
Arsenic, Total	500	10.0	U	486		96		75-125
Barium, Total	2500	22.0		2420		95		75-125
Beryllium, Total	500	3.0	U	490		98		75-125
Cadmium, Total	500	5.0	U	478		95		75-125
Calcium, Total	25000	35300		58600		93		75-125
Chromium, Total	500	2.0	J	476		94		75-125
Cobalt, Total	500	50.0	U	484		96		75-125
Copper, Total	500	20.0	U	475		94		75-125
Iron, Total	5000	1420		6190		95		75-125
Lead, Total	500	50.0	U	488		96		75-125
Magnesium, Total	25000	8700		32200		94		75-125
Manganese, Total	500	101		573		94		75-125
Nickel, Total	500	20.0	J	488		93		75-125
Potassium, Total	25000	2300		25400		92		75-125
Selenium, Total	500	10.0	U	494		97		75-125
Silver, Total	500	10.0	U	491		98		75-125
Sodium, Total	25000	2900		27000		96		75-125
Thallium, Total	500	10.0	U	467		91		75-125
Vanadium, Total	500	3.0	J	481		95		75-125
Zinc, Total	500	6.0	J	488		96		75-125

- %Recovery Flag * - %Recovery Outside Limits NC - Not Calculated NS - Not Spiked

Form 7

Laboratory Control Sample

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

**ALS Environmental
Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 7 - Laboratory Control Sample

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

RunID

R-CVAA-03-873622

R-CVAA-03_873622			R2502931-LCS			
Spike Matrix	Water	Analysis Batch	873622	Run Date	03/24/25	
Result Units	ug/L	Prep Batch	454217	Run Time	10:27	
Prep Method	Method	Prep Date	03/21/2025	Prep Amt	25 mL	
Analyte	%Recovery Limits	Spike Added	LCS Result	%R	Q	
Mercury	80-120	1.00	1.05	105		



Form 7 - Laboratory Control Sample

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

RunID

R-ICP-AES-07-873976

R-ICP-AES-07_873976			R2502931-LCS			
Spike Matrix	Water	Analysis Batch	873976	Run Date	03/25/25	
Result Units	ug/L	Prep Batch	454259	Run Time	18:17:00	
Prep Method	EPA 3005A/3010A	Prep Date	03/22/2025	Prep Amt	50 mL	
Analyte	%Recovery Limits	Spike Added	LCS Result	%R	Q	
Aluminum	80-120	25000	24900	100		
Antimony	80-120	500	506	101		
Arsenic	80-120	500	488	98		
Barium	80-120	2500	2440	98		
Beryllium	80-120	500	497	99		
Cadmium	80-120	500	489	98		
Calcium	80-120	25000	25300	101		
Chromium	80-120	500	483	97		
Cobalt	80-120	500	496	99		
Copper	80-120	500	480	96		
Iron	80-120	5000	4920	98		
Lead	80-120	500	500	100		
Magnesium	80-120	25000	24700	99		
Manganese	80-120	500	485	97		
Nickel	80-120	500	481	96		
Potassium	80-120	25000	23800	95		
Selenium	80-120	500	499	100		
Silver	80-120	500	495	99		
Sodium	80-120	25000	25100	100		
Thallium	80-120	500	476	95		
Vanadium	80-120	500	485	97		
Zinc	80-120	500	485	97		



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Form 9

ICP Serial Dilutions

Metals by EPA 6010D (P)

