Village of Cuba Landfill Site

ALLEGANY COUNTY, NEW YORK

Periodic Review Report (2017/2018)

NYSDEC Site Number: 902012

Prepared for

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



Prepared by



February 2018

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EXECUTIVE SUMMARY

The Cuba Landfill Site (the "Site") is a 40-acre former waste disposal facility located on Jackson Hill Roa in the Town of Cuba, 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 and subsequent confirmatory sampling events, 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 represented 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 that 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 with respect to 6 New York Codes, Rules and Regulations (6 NYCRR) Part 703.5 Class GA Ambient Groundwater Quality Standards (Part 703.5 AWQS) at five (5) wells in March 2017. However, the data indicate that groundwater VOC concentrations have generally decreased since remedy implementation. Inorganic concentrations show reductions in constituent concentrations with some fluctuation. With the exception of iron, manganese, and sodium, the majority of inorganics do not exceed Part 703.5 AWQS. Lead and barium were also detected in exceedance of Part 703.5 AWQS at three (3) wells during this reporting period. As indicated by the data, surface water quality does not appear to be impacted by surface water

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runoff from the Site.

1. INTRODUCTION

EA Science and Technology, an affiliate of EA Engineering, P.C., performed Site management activities, including quarterly sampling and Site inspection, through February 2012. In 2014, the Village of Cuba engaged Lu Engineers with continuing Site management activities at the Cuba Landfill Site located in the Town of Cuba, Allegany County, New York (Figure 1).

Lu continued the management program in March 2017 by conducting the Site inspection and sampling of groundwater monitoring wells, surface water, and a down-gradient residential well. The March 2017 sampling event included groundwater sampling for baseline VOCs and Target Analyte List (TAL) metals and collecting water quality parameters (e.g. turbidity, pH, temperature, oxygen-reduction potential [ORP], and conductivity). Water quality parameters were recorded on logs, which are included in Appendix A. Site monitoring is required by, and stipulated in, the Record of Decision (ROD). The purpose of this PRR is to summarize the field activities, analytical results of the sampling events, and Site management activities that have been completed during this reporting period and to offer recommendations for future Site monitoring and maintenance activities.

1.1 **BACKGROUND**

The Cuba Landfill is a 40-acre former waste disposal facility located in the Town of Cuba, Allegany County, New York. The landfill Site is owned by the Village of Cuba and was operated by the Village of Cuba from the 1950s to the 1980s. 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. 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.

In 1994, results of Phase II Preliminary Site Assessment (PSA) 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. After completion of the remedial work as specified within the February 2008 Contract Documents (Contract D006905), some 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 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.

1.2 PERIODIC REVIEW REPORT

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, 2017 to January 25, 2018. The following items are included in this PRR:

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- 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:
 - The compliance of the remedy with the requirements of the Site-specific ROD.
 - The operation and the effectiveness of each treatment unit, including identification of any needed repairs or modifications.
 - Any new conclusions or observations regarding Site contamination based on inspection or lab data generated during the monitoring events.
 - Recommendations regarding any necessary changes to the remedy and/or SMP.
 - The overall performance and effectiveness of the remedy to date.

2. SITE OVERVIEW

The Cuba Landfill Site consists of two (2) adjoining parcels in the Town of Cuba totaling approximately 40-acres (Figure 1). The Site is bordered to the north by Deep Snow Road and a hay field, to the west by a small parcel of wooded land improved with a hunting cabin, and to the east and south by private, undeveloped wooded lands. The topography of the Site slopes steeply from north to 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. Access to the Site is off Jackson Hill Road and the seasonal Deep Snow Road.

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In 2013, the Village of Cuba purchased a 10-acre rectangular parcel of land that adjoins the Site to the immediate south, as illustrated on Figure 2 and Figure 3. 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.

Since 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. Completion of Phase I and II – PSA for the NYSDEC to determine if the Site qualified for the New York State Registry of Inactive Hazardous Waste Disposal Sites (IHWDS) indicated the presence of VOCs in Site groundwater and leachate. Based on these results 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 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.

- Soil –Twelve (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). Subsurface soil samples from two (2) locations did not contain concentrations of VOCs, semi-volatile organic compounds (SVOCs), pesticides, or PCBs greater than the 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 No VOCs, pesticides, or PCBs were detected in any of the sediment samples analyzed. One (1) sampling location at the southwest corner of the

property contained one (1) SVOC, phenol, and a few metals exceeding the SCGs. Both

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upgradient and downgradient samples from both tributaries contained similar metals concentrations.

 Groundwater Springs – Groundwater springs located downgradient and at various off-Site locations contained VOCs, endrin, Aroclor 1260, and a few metals were detected at concentrations greater than the SCGs.

In 2008, the NYSDEC issued a work authorization to 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 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.

Remedial measures were implemented at the Cuba Landfill between September 2008 and December 2009. 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 IMPLEMENTAT	ION 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
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)	June 2015
Ninth Inspection/Monitoring Report (October 2016 event, Lu Engineers)	October 2016
Tenth Inspection/Monitoring Report (March 2017 event, Lu Engineers)	March 2017

⁽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. SITE MANAGEMENT PLAN COMPLIANCE REPORT

The Cuba Landfill Site Operations, Monitoring and Management (OM & M) activities include media monitoring to evaluate remedy performance as follows:

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- Landfill Cover System Inspection and Drainage Monitoring
- Groundwater and Surface Water Monitoring
- Landfill Gas Monitoring.

The monitoring locations, analytical testing requirements and inspection protocols for each monitoring/sampling/inspection event are outlined in the approved SMP. The results of the first three (3) quarterly monitoring/sampling/inspection events conducted by EA Science and Technology during preceding reporting periods are summarized in their respective historic quarterly sampling reports, previously submitted. These monitoring events included activities conducted in July/August 2011 (3rd quarter), November 2011 (4th quarter) and February 2012 (1st quarter).

During the most recent monitoring/sampling/inspection event conducted by Lu Engineers in March 2017, groundwater and surface water samples were analyzed for baseline VOC parameters and Target Analyte List (TAL) metals. Water quality parameters were also evaluated and recorded on groundwater monitoring logs provided in Appendix A. A down-gradient residential well, 8354 Jackson Hill, was also sampled during this event and analyzed for the aforementioned parameters, as summarized in Table 1 and Table 2. Per NYSDEC communication, groundwater samples were not analyzed for leachate indicators during this sampling event. Results of monitoring and sampling activities conducted during this event are summarized in the following tables:

- Table 1: Volatile Organic Compounds Detected in Groundwater & Surface Water (March 2017)
- Table 2A-2L: VOC Groundwater Results Trend Analysis
- Table 3: Baseline Leachate Indicator & Inorganic Parameters Detected in Groundwater & Surface Water

The results of these monitoring programs are discussed at greater length in Section 4. The monitoring/sampling data collected in 2017 indicate the following:

- Concentrations of detected VOCs in groundwater continue to be generally lower than observed in historical data.
- There have been no apparent surface water quality impacts to down-gradient streams relative to runoff from the Site.
- Concentrations of inorganic parameters from monitoring wells fluctuated from previous sampling rounds, however, noted decreases in concentrations were observed. Increased concentrations in lead and barium occurred during this reporting

period.