Workorder

R2502931

Client

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04/03/2025

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 9 - ICP Serial Dilutions

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

MW-11(SDL) (SD)				Matrix	Analysis Date	Units				
RQ2503295-12				Water	03/25/25 18:33:00	ug/L				
Analyte	Dilution	DL	LOQ	Sample Result		SD Result		Diff	Q	DL x 50
Aluminum, Total	5	30	100	1900		2350		24	*	1500
Antimony, Total	5	27	60	60.0	U	300	U	NC		1350
Arsenic, Total	5	6	10	10.0	U	50.0	U	NC		300
Barium, Total	5	3	20	22.0		30.0	J	NC		150
Beryllium, Total	5	0.2	3.0	3.0	U	15.0	U	NC		10
Cadmium, Total	5	0.4	5.0	5.0	U	25.0	U	NC		20
Calcium, Total	5	300	1000	35300		34700		2		15000
Chromium, Total	5	2	10	2.0	J	50.0	U	NC		100
Cobalt, Total	5	0.9	50	50.0	U	250	U	NC		45
Copper, Total	5	4	20	20.0	U	100	U	NC		200
Iron, Total	5	70	100	1420		1470		NC		3500
Lead, Total	5	4	50	50.0	U	250	U	NC		200
Magnesium, Total	5	30	1000	8700		8800		1		1500
Manganese, Total	5	4	10	101		102		NC		200
Nickel, Total	5	3	40	20.0	J	20.0	J	NC		150
Potassium, Total	5	400	2000	2300		3000	J	NC		20000
Selenium, Total	5	7	10	10.0	U	50.0	U	NC		350
Silver, Total	5	0.6	10	10.0	U	50.0	U	NC		30
Sodium, Total	5	300	1000	2900		3100	J	NC		15000
Thallium, Total	5	8	10	10.0	U	50.0	U	NC		400
Vanadium, Total	5	0.7	50	3.0	J	250	U	NC		35
Zinc, Total	5	3	20	6.0	J	100	U	NC		150

NC - Sample and/or Serial Dilution result(s) do not meet criteria for evaluation. %Diff Not Calculated.



Form 9 - ICP Serial Dilutions

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

MW-1D(SDL) (SD)	Matrix	Analysis Date	Units
RQ2503520-13	Water	03/28/25 15:56:00	ug/L

Analyte	Dilution	DL	LOQ	Sample Result	SD Result	Diff	Q	DL x 50
Selenium, Total	5	7	10	10.0 U	50.0 U	NC		350

NC - Sample and/or Serial Dilution result(s) do not meet criteria for evaluation. %Diff Not Calculated.

Form 10

Detection Limits

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 10 - Detection Limits

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

Analyte	CAS	Units	DL	LOQ	Prep Method	Leach Method
Mercury, Total	7439-97-6	ug/L	0.08	0.20	7470A	NA



Form 10 - Detection Limits

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

Analyte	CAS	Units	DL	LOQ	Prep Method	Leach Method
Aluminum, Total	7429-90-5	ug/L	30	100	EPA 3005A/3010A	NA
Antimony, Total	7440-36-0	ug/L	27	60	EPA 3005A/3010A	NA
Arsenic, Total	7440-38-2	ug/L	6	10	EPA 3005A/3010A	NA
Barium, Total	7440-39-3	ug/L	3	20	EPA 3005A/3010A	NA
Beryllium, Total	7440-41-7	ug/L	0.2	3.0	EPA 3005A/3010A	NA
Cadmium, Total	7440-43-9	ug/L	0.4	5.0	EPA 3005A/3010A	NA
Calcium, Total	7440-70-2	ug/L	300	1000	EPA 3005A/3010A	NA
Chromium, Total	7440-47-3	ug/L	2	10	EPA 3005A/3010A	NA
Cobalt, Total	7440-48-4	ug/L	0.9	50	EPA 3005A/3010A	NA
Copper, Total	7440-50-8	ug/L	4	20	EPA 3005A/3010A	NA
Iron, Total	7439-89-6	ug/L	70	100	EPA 3005A/3010A	NA
Lead, Total	7439-92-1	ug/L	4	50	EPA 3005A/3010A	NA
Magnesium, Total	7439-95-4	ug/L	30	1000	EPA 3005A/3010A	NA
Manganese, Total	7439-96-5	ug/L	4	10	EPA 3005A/3010A	NA
Nickel, Total	7440-02-0	ug/L	3	40	EPA 3005A/3010A	NA
Potassium, Total	7440-09-7	ug/L	400	2000	EPA 3005A/3010A	NA
Selenium, Total	7782-49-2	ug/L	7	10	EPA 3005A/3010A	NA
Silver, Total	7440-22-4	ug/L	0.6	10	EPA 3005A/3010A	NA
Sodium, Total	7440-23-5	ug/L	300	1000	EPA 3005A/3010A	NA
Thallium, Total	7440-28-0	ug/L	8	10	EPA 3005A/3010A	NA
Vanadium, Total	7440-62-2	ug/L	0.7	50	EPA 3005A/3010A	NA
Zinc, Total	7440-66-6	ug/L	3	20	EPA 3005A/3010A	NA