- Landfill gas levels with respect to VOCs and explosivity were below the requirements of Part 360.
- Site-specific contaminants were not detected in the down-gradient residential drinking water sample collected in March 2017 from the residence, 8354 Jackson Hill Road, located on the east side of the intersection of Jackson Hill Road and North Branch Road.

The Site inspections conducted as required by the SMP indicate the following:

- Landfill cap drainage is effective. Ponding generally has not been observed on the landfill cap and structures are in good working condition. Snow was melting on-Site during the March 2017 sampling event which may have resulted in a minor amount of ponding/standing water along the access road.
- The placement of large tree stumps on either side of the western access road appears to be inhibiting vehicular trespassing.
- Minor erosion has been observed on the eastern and western access roads on the steepest portions. A small area of exposed geotextile was observed on the landfill cap (refer to Appendix B, Site Photographs).
- Approximately 30% (eastern-most) of the willow trees, a component of the phytoremediation effort at the Site, appeared to have died (refer to Appendix B, Site Photographs).

Remedy monitoring data thus far indicate that the Cuba Landfill remedies are functioning as intended. In particular, the monitoring data indicate that the remedies are making progress toward the remedial action objectives which are as follows:

- Control the potential for leachate within the landfill to migrate to groundwater or surface water, by reducing leachate within the Site. The remedy appears to be successfully reducing leachate volume and head through implementation of the Site cap and phytoremediation area. The cap is serving to reduce groundwater quality impacts as observed by the reduction in leachate indicator parameters.
- Control the potential for direct contact with waste materials, leachate, or contaminated groundwater. Direct contact is being prevented by the engineered landfill cap, land use restrictions, and Site access controls.
- Provide for attainment of SCGs for groundwater quality, to the extent practicable. Number of contaminants is fewer and concentrations are generally lower than historical data, thus contributing to attainment of SCGs to the degree feasible. Natural attenuation of VOCs is also likely occurring at the Site.
- Eliminate the potential for future ingestion, inhalation of, or dermal contact with organic contaminants in groundwater. In March 2017, one (1) down-gradient residential water supply was sampled for VOCs and TAL metals. Test results indicated a detection of acetone (2.0 μg/L) at a concentration below the NYSDEC Guidance Value of 50 μg/L. The

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concentration of iron (315 μ g/L) slightly exceeded the NYSDEC Class GA Ambient Water Quality Standard (300 μ g/L).

Monitoring programs have been and continue to be compliant with the approved SMP for the Cuba Landfill Site.

The Site remedy does not rely on any mechanical long-term treatment systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this PRR.

4. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS EVALUATION

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OM&M activities are conducted at the Cuba Landfill as part of ongoing implementation of the SMP which were previously discussed in Section 3. These activities provide the data to evaluate remedy performance, effectiveness, and protectiveness and are summarized below.

It is important to note that during studies completed for the RI, wells were sampled to assess groundwater conditions at the Cuba Landfill. The most recent remedial action studies include groundwater analysis through well sampling. However, only a few wells currently overlap with the wells initially sampled during the RI. As such, direct comparisons between historical and current well data are limited; therefore, overall concentrations and general discussions of historical data are used to compare pre- and post-RI groundwater conditions.

Analytical data generated by Lu during the March 2017 sampling event is included in this report as Appendix C. All documentation associated with the March 2017 groundwater sampling and Site-wide inspection event are included as Appendix A and Appendix D, respectively.

4.1 SITE INSPECTIONS

In March 2017, the landfill cap grades and swales were in good condition. The cap was minimally covered with snow and a majority of the cap was visible and thus the Site inspection was completed. 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. A small patch of exposed green geotextile was observed on the Site cap as indicated in Appendix B, Site Photographs. A copy of the Site-wide inspection form is included as Appendix D of this report.

4.2 GROUNDWATER DATA

Data for detected VOCs and TAL metals from March 2017 is presented in Tables 1-3. VOC trend data is presented in Tables 2A-2L. Groundwater sampling logs are provided in Appendix A. No odors or sheen were observed in the water. Groundwater observations are included on the groundwater monitoring logs.

In March 2017, concentrations of cVOCs in exceedance of applicable groundwater standards and guidance values were detected in the following monitoring wells:

- MW-4 (1,1,1-Trichloroethane, 1,1-Dichloroethane, chloroethane, cis-1,2-Dichloroethene, trichloroethene)
- MW-7 (Trichloroethene)
- MW-8 (1,1,1-Trichloroethane, 1,1-Dichloroethane, cis-1,2-Dichloroethene, trichloroethene)
- MW-11 (1,1,1-Trichloroethane, 1,1-Dichloroethane, cis-1,2-Dichloroethene)
- MW-13 (1,1,1-Trichloroethane, 1,1-Dichloroethane, cis-1,2-Dichloroethene, tetrachloroethene, trichloroethene)

Concentrations of VOCs and inorganics detected during the March 2017 sampling event are lower than historical values as presented in the RI report (Dvirka and Bartilucci, 1999) and previous post-remediation sampling events (refer to Tables 2A-2L and 3). A complete summary of analytical results are provided in Tables 1-3. Analytical exceedances are also depicted on Figure 3.

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The following provides a summary of March 2017 Findings:

- Several cVOC exceedances occurred at MW-4 and MW-13, however, constituent concentrations indicate a declining trend since initiation of the groundwater monitoring program at the Site. Concentrations of cVOCs also declined between October 2016 and March 2017 sampling events as shown on Tables 2D and 2L, respectively. Refer to Table 2D and 2L.
- MW-11, which had no cVOC detections in 2016, had elevated concentrations in three (3) cVOC constituents; cis-1,2-DCE, 1,1-DCE, and 1,1,1-TCE. Refer to Table 2J.
- At MW-07, cVOC concentrations have slightly declined with respect to TCE and 111-TCE since November 2011, as indicated on Table 2E. Reduced concentrations of TCE and the presence of daughter products (below Part 703.5 AWQS) suggest on-going reductive dechlorination.
- cVOC concentrations increased with respect to each parameter detected at MW-08.
 (Table 2F).
- Upgradient well, MW-9, and downgradient well, MW-3, were dry during the March 2017 sampling event and no parameters or samples were obtained due to the low volume.
- No cVOCs were detected at the upgradient well, MW-1S, consistent with previous sampling events (Table 2A).
- No cVOCs were detected in exceedance of Part 703.5 AWQS in the furthest down-gradient overburden and bedrock monitoring well, MW-10. The adjacent monitoring well, MW-10D, yielded low-level concentrations of 1,1,1-trichloroethane and trichloroethene below Part 703.5 AWQS during the March 2017 sampling event (Table 2H).

In general, March 2017 groundwater sample results indicate that cVOC contamination exists in down-gradient monitoring wells on and off the Site property. The most persistent contaminants of concern include trichloroethene and its daughter products cis-1,2-dichloroethene, as well as 1,1,1-trichloroethane and its daughter product, 1,1-dichloroethane.