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Form 12

Linear Ranges

Metals by EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 12 - Linear Ranges

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

Analyte	Linear Range	Units
AG 328	2	mg/L
AL 237	500	mg/L
AS 188	4	mg/L
B 249	50	mg/L
BA 233	40	mg/L
BE 313	1	mg/L
CA 227	250	mg/L
CD 226	2	mg/L
CO 228	10	mg/L
CR 267	10	mg/L
CU 324	20	mg/L
FE 259	100	mg/L
K 766	100	mg/L
MG 279	500	mg/L
MN 257	10	mg/L
MO 202	10	mg/L
NA 589	250	mg/L
NI 231	8	mg/L
PB 220	10	mg/L
SB 206	10	mg/L
SE 196	10	mg/L
SI 252	20	mg/L
SN 189	20	mg/L
SR 421	10	mg/L
TI 337	10	mg/L
TL 191	4	mg/L
V 292	10	mg/L
ZN 206	10	mg/L

Analysis Run Log

Mercury by EPA 7470A (CV), Metals by
EPA 6010D (P)

Workorder

R2502931

Client

LU Engineers

Project

Cuba

04/03/2025

**ALS Environmental
Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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Form 14 - Analysis Run Log

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

R-CVAA-03_873622	Instrument ID	Start Date	End Date
	R-CVAA-03	03/24/25	03/24/25

Time	Type	Sample ID	Dilution	Analytes
08:50	ICV	Initial Calibraton Verification	1	Hg
08:53	ICB	Initial Calibration Blank	1	Hg
09:51	CCV	Continuing Calibration Verification	1	Hg
09:54	CCB	Continuing Calibration Blank	1	Hg
10:14	LLCCV	Low Level Continuing Calibration Verification	1	Hg
10:17	CCV	Continuing Calibration Verification	1	Hg
10:22	CCB	Continuing Calibration Blank	1	Hg
10:24	MB	MB-R2502931-MB Method Blank	1	Hg
10:27	LCS	LCS-R2502931-LCS Lab Control Sample	1	Hg
10:36	SMPL	MW-11	1	Hg
10:38	MS	MW-11	1	Hg
10:41	DMS	MW-11	1	Hg
10:43	SMPL	MW-04	1	Hg
10:46	CCV	Continuing Calibration Verification	1	Hg
10:48	CCB	Continuing Calibration Blank	1	Hg
10:51	SMPL	MW-13	1	Hg
10:53	SMPL	MW-1D	1	Hg
10:56	SMPL	MW-1S	1	Hg
10:58	SMPL	MW-12	1	Hg
11:01	SMPL	SW-2	1	Hg
11:04	SMPL	SW-1	1	Hg
11:06	CCV	Continuing Calibration Verification	1	Hg
11:09	CCB	Continuing Calibration Blank	1	Hg
11:11	SMPL	SW-3	1	Hg
11:14	SMPL	SW-4	1	Hg
11:16	SMPL	8354 Jackson Hill Rd	1	Hg
11:19	SMPL	MW-10D	1	Hg



Form 14 - Analysis Run Log

Client LU Engineers

Project Cuba

Workorder

R2502931

Mercury by EPA 7470A (CV)

R-CVAA-03_873622	Instrument ID	Start Date	End Date
	R-CVAA-03	03/24/25	03/24/25

Time	Type	Sample ID	Dilution	Analytes
11:21	SMPL	MW-08	1	Hg
11:24	SMPL	MW-07	1	Hg
11:26	LLCCV	Low Level Continuing Calibration Verification	1	Hg
11:34	CCV	Continuing Calibration Verification	1	Hg
11:36	CCB	Continuing Calibration Blank	1	Hg



Form 14 - Analysis Run Log

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_873976	Instrument ID	Start Date	End Date
	R-ICP-AES-07	03/25/25	03/25/25