Concentrations of iron, manganese, and/or sodium in exceedance of Part 703.5 AWQS occurred in MW-1D, MW-1S, MW-4, MW-7, MW-11, MW-12, and MW-13 as summarized in Table 2. A Part 703.5 AWQS exceedance in lead occurred at MW-12 and MW-1D. Copper and barium were also detected above Part 703.5 AWQS in MW-1D and MW-13, respectively. Iron, manganese, and/or sodium exceeded applicable groundwater standards in the downgradient monitoring wells, outside the landfill boundary limits, at MW-10D and MW-10. Elevated

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concentrations of copper, iron, and manganese were also found outside the landfill boundary limits in MW-8. Concentrations of iron, manganese, and sodium fluctuated between July 2014

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and March 2017 as indicated by Table 2 and documented increases in concentrations levels with respect to iron and manganese, as shown by MW-4, MW-8, MW-12, MW-13, MW-IS, and MW-10D may indicate reductive dechlorination.

A slight analytical exceedance occurred in iron from the residential well located at 8345 Jackson Hill Road (315 μ g/L). During this sampling event, the sample obtained from 8345 Jackson Hill Road was retrieved from the well prior to the pressure tank.

The previous sampling event (October 2016) indicated an elevated concentration of lead at this residential well. However, the October 2016 sample was obtained from the hose bib and the piping associated with this may have accounted for the elevated concentration of lead in the sample.

4.3 SURFACE WATER DATA

Historic data from the RI showed that off-Site surface water sampled from two (2) tributaries of Van Campen Creek that flow near the Site indicated no exceedances of SCGs for Site-specific contaminants of concern. The tributaries are located down gradient of the Site and were likely surface water discharge locations from surface water passing through or in close proximity to the Site. Surface water flowing over the Site likely discharged into these tributaries. Surface water in the vicinity of the Site did not appear to be impacted by the landfill.

After implementation of the remedial actions, the surface water data generally showed and continue to show comparable water quality sample results between surface water discharging from the basins/swales and upstream sample points, indicating that the Site cap is effectively preventing migration of Site contaminants to surface water. The most recent surface water sample results collected in March 2017 are presented on Table 1 and Table 3. Samples were analyzed for VOCs and TAL metals consistent with monitoring well sampling parameters. An elevated concentration of iron was detected at SW-03 and SW-04 in exceedance of Part 703.5 AWQS. No elevated concentrations of cVOCs were detected in SW-01, 03, and 04. Figure 3 illustrates the four (4) sample locations (SW-01, SW-02, SW-03, and SW-04). There was insufficient volume to sample at SW-02 in March 2017.

4.4 LEACHATE INDICATOR DATA

Leachate indicators, such as total organic carbon (TOC) and biochemical oxygen demand (BOD), help determine the extent and magnitude of total leachate impacts throughout the landfill. Table 3 presents the most recent leachate indicator data, which was collected in July 2014. Leachate indicators, other than TAL metals, were not collected during the June 2015, October 2016, or March 2017 sampling events.

Analytical results associated with unfiltered groundwater samples collected as part of the post-remedial sampling events in July/August 2011, November 2011, February 2012 were

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submitted for NYSDEC Part 360 2.11 (d) routine leachate indicator analysis. There were no exceedances of Part 703.5 AWQS values in samples collected in July/August 2011. Overburden monitoring well MW-3 exceeded the applicable NYSDEC AWQS for phenolics in November 2011. Surface water sample results from sample points SW-03 and SW-04 exceeded the applicable NYSDEC AWQS for phenolics in February 2013.

In July 2014, groundwater and surface water samples were analyzed for NYSDEC Part 360 2.11 (d) baseline leachate indicator analysis. Groundwater and surface water samples collected in July 2014 did not exceed the NYSDEC AWQS for leachate indicator parameters.

4.5 LANDFILL GAS MONITORING DATA

The landfill gas vents were monitored during the March 2017 sampling event for VOCs and explosivity. Refer to Figure 2 for gas vent locations. No elevated readings in the vents were found during the March 2017 sampling event and Site-wide inspection, as documented in Appendix D.

4.6 **SUMMARY**

In general, the remedy performance monitoring data presented above indicate that the remedies implemented are performing as expected, are effective and protective, and are progressing towards the remedial action objectives. cVOCs are the primary contaminants of concern at the Site. Groundwater cVOC concentrations have generally decreased over time, but reveal minor fluctuations since 2011. 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. Increased concentrations of iron and manganese indicate an increase in reductive dechlorination of dissolved-phase cVOCs in groundwater. Elevated lead levels were detected at MW-1D and MW-12; data from the next sampling event (second quarter 2018) may clarify this finding. As the data currently support, the factors discussed above demonstrate progress towards attaining the remediation goals set forth in the controlling documents and the Record of Decision.

5. INSTITUTIONAL CONTROL/ENGINEERING CONTROL COMPLIANCE REPORT

Lu Project No.: 50191-01

February 2018

The Cuba Landfill Site remedies involve the use of both ICs and ECs, which include the following:

ICs:

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

ECs:

- 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 Table 4. Information in Table 4 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, each of the ICs and ECs at the Cuba Landfill Site remain in place and continue to be effective.

6. OVERALL CONCLUSIONS AND RECOMMENDATIONS

6.1 COMPLIANCE WITH SITE MANAGEMENT PLANS

The controlling document for the Site is the approved SMP. The implementation of and compliance with 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 40-acre disposal Site.

Lu Project No.: 50191-01

February 2018

6.2 PERFORMANCE AND EFFECTIVENESS OF THE REMEDIES

Overall, the remedy performance monitoring data collected during this reporting period indicate that the remedies implemented for both of the operable units are performing as expected, are effective and protective. The landfill cap is serving to reduce groundwater impacts as determined by overall declining leachate indicator parameter concentrations. Landfill gas is typical and 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. Approximately 30% of the willow trees in the eastern portion of the phytoremediation planting area appear to have died.

The following repairs are recommended for Site maintenance:

- Remove dead willow trees. Re-plant with new willow saplings.
- Repair the monitoring well at MW-1S which has upheaved (refer to Appendix B Site Photographs, Photo No. 1).
- If determined necessary, repair the exposed green geotextile on the Site cap.

6.3 FUTURE SAMPLING SCHEDULE AND PERIODIC REVIEW REPORT SUBMITTALS

Based on the analytical data generated during this reporting period, it is evident that cVOCs are the primary contaminants of concern at the Site. VOC contaminant concentrations generally appear to be remaining consistent with evidence of degradation occurring. Lu Engineers recommends that the overburden and bedrock monitoring wells, and surface waters included in the SMP monitoring program be sampled annually for VOCs and TAL metals, on a rotating quarterly basis. Lu Engineers will perform the next sampling event during the second quarter of 2018.

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 by the NYSDEC.

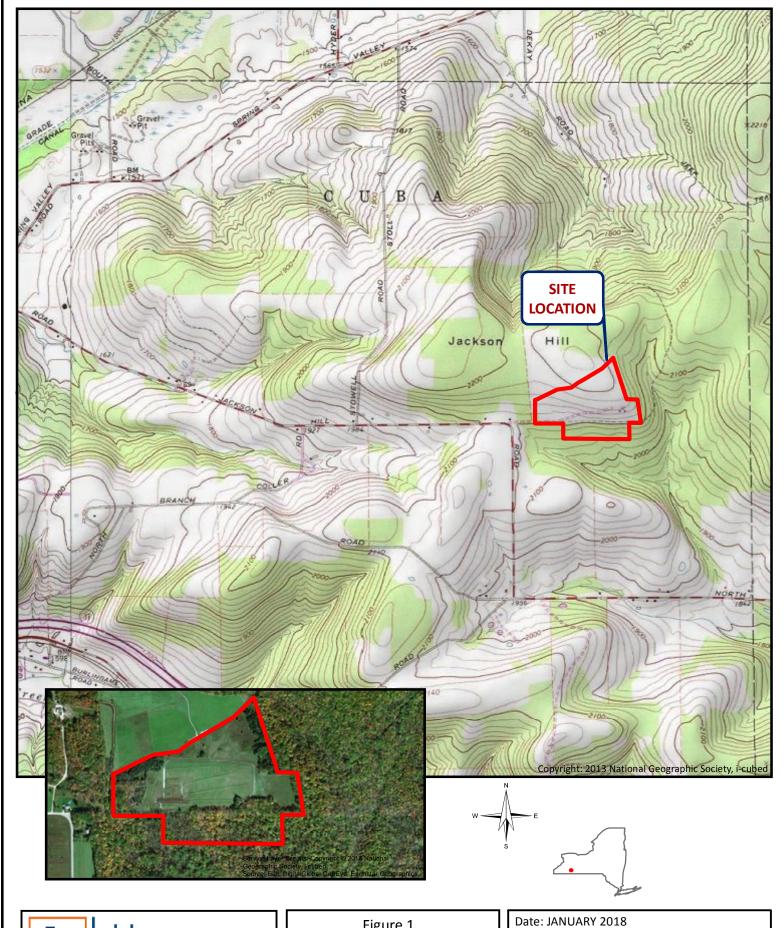


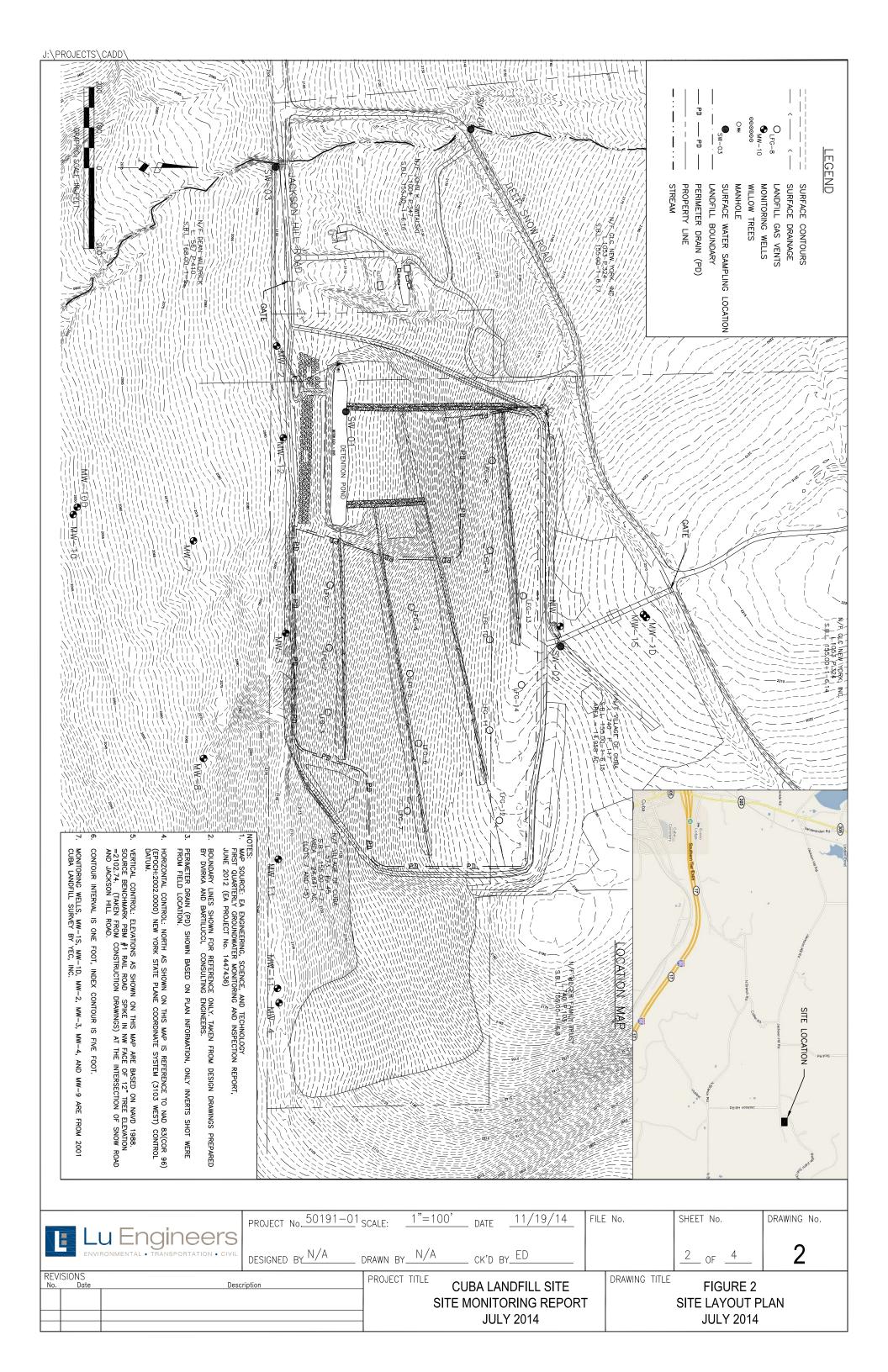


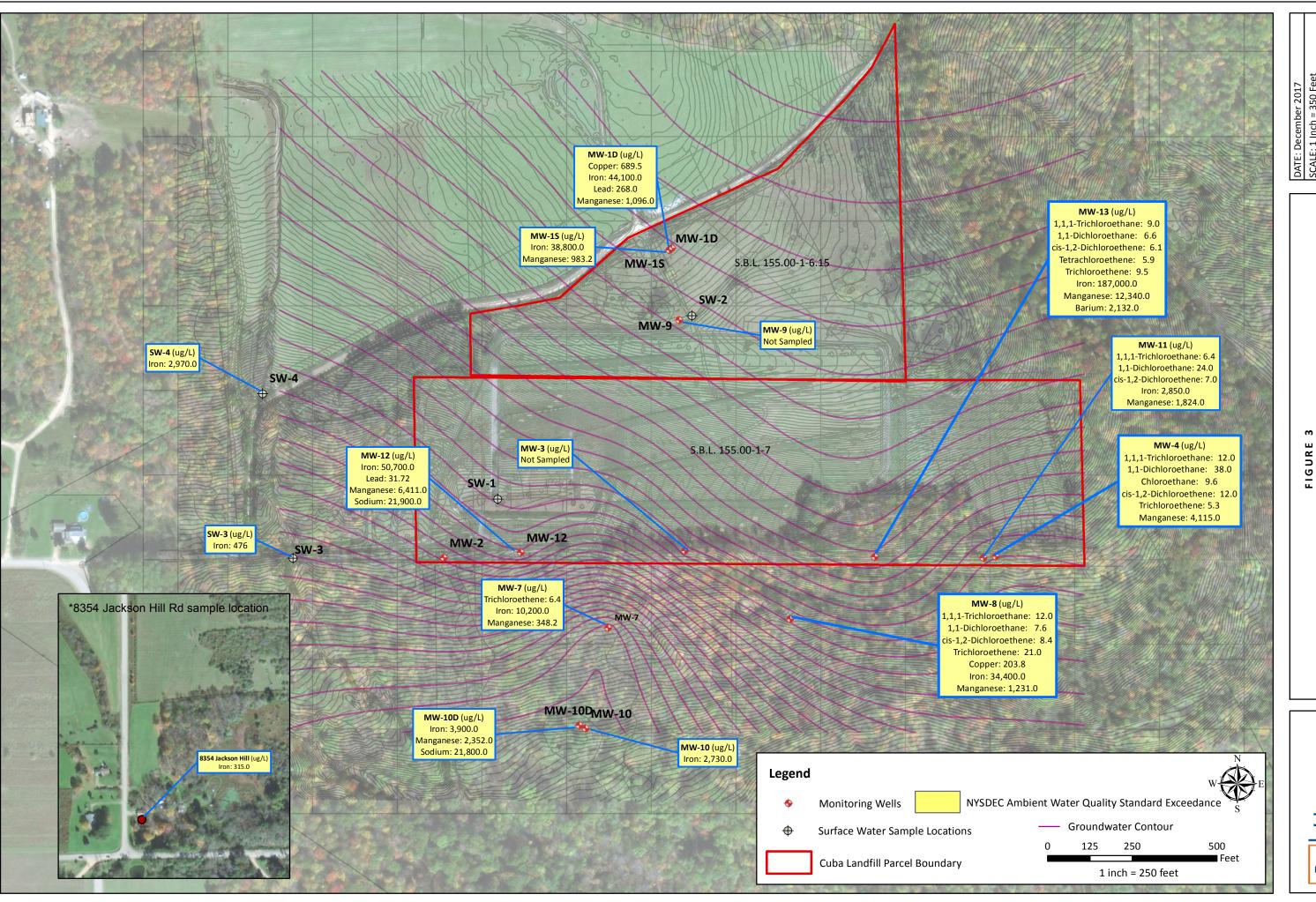
Figure 1 Site Location Map Cuba Landfill Site Allegany County, NY

SCALE: 1 inch = 3,000 feet

CREATED/CHECKED: CB/GLA

Data Source: 2011 National Geographic Society





DATE: December 2017
SCALE: 1 Inch = 350 Feet
DRAWN/CHECKED: PRC/GLA
DATA SOURCE: ESRI Online

FIGURE 3 ANALYTICAL RESULTS & GROUNDWATER CONTOUR MAP

CU BA LANDFILL SITE

ENVIRONMENTAL . TRANSPORTATION . CIVIL

Table 1 - Volatile Organic Compounds Detected in Groundwater & Surface Water (March 2017)

	NYSDEC Ambient	Sample ID	8354 Jack Hill	son	MW-19	6	MW-1	D	MW-3		MW-4		MW-7		MW-8		MW-9		MW-10)	MW-10	D
	Water Quality Standard	Sample Type	Groundwat	er	Groundwat	er	Groundwate	er	Groundwat	er	Groundwate	er	Groundwat	er	Groundwat	er	Groundwate	er	Groundwat	er	Groundwa	ter
Detected Parameter List USEPA Method 8260B	Class GA	Sample Date	3/23/20	17	3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2917		3/23/2017		3/23/2017	,
1,1,1-Trichloroethane	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		12.0		4.5		12.0		NS		<5.0	U	0.99	J
1,1-Dichloroethane	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		38		1.3	J	7.6		NS		<5.0	U	<5.0	U
1,1-Dichloroethene	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		3.1		0.56		0.72		NS		<5.0	U	<5.0	U
Acetone	50*	μg/L	2.0	J	<5.0	U	2.6	J	NS		<10.0	U	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U
Chloroethane	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		9.6		<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U
cis-1,2-Dichloroethene	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		12		2.9		8.4		NS		<5.0	U	<5.0	U
1,2-Dichloroethane	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	J	NS		0.20	J	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U
Tetrachloroethene	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		0.44	J	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U