Time	Type	Sample ID	Dilution	Analytes
15:45	ICV	Initial Calibraton Verification	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
15:48	ICB	Initial Calibration Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:07	CCV	Continuing Calibration Verification	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:11	CCB	Continuing Calibration Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:14	MB	MB-R2502931-MB Method Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:17	LCS	LCS-R2502931-LCS Lab Control Sample	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:20	SMPL	MW-11	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:24	MS	MW-11	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:27	DMS	MW-11	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:30	PS	MW-11	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:33	SD	MW-11	5	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:37	SMPL	MW-04	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:40	SMPL	MW-13	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Na,Tl,V,Zn
18:43	SMPL	MW-1D	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Ag,Na,Tl,V,Zn
18:46	CCV	Continuing Calibration Verification	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:49	CCB	Continuing Calibration Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:53	SMPL	MW-1S	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:56	SMPL	MW-12	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
18:59	SMPL	SW-2	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:02	SMPL	SW-1	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:06	SMPL	SW-3	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:09	SMPL	SW-4	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:12	SMPL	8354 Jackson Hill Rd	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn



Form 14 - Analysis Run Log

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_873976	Instrument ID	Start Date	End Date
	R-ICP-AES-07	03/25/25	03/25/25

Time	Type	Sample ID	Dilution	Analytes
19:15	SMPL	MW-10D	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:19	SMPL	MW-08	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:22	SMPL	MW-07	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,K,Se,Ag,Na,Tl,V,Zn
19:25	CCV	Continuing Calibration Verification	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:28	CCB	Continuing Calibration Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
19:57	CCV	Continuing Calibration Verification	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn
20:01	CCB	Continuing Calibration Blank	1	Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn



Form 14 - Analysis Run Log

Client LU Engineers

Project Cuba

Workorder

R2502931

Metals by EPA 6010D (P)

R-ICP-AES-07_874410	Instrument ID	Start Date	End Date
	R-ICP-AES-07	03/28/25	03/31/25

Time	Type	Sample ID	Dilution	Analytes
15:14	ICV	Initial Calibraton Verification	1	Ni,Se
15:17	ICB	Initial Calibration Blank	1	Ni,Se
15:40	CCV	Continuing Calibration Verification	1	Ni,Se
15:43	CCB	Continuing Calibration Blank	1	Ni,Se
15:53	SMPL	MW-1D	1	Se
15:56	SD	MW-1D	5	Ni,Se
15:59	SMPL	MW-13	2	Ni
16:02	SMPL	MW-07	2	Ni
16:18	CCV	Continuing Calibration Verification	1	Ni,Se
16:22	CCB	Continuing Calibration Blank	1	Ni,Se
16:57	CCV	Continuing Calibration Verification	1	Ni,Se
17:01	CCB	Continuing Calibration Blank	1	Ni,Se
10:21	CCV	Continuing Calibration Verification	1	Ni,Se
10:24	CCB	Continuing Calibration Blank	1	Ni,Se
10:54	CCV	Continuing Calibration Verification	1	Ni,Se
10:57	CCB	Continuing Calibration Blank	1	Ni,Se

SITE-WIDE INSPECTION FORM

Cuba Landfill Site
Town of Cuba, Allegany County

NAME OF INSPECTOR: Maddy Waldock / Derek Whitfield

COMPANY OF INSPECTOR: Lv Engineer

DATE OF INSPECTION: 3/19/2025

CURRENT USE OF SITE: Closed Landfill

EVIDENCE OF VANDALISM (wells, vents, protective cover damage):

N/A

EVIDENCE OF COVER SYSTEM INTRUSION (ruts, burrows, excavations):

N/A

EVIDENCE OF PENETRATIONS (poles, posts, stakes): N/A

EVIDENCE OF HUMAN ENCROACHMENT (trash, fire pits, tire/footprints):

N/A

GENERAL SITE CONDITION (gates, access road, culverts): Gate + well some locked. Was unable to use access road because of flooding / muddy conditions.