Trichloroethene	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		5.3		6.4		21.0		NS		<5.0	U	0.64	
Vinyl chloride	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	NS		1.6		<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U

	NYSDEC Ambient	Sample ID	MW-11		MW-12		MW-1		SW-01		SW-02		SW-03		SW-04		Field-DU	
	Water Quality Standard	Sample Type	Groundwat	er	Groundwat	er	Groundwat	er	Groundwat	er	Groundwate	r	Groundwat	er	Groundwat	er	Groundwat	ter
Detected Parameter List USEPA Method 8260B	Class GA	Sample Date	3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017		3/23/2017	
1,1,1-Trichloroethane	5(s)	μg/L	6.4		<5.0	U	9.0		<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
1,1-Dichloroethane	5(s)	μg/L	24		0.70	J	6.6		<5.0	U	NS		<5.0	U	<5.0	U	0.70	J
1,1-Dichloroethene	5(s)	μg/L	1.4		<5.0	U	0.93		<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
Acetone	50*	μg/L	<5.0	U	1.7	J	1.70	J	1.80	J	NS		<10.0	U	<10.0	U	2.6	J
Chloroethane	5(s)	μg/L	1.5	J	<5.0	U	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
cis-1,2-Dichloroethene	5(s)	μg/L	7.0		<5.0	U	6.1		<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
1,2-Dichloroethane	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
Tetrachloroethene	5(s)	μg/L	1.6		<5.0	U	5.9		<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U
Trichloroethene	5(s)	μg/L	4.0		0.78		9.5		<5.0	U	NS		<5.0	U	<5.0	U	0.65	
Vinyl chloride	5(s)	μg/L	<5.0	U	<5.0	U	<5.0	U	<5.0	U	NS		<5.0	U	<5.0	U	<5.0	U

Notes:

USEPA = U.S. Environmental Protection Agency

NYDEC = New York State Department of Environmental Conservation

--- = indicates no applicable standard.

 μ g/L = micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitiation limits shown as <_.

NS = No sample collected.

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (TOGS) 1.1.1, August 1999.

* = NYSDEC Part 703.5 Guidance Value (no standard)

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.

Table 2A - 1S VOC Groundwater Results Trend Analysis

	NYS				MW-1	.S							
Detected Parameters ¹	Groundwater Standard ²	Pre-Remediation	Post-Remediation										
VOCs 8260B		Nov-97	11-Jan 11-Nov 14-Jul 14-Nov 15-Jun 16-Oct 17-Mar										
Acetone	50*	ND	ND	2.21	ND	ND	ND	NS	ND				
Chloroethane	5	ND	ND	ND	ND	ND	ND	NS	ND				
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	NS	ND				
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	NS	ND				
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	NS	ND				
Ethylbenzene	5	ND	0.11	ND	ND	ND	ND	NS	ND				
1,1,1-Trichloroethane	5	1	ND	ND	ND	ND	ND	NS	ND				
Tetrachloroethene	5	1	ND	ND	ND	ND	ND	NS	ND				
Toluene	5	ND	0.47	ND	ND	ND	ND	NS	ND				
Trichloroethene	5	ND	ND	ND	ND	ND	ND	NS	ND				

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2B - MW-1D VOC Groundwater Results Trend Analysis

	NYS Groundwater	ater MW-1D												
Detected Parameters ¹	Standard ²			Pos	st-Remediatio	on								
VOCs 8260B		11-Jan	11-Jan 11-Nov 14-Jul 14-Nov 15-Jun 16-Oct 17-Mar											
Acetone	50*	ND	NA	ND	ND	ND	NS	2.6 J						
Chloroethane	5	ND	NA	ND	ND	ND	NS	ND						
cis-1,2-Dichloroethene	5	ND	NA	ND	ND	ND	NS	ND						
1,1-Dichloroethane	5	0.19	NA	ND	ND	ND	NS	ND						
1,1-Dichloroethene	5	ND	NA	ND	ND	ND	NS	ND						
Ethylbenzene	5	ND	NA	ND	ND	ND	NS	ND						
1,1,1-Trichloroethane	5	0.2	NA	ND	ND	ND	NS	ND						
Tetrachloroethene	5	ND	NA	ND	ND	ND	NS	ND						
Toluene	5	ND	NA	ND	ND	ND	NS	ND						
Trichloroethene	5	ND	NA	ND	ND	ND	NS	ND						

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2C - MW-03 VOC Groundwater Results Trend Analysis

	NYS Groundwater				MW-0	3							
Detected Parameters ¹	Standard ²	Remediation	Post-Remediation										
VOCs 8260B		Nov-97	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar				
Acetone	50*	14	433	ND	NS	NS	ND	NS	NS				
Chloroethane	5	4.0	20.6	56.2	NS	NS	14.0	NS	NS				
cis-1,2-Dichloroethene	5	ND	622	ND	NS	NS	79.0	NS	NS				
1,1-Dichloroethane	5	11.0	81.6	86.4	NS	NS	27.0	NS	NS				
1,1-Dichloroethene	5	65.0	7.2	4.8	NS	NS	ND	NS	NS				
Ethylbenzene	5	ND		ND	NS	NS	ND	NS	NS				
1,1,1-Trichloroethane	5	240.0	73.8	84.8	NS	NS	33.0	NS	NS				
Tetrachloroethene	5	ND	ND	ND	NS	NS	ND	NS	NS				
Toluene	5	ND		ND	NS	NS	ND	NS	NS				
Trichloroethene	5	290.0	99.8	162.0	NS	NS	210.0	NS	NS				

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2D - MW-04 VOC Groundwater Results Trend Analysis

	NYS					MW-04								
Detected Parameters ¹	Groundwater Standard ²	Pre-Remediation				Post-Ren	nediation							
VOCs 8260B		Nov-97	11-Jan	11-Jan 11-Jul 11-Nov 14-Jul 14-Nov 15-Jun 16-Oct Mar-										
Acetone	50*	ND	ND	ND	ND	ND	ND	ND	ND	ND				
Chloroethane	5	ND	5.62	6.22	2.12	5.1	11.0	12.0	ND	9.6				
cis-1,2-Dichloroethene	5	ND	13.4	10.2	10.1	15.0	18.0	21.0	20.0	12.0				
1,1-Dichloroethane	5	100.0	85.5	84.6	62.7	89.0	79.0	68.0	100.0	38.0				
1,1-Dichloroethene	5	1.0	3.62	3.95	3.08	8.7	6.9	7.7	6.0	3.1				
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,1,1-Trichloroethane	5	12.0	30.1	24.5	19.7	35.0	24.0	32.0	30.0	12.0				
Tetrachloroethene	5	ND	2.26	1.25	1.55	ND	ND	ND	ND	0.44				
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND				
Trichloroethene	5	4.0	14.1	6.22	6.75	ND	ND	ND	6.4	5.3				

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2E - MW-07 VOC Groundwater Results Trend Analysis

	NYS Groundwater			MW-0	7							
Detected Parameters ¹	Standard ²			Post-Reme	diation							
VOCs 8260B		11-Nov	11-Nov 14-Jul 14-Nov 15-Jun 16-Oct 17-Mai									
Acetone	50*	ND	ND	ND	ND	NS	ND					
Chloroethane	5	ND	ND	ND	ND	NS	ND					
cis-1,2-Dichloroethene	5	3.22	ND	ND	ND	NS	2.9					
1,1-Dichloroethane	5	1.53	ND	ND	ND	NS	1.3 J					
1,1-Dichloroethene	5	0.55	ND	ND	ND	NS	0.56					
Ethylbenzene	5	ND	ND	ND	ND	NS	ND					
1,1,1-Trichloroethane	5	5.63	5.9	ND	ND	NS	4.5					
Tetrachloroethene	5	ND	ND	ND	ND	NS	ND					
Toluene	5	ND	ND	ND	ND	NS	ND					
Trichloroethene	5	7.55	6.9	6.9	7.1	NS	6.4					

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2F - MW-08 VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-08									
Detected Parameters ¹	Standard ²		Post-Remediation								
VOCs 8260B		11-Nov	11-Nov 14-Jul 14-Nov Nov-97 11-Jan 11-Nov 14-Jul 15-Jun 16-Oct 17-								
Acetone	50*	ND	ND	ND	ND	ND	51.5	NS	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND
cis-1,2-Dichloroethene	5	6.66	5.2	6.5	ND	0.59	0.53	NS	5.4	5.4	8.4
1,1-Dichloroethane	5	5.61	5.3	6.2	2	3.48	2.71	NS	5.6	6	7.6
1,1-Dichloroethene	5	0.54	ND	ND	ND	ND	ND	NS	ND	ND	0.72
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND
1,1,1-Trichloroethane	5	9.92	8.4	11.0	0.9	0.8	0.3	NS	10.0	8.1	12.0
Tetrachloroethene	5	ND	ND	ND	2	ND	ND	NS	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND
Trichloroethene	5	18.6	12.0	18.0	ND	ND	ND	NS	15.0	14	21.0

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2G - MW-09 VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-09									
Detected Parameters ¹	Standard ²	Pre- Remediation									
VOCs 8260B		Nov-97	11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar		
Acetone	50*	ND	8.18	51.5	NS	NS	NS	NS	NS		
Benzene	1	ND	0.12	0.54	NS	NS	NS	NS	NS		
Chloroethane	5	ND	1.3	0.96	NS	NS	NS	NS	NS		
cis-1,2-Dichloroethene	5	ND	0.59	0.53	NS	NS	NS	NS	NS		
1,1-Dichloroethane	5	2	3.48	2.71	NS	NS	NS	NS	NS		
1,1-Dichloroethene	5	ND	ND	ND	NS	NS	NS	NS	NS		
Ethylbenzene	5	ND	0.15	ND	NS	NS	NS	NS	NS		
1,1,1-Trichloroethane	5	0.9	0.78	0.31	NS	NS	NS	NS	NS		
1,1,2-Trichloroethane	1	ND	ND	ND	NS	NS	NS	NS	NS		
Tetrachloroethene	5	2	ND	ND	NS	NS	NS	NS	NS		
Toluene	5	ND	0.73	ND	NS	NS	NS	NS	NS		
trans-1,2-Dichloroethene	5	ND	ND	ND	NS	NS	NS	NS	NS		
Trichloroethene	5	ND	ND	ND	NS	NS	NS	NS	NS		
Vinyl chloride	2	ND	ND	ND	NS	NS	NS	NS	NS		
Xylenes (total)	5	ND	0.6	ND	NS	NS	NS	NS	NS		