EVIDENCE OF EROSION, SETTLEMENT RUTTING, POTHOLE, SLIPPAGE:

yes

EVIDENCE OF STRESSED VEGETATION OR BARE SPOTS: ^{~10} ~~near~~ dead
Willow trees, one tree leaning over

EVIDENCE OF DAMAGE TO WELLS/VENTS: N/A

EVIDENCE OF COVER SYSTEM SUBSIDENCE NEAR WELLS/VENTS: N/A

EVIDENCE OF WILDLIFE INTRUSION (nests, burrows, wasp nests): N/A

EVIDENCE OF SPILLED LIQUIDS (well tampering/vent blowout): N/A

GAS VENTS: Unusual conditions- belching, whistling, excessive gas production: N/A

MONITORING WELLS: Well covers in place and secure: MW-4 rusted +
broken cover latch

EVIDENCE OF DRAINAGE ISSUES (i.e., blockage due to sedimentation, ponding): N/A

EVIDENCE OF SWALE OVERFLOW (i.e., stormwater pathway strays from swales): N/A

EVIDENCE OF WILLOW TREE MORTALITY:
 ~10 willow trees ~~are~~ (young ones) are seemingly dead
 or in distress.

EVIDENCE OF PHYTOREMEDIATION FAILURE (i.e., excessive leachate on access road south of willow trees):

Only muddyness no evidence of leachate.

LANDFILL/GAS VENT MONITORING DATA

[illegible]

* very windy



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Box 1

Site No. **902012**

Site Name Cuba Municipal Waste Disposal

Site Address: JACKSON HILL ROAD Zip Code: 14727

City/Town: Cuba

County: Allegany

Site Acreage: 39.780

Reporting Period: January 25, 2025 to January 25, 2026

YES NO

1. Is the information above correct? ☒ ☐

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? ☐ ☒

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? ☐ ☒

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? ☐ ☒

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development? ☐ ☒

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Closed Landfill ☒ ☐

7. Are all ICs in place and functioning as designed? ☒ ☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcel**155.00-1-6.15**Owner

Village of Cuba

Institutional Control

Site Management Plan

Ground Water Use Restriction
 Soil Management Plan
 Landuse Restriction
 Surface Water Use Restriction
 Monitoring Plan

A revised Site Management Plan (SMP) was approved in March 2022 to manage remaining contamination at the Site in perpetuity or until extinguishment of the Environmental Notice in accordance with ECL Article 71, Title 36.

A Declaration of Covenants and Restrictions (DCR) has been filed on the two entire parcels (~40 acres) that provides an enforceable legal instrument to ensure compliance with the SMP and all ECs and ICs placed on the Site. The DCR was filed with Allegany County in October 2011, and recorded on 10/11/11 as Instrument No.2011-50956.

Because there is remaining contamination at this site, Engineering Controls (ECs) and Institutional Controls (ICs) have been implemented to protect public health and the environment for future use. The Controlled Property has the following Engineering Controls:

1. An engineered landfill cap;
2. Fourteen passive gas vents were installed within the landfill cap boundaries;
3. Four drainage swales were included in the landfill cap design to promote efficient drainage over the cap;
4. One hundred sixty eight willow trees were planted south of the retention pond to mitigate potential leachate seepage south of the site;
5. To minimize the potential of vehicular traffic, 8-ft chain link fence gates were installed at the entrances of the property on Deep Snow Road, one to the southwest of the site and one to the north of the site. Gates have been secured with locks to minimize the potential for trespassing;
6. An access road to control access to the contaminated area;and
7. Sentinel wells for long-term monitoring of site groundwater.

A series of ICs are required to implement, maintain and monitor these ECs. The DCR requires compliance with these ICs, to ensure that:

- All ECs must be operated and maintained as specified in the SMP;and
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP; and
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in the SMP; and
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP; and
- An exclusion against any uses other than for a landfill;and
- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and

passive soil gas vents, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the DCR places the following restrictions on the entire property:

- The property may only be used for its current use as a landfill.
- The property may not be used for a higher level of use without additional remediation and amendment of the DCR, as approved by the NYSDEC.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area, and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the controlled property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP.

NYSDEC retains the right to access such controlled property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

These EC/ICs are designed to:

- Prevent ingestion/direct contact with contaminated soil
- Prevent exposure to contaminants volatilizing from contaminated soil
- Prevent exposure to onsite groundwater
- Prevent the migration of LNAPL from the small impacted area of the landfill and the release of LNAPL contaminants into groundwater.