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2H - MW-10 VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-10								
Detected Parameters ¹										
VOCs 8260B		11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar		
Acetone	50*	4.62	2.13	12.0	ND	17.0	ND	ND		
Benzene	1	ND								
Chloroethane	5	ND								
cis-1,2-Dichloroethene	5	ND								
1,1-Dichloroethane	5	ND								
1,1-Dichloroethene	5	ND								
Ethylbenzene	5	ND								
1,1,1-Trichloroethane	5	ND								
1,1,2-Trichloroethane	1	ND								
Tetrachloroethene	5	ND								
Toluene	5	0.34	ND	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	5	ND								
Trichloroethene	5	ND								
Vinyl chloride	2	ND								
Xylenes (total)	5	ND								

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2I - MW-10D VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-10D								
Detected Parameters ¹	Standard ²			Post-Reme	diation					
VOCs 8260B		11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar			
Acetone	50*	6.66	ND	ND	ND	ND	ND			
Benzene	1	ND	ND	ND	ND	ND	ND			
Chloroethane	5	ND	ND	ND	ND	ND	ND			
cis-1,2-Dichloroethene	5	0.69	ND	ND	ND	ND	ND			
1,1-Dichloroethane	5	0.5	ND	ND	ND	ND	ND			
1,1-Dichloroethene	5	0.18	ND	ND	ND	ND	ND			
Ethylbenzene	5	ND	ND	ND	ND	ND	ND			
1,1,1-Trichloroethane	5	1.66	ND	ND	ND	ND	0.99			
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND			
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND			
Toluene	5	ND	ND	ND	ND	ND	ND			
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND			
Trichloroethene	5	0.7	ND	ND	ND	ND	0.64			
Vinyl chloride	2	ND	ND	ND	ND	ND	ND			
Xylenes (total)	5	ND	ND	ND	ND	ND	ND			

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2J - MW-11 VOC Groundwater Results Trend Analysis

	NYS Groundwater				MW-11			
Detected Parameters ¹	Standard ²			Post-	Remediation	1		
VOCs 8260B		11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar
Acetone	50*	5.45	1.81	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5	2.23	1.17	ND	ND	ND	ND	1.5 J
cis-1,2-Dichloroethene	5	4.87	4.17	9.1	ND	8.1	ND	7.0
1,1-Dichloroethane	5	50.5	44.0	53.0	25.0	39.0	ND	24.0
1,1-Dichloroethene	5	1.61	1.48	ND	ND	ND	ND	1.4
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	13.9	12.8	15.0	6.0	11.0	ND	6.4
1,1,2-Trichloroethane	1	ND	0.16	ND	ND	ND	ND	ND
Tetrachloroethene	5	1.45	2.92	ND	ND	ND	ND	1.6
Toluene	5	0.34	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	4.03	4.27	ND	ND	ND	ND	4.0
Vinyl chloride	2	0.34	ND	ND	ND	ND	ND	ND
Xylenes (total)	5	ND	ND	ND	ND	ND	ND	ND

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2K - MW-12 VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-12 Post-Remediation								
Detected Parameters ¹	Standard ²									
VOCs 8260B		11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar		
Acetone	50*	5.22	2.41	ND	ND	ND	ND	1.7		
Benzene	1	0.14	0.52	ND	ND	ND	ND	ND		
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	5	1.29	1.47	ND	ND	ND	ND	ND		
1,1-Dichloroethane	5	2.1	2.14	ND	ND	ND	ND	0.70 J		
1,1-Dichloroethene	5	0.32	0.21	ND	ND	ND	ND	ND		
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	5	1.97	1.59	ND	ND	ND	ND	ND		
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND		
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND		
Toluene	5	0.12	ND	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND		
Trichloroethene	5	1.33	1.45	ND	ND	ND	ND	0.78		
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND		
Xylenes (total)	5	ND	ND	ND	ND	ND	ND	ND		

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Table 2L - MW-13 VOC Groundwater Results Trend Analysis

	NYS Groundwater	MW-13 Post Remediation								
Detected Parameters ¹	Standard ²									
VOCs 8260B		11-Jan	11-Nov	14-Jul	14-Nov	15-Jun	16-Oct	17-Mar		
Acetone	50*	6.21	1.61	ND	ND	ND	ND	1.70 J		
Benzene	1	ND	ND	ND	ND	ND	ND	ND		
Chloroethane	5	0.61	0.37	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	5	14.7	17.1	12.0	11.0	7.4	9.7	6.1		
1,1-Dichloroethane	5	21.4	20.0	15.0	14.0	9.3	12	6.6		
1,1-Dichloroethene	5	1.06	1.67	ND	ND	ND	ND	0.93		
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	5	27.4	24.7	16.0	14.0	11.0	11	9.0		
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND		
Tetrachloroethene	5	7.39	6.55	6.4	5.7	5.4	6	5.9		
Toluene	5	ND	ND	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	5	ND	0.14	ND	ND	ND	ND	ND		
Trichloroethene	5	17.8	15.9	13.0	13.0	9.9	12	9.5		
Vinyl chloride	2	ND	ND	ND	ND	ND	ND	ND		
Xylenes (total)	5	ND	ND	ND	ND	ND	ND	ND		

Notes:

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

ND - Not detected above reporting limit

NS - No sample collected

- 1 Results presentend in ug/L or parts per billion (ppb)
- 2 NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)
- * NYSDEC Guidance Value (TOGS 1.1.1)

Village of Cuba Landfill Site NYSDEC Site #902012 Periodic Review Report (2017/2018)

Table 3 - Baseline Leachate Indicator & Inorganic Parameters Detected in Groundwater & Surface Water