155.00-1-7

VILLAGE OF CUBA

Soil Management Plan

Monitoring Plan

Ground Water Use Restriction

Landuse Restriction

Surface Water Use Restriction

Site Management Plan

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Box 4

<u>Parcel</u> 155.00-1-6.15	<u>Engineering Control</u> Cover System Subsurface Barriers Fencing/Access Control
155.00-1-7	Subsurface Barriers Cover System Fencing/Access Control

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

- (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

**IC CERTIFICATIONS
SITE NO. 902012**

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gregory L. Andrus at 280 E. Broad St., Suite 117 Rochester, NY 14604
print name print business address

am certifying as Owner's Representative (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.



Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

2/22/26

Date

EC CERTIFICATIONS

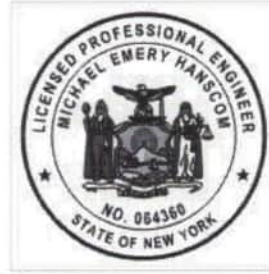
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michael E. Hanscom, P.E. at Joseph C. Lu Engineering, P.C.
print name 280 E. Broad St., Suite 170, Rochester, N.Y. 14604
print business address

am certifying as a Professional Engineer for the Village of Cuba
(Owner or Remedial Party)



Michael E. Hanscom
Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification

Stamp
(Required for PE)

2/24/2026
Date

From: [Monnin, Taylor J \(DEC\)](#)
To: [Greg Andrus](#)
Cc: villageofcuba@gmail.com
Subject: RE: Material Import Form Cuba Site 902012
Date: Tuesday, March 11, 2025 2:12:28 PM
Attachments: [image001.png](#)

Thank you, Greg. I have reviewed the revised import request to bring 0-120 CY of virgin crushed rock to the Cuba Municipal Waste Disposal site (902012). The import request is hereby **APPROVED**.

Please let me know if you have any questions.

Thank you,
Taylor

From: Greg Andrus <gregandrus@luengineers.com>
Sent: Friday, March 7, 2025 1:51 PM
To: Monnin, Taylor J (DEC) <Taylor.Monnin@dec.ny.gov>
Cc: villageofcuba@gmail.com
Subject: RE: Material Import Form Cuba Site 902012

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hello Ms. Monnin,

Please see the attached form and let us know if you have any other questions or concerns relative to approval.

Thank you!

Greg

Gregory L Andrus, P.G.
Group Leader, Investigation/Remediation

Office (direct): 585.434.2414
Cell: 585.732.5786
280 East Broad Street, Suite 170
Rochester, NY 14604
luengineers.com
D/MBE Certified – Veteran-Owned Small Business



From: Monnin, Taylor J (DEC) <Taylor.Monnin@dec.ny.gov>
Sent: Wednesday, March 5, 2025 11:55 AM
To: Greg Andrus <gregandrus@luengineers.com>
Cc: villageofcuba@gmail.com
Subject: RE: Material Import Form Cuba Site 902012

Thank you, Greg, I have reviewed the import request for 0-120 cubic yards NYSDOT 304.15 Subbase and have the following comments:

1. Please provide the NYDSEC Mine ID for the fill source in Section 4.
2. Please include the signature date.

Please submit a revised import request form with the above requested information. Feel free to reach out with any questions.

Thank you,
Taylor

From: Greg Andrus <gregandrus@luengineers.com>
Sent: Friday, February 28, 2025 3:36 PM
To: Monnin, Taylor J (DEC) <Taylor.Monnin@dec.ny.gov>
Cc: villageofcuba@gmail.com
Subject: Material Import Form Cuba Site 902012

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hello Ms. Monnin,

Just a quick follow up on the material the Village wants to import for road repair and miscellaneous use as-needed at the subject property. The updated form is attached for your review approval. I included it in the PRR as well, but figured it would be a good idea to send it separately for clarity.

Please advise as to whether you may have any questions or concerns relative to approval of the subject material.

Thank you,

Greg

Gregory L Andrus, P.G.
Group Leader, Investigation/Remediation

Office (direct): 585.434.2414
Cell: 585.732.5786
280 East Broad Street, Suite 170
Rochester, NY 14604
luengineers.com



NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL
CONSERVATION



Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Commercial or Industrial Use

Have Ecological Resources been identified? no

Is this soil originating from the site? no

How many cubic yards of soil will be imported/reused? 0-120

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? yes

Does it contain less than 10%, by weight, material that passes a size 100 sieve? yes

Is this virgin material from a permitted mine or quarry? yes

Is this material recycled concrete or brick from a DEC registered processing facility?no

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

The material meets requirements of DER-10 section 5.4(e)5.NYDOT Item 304.14 Subbase Course Type 2 or 304.15, Subbase Course Optional Type. See sample04-24-1987-01 material test .04-24-1987-01 see attachment below

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

Revised April 2023

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5): The material planned for import is a virgin crushed rock from a NYSDOT- approved source. The material meets requirements of DER-10 section 5.4 (e)5. See sample04-24-1987-01 material test .04-24-1987-01 see attachment below

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source: Village of Cuba DPW

Location where fill was obtained: New Enterprise Alfred Station Plant 38, Mine #30-00804

Identification of any state or local approvals as a fill source: NYSDOT Source #6-49G

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request: Alfred Plant 38 spec sheet , CME lab Report from Alfred station Source #6-49G

Revised April 2023

The information provided on this form is accurate and complete.



Signature Date

Kris Krzos

Print Name

The Village of Cuba ,NY

Firm

Proctor Report

Report ID: PTR:04-24-1987-01
Issue No: 1

This issue replaces all previous issues of this report

Client: New Enterprise Stone & Lime Co., Inc CC: Paul Juda

Project: 17330 - New Enterprise Stone & Lime

Location: Williamsville, NY

This report and the results contained herein are the exclusive property of CME Associates, Inc. and shall only be reproduced in full when written consent is provided by CME Associates, Inc.



Submitted By: Niel W. Zuern, Vice President of Quality
Date of Issue: 7/15/2024

Sample Details

Sample ID: 04-24-1987-01

Date Sampled: 6/21/2024

Sampling Method: Sampled per ASTM D75

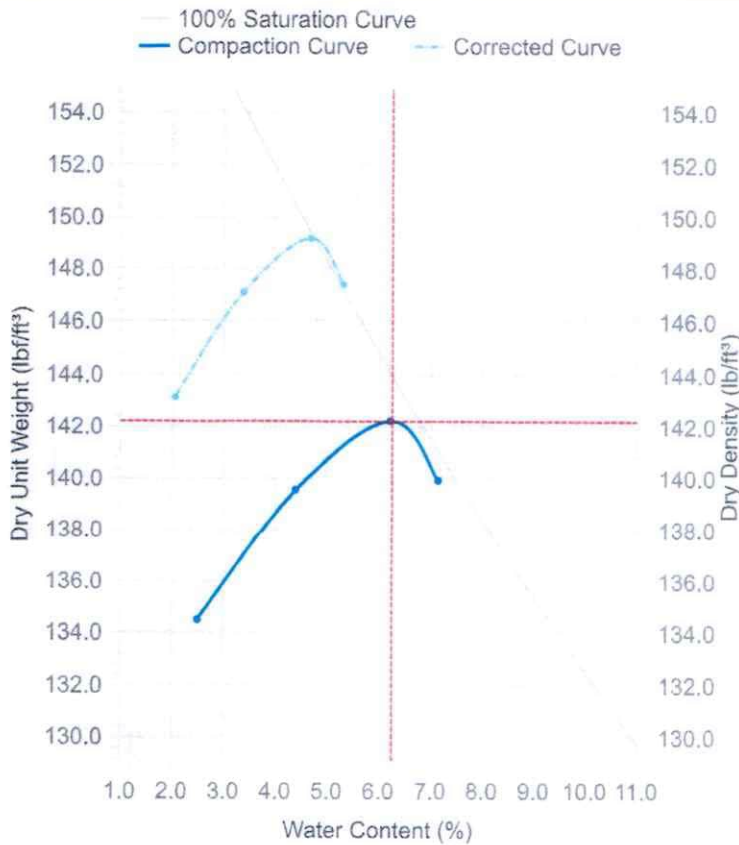
Source: NESL Alfred 6-49G

Material: NYSDOT 304.15 Subbase

Specification:

Location: NESL 6-49G Stockpile

Dry Unit Weight - Water Content Relationship



Test Results

ASTM D1557

Mod. Maximum Dry Unit Weight (lb/ft³): 142.2
Mod. Optimum Water Content (%): 6.3
Retained on 3/4" Sieve (%): 30
Passing 3/4" Sieve (%): 70
Cumulative Retained on 3/8" Sieve (%): 63
Retained on 3/8" Sieve (%): 33
Passing 3/8" Sieve (%): 37
Cumulative Retained on No.4 Sieve (%): 73
Retained on No.4 Sieve (%): 10
Passing No.4 Sieve (%): 27
Method: C
Preparation Method: Moist
Rammer Type: Automatic
Test Portion Specific Gravity: 2.70
Determined By: Estimated
Tested By: Austin Glasier
Date Tested: 6/25/2024

ASTM D4718

Corrected Maximum Dry Unit Weight (lb/ft³): 149.2
Corrected Optimum Water Content (%): 4.7
Oversize Specific Gravity: 2.70
Oversize Particles (%): 30

Comments

Oversize Specific Gravity Determined by Estimation.

Material Test Report

Client: New Enterprise Stone & Lime Co., Inc **CC:** Paul Juda
Project: 17330 - New Enterprise Stone & Lime
Location: Williamsville, NY

Report ID: MAT:04-24-1987-01

Issue No: 1

This issue replaces all previous issues of this report

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Submitted By: Niel W. Zuern, Vice President of Quality
Date of Issue: 7/15/2024

Sample Details

Sample ID: 04-24-1987-01
Date Sampled: 6/21/2024
Source: NESL Alfred 6-49G
Material: NYSDOT 304.15 Subbase
Sampling Method: Sampled per ASTM D75
Location: NESL 6-49G Stockpile

Other Test Results

Description	Method	Result	Limits
Cu	ASTM D2487	94.07	
Cc		13.74	
Procedure	ASTM C117	B	

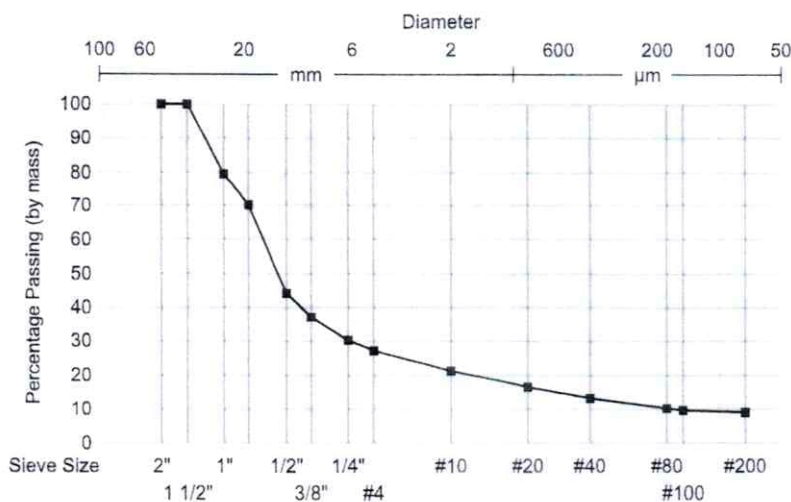
Particle Size Distribution

ASTM C136

Drying By: None

Date Tested: 6/25/2024

Tested By: Austin Glasier



Sieve Size	% Passing	Limits
2in	100	
1 1/2in	100	
1in	80	
3/4in	70	
1/2in	44	
3/8in	37	
1/4in	30	
No.4	27	
No.10	21	
No.20	16	
No.40	13	
No.80	10	
No.100	10	
No.200	9.0	

COBBLES	GRAVEL (73%)		SAND (18%)			SILT/CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	
0%	29.9%	42.9%	5.9%	8.1%	4.2%	9%

Comments

N/A