		Sample ID		MW-11			MW-12			MW-13			MW-1D			MW-1S			MW-3			MW-9			MW-10D		NYSDEC Ambien Water Quality
		Sample Type		Water		W	Vater			Water			Water		Standard												
	USEPA	Sample Date	7/14/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	7/14/2014	10/24/2016	3/27/2017	7/14/2014	10/24/2016	3/23/2017	Class GA
Baseline Parameter List	Method																										
Leachate Indicators																											
Alkalinity, as CaCO3	SM 2320 B	mg/L	154	NA	NA	356	NA	NA	199	NA	NA	75.7	NS	NS	70.3	NS	NS	NS	NS	NS	NS	NS	NS	177	NA	NA	
Ammonia (as N)	E350.1	mg/L	0.148	NA	NA	0.109	NA	NA	0.15	NA	NA	< 0.050	NS	NS	0.123	NS	NS	NS	NS	NS	NS	NS	NS	<0.050	NA	NA	2(s)
Biochemical oxygen demand (BOD5)	SM5210B	mg/L	<2.0	NA	NA	<2.0	NA	NA	<2.0	NA	NA	<2.0	NS	NS	4.5	NS	NS	NS	NS	NS	NS	NS	NS	<2.0	NA	NA	
Bromide	300	mg/L	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NA	NA	2(g)
Chemical Oxygen Demand	E410.4	mg/L	9.8	NA	NA	<5.0	NA	NA	<5.0	NA	NA	<5.0	NS	NS	<5.0	NS	NS	NS	NS	NS	NS	NS	NS	<5.0	NA	NA	
Chloride	300	mg/L	<2.0	NA	NA	2.8	NA	NA	<2.0	NA	NA	9.8	NS	NS	<2.0	NS	NS	NS	NS	NS	NS	NS	NS	14.5	NA	NA	250(s)
Color	SM2120B	color units	16	NA	NA	17	NA	NA	17	NA	NA	18	NS	NS	32	NS	NS	NS	NS	NS	NS	NS	NS	12	NA	NA	
Hardness, Calcium/Magnesium (as CaCO3)	M2340B	mg/L	147	NA	NA	334	NA	NA	215	NA	NA	86.1	NS	NS	86.8	NS	NS	NS	NS	NS	NS	NS	NS	186	NA	NA	
Kjeldahl Nitrogen - Total (as N)	E351.2	mg/L	0.58	NA	NA	1.0	NA	NA	0.95	NA	NA	0.40	NS	NS	0.6	NS	NS	NS	NS	NS	NS	NS	NS	<0.20	NA	NA	
Nitrate (as N)	300	mg/L	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NS	NS	<1.0	NS	NS	NS	NS	NS	NS	NS	NS	<1.0	NA	NA	10(s)
Organic carbon-Total (TOC)	SM5310B	mg/L	3.7	NA	NA	2.0	NA	NA	1.6	NA	NA	1.7	NS	NS	1.0	NS	NS	NS	NS	NS	NS	NS	NS	1.7	NA	NA	
Phenolics, Total Recoverable	420.4	mg/L	<0.0050	NA	NA	< 0.0050	NA	NA	< 0.005	NA	NA	<0.0050	NS	NS	<0.0050	NS	NS	NS	NS	NS	NS	NS	NS	< 0.0050	NA	NA	0.001(s)
Residue-filterable (TDS)	SM2540C	mg/L	182	NA	NA	393	NA	NA	218	NA	NA	125	NS	NS	111	NS	NS	NS	NS	NS	NS	NS	NS	226	NA	NA	
Sulfate (as SO4)	300	mg/L	7.6	NA	NA	28.3	NA	NA	11.5	NA	NA	10.8	NS	NS	9.1	NS	NS	NS	NS	NS	NS	NS	NS	26.1	NA	NA	250(s)
Inorganic Parameters																											
Aluminum	SW6010C	μg/L	1750	10,400.0	1,580.0	11,400	2,540.0	24,000.0	34,800	3,560.0	98,100.0	5180	NS	28,700	14600	NS	13,400	NS	NS	NS	NS	NS	NS	464	1,950.0	1.9	
Antimony	SW6010C	μg/L	<60.0	<60.0	<60.0	<60.0	<60.0	0.51 J	<60.0	<60.0	<60.0	<60.0	NS	0.68 J	<60.0	NS	<60	NS	NS	NS	NS	NS	NS	<60.0	<60.0	<60	3 (g)
Arsenic	SW6010C	μg/L	<10	<10	1.3	<10	<10	10.39	13.4	<10	17.93	<10	NS	4.25	<10	NS	7.79	NS	NS	NS	NS	NS	NS	<10	<10	1.94	25 (s)
Barium	SW6010C	μg/L	26.7	63.0	32.31	101	79.0	345.7	223	67.0	2,132.0	30.6	NS	184.8	159	NS	216.2	NS	NS	NS	NS	NS	NS	48.7	862.0	89.74	1000 (s)
Beryllium	SW6010C	μg/L	<3	<3	<3	<3	<3	1.21	<3	<3	5.2	<3	NS	1.6	<3	NS	0.83	NS	NS	NS	NS	NS	NS	<3	<3	0.13 J	3 (g)
Boron	SW6010C	μg/L	<200	<200	NA	<200	<200	NA	<200	<200	NA	<200	NS	NA	<200	NS	NA	NS	NS	NS	NS	NS	NS	<200	<200	NA	1000 (s)
Cadmium	SW6010C	μg/L	<5	<5	0.27	<5	<5	0.26	<5	<5	1.75	<5	NS	1.19	<5	NS	0.06 J	NS	NS	NS	NS	NS	NS	<5	<5	<5	5
Calcium	SW6010C	μg/L	41,300	8,300.0	42,700.0	69,200	76,100.0	93,100.0	59,500	89,700.0	94,400.0	18,700	NS	26,900	22,200	NS	27,800	NS	NS	NS	NS	NS	NS	42,900	103,000.0	45,500.0	
Chromium	SW6010C	μg/L	<10	12.0	2.08	16	<10	39.68	50.6	<10	169.7	<10	NS	43.25	19.9	NS	21.47	NS	NS	NS	NS	NS	NS	<10	<10	2.72	50 (s)
Chromium, Hexavalent	SW6010C	μg/L	< 0.010	<0.010	NA	<0.020		NA	< 0.010	< 0.010	NA	< 0.010	NS	NA	<0.010	NS	NA	NS	NS	NS	NS	NS	NS	< 0.010	< 0.010	NA	50 (s)
Cobalt	SW6010C	μg/L	<50	<50	1.59	<50	<50	31.38	<50.0	<50	112.9	<50	NS	27.42	<50	NS	14.50	NS	NS	NS	NS	NS	NS	<50	<50	3.22	
Copper	SW6010C	μg/L	<20.0	<20.0	3.87	<20.0	<20.0	42.28	30.5	<20.0	170.1	95.5	NS	689.5	<20.0	NS	24.27	NS	NS	NS	NS	NS	NS	<20.0	<20.0	3.99	200 (s)
Cyanide, Total	SW6010C	μg/L	< 0.010	NS	NA	NS	NS	NS	NS	NS	NS	< 0.010	NS	NA	200 (s)												
Iron	SW6010C	μg/L	1,600	13,400.0	2,850.0	14,400	3,130.0	50,700.0	46,300	3,770.0	187,000.0	3,410	NS	44,100	18,300	NS	30,800	NS	NS	NS	NS	NS	NS	470	2,550.0	3,900.0	300 (a)
Lead	SW6010C	μg/L	<5	<50	1.88	<5	<50	31.72	10.8	<50	94.83	6.80	NS	268	7.4	NS	15.53	NS	NS	NS	NS	NS	NS	<5	<50	1.49	25
Magnesium	SW6010C	μg/L	10,800	3,100.0	9,660.0	39,300	36,100.0	46,300.0	16,100	12,100.0	33,900.0	9,600	NS	17,000	7,580	NS	8,700	NS	NS	NS	NS	NS	NS	19,300	34,000.0	16,700.0	
Manganese	SW6010C	μg/L	855	462.0	1,824.0	335	314.0	6,411.0	1,040	147.0	12,340.0	82.9	NS	1096	509	NS	983.2	NS	NS	NS	NS	NS	NS	95.5	1,200.0	2,352.0	300 (a)
Mercury	SW7470A	μg/L	< 0.200	<0.200	<0.200	< 0.200	<0.200	< 0.200	< 0.200	<0.200	< 0.200	< 0.200	NS	<0.200	<0.200	NS	<0.200	NS	NS	NS	NS	NS	NS	<0.200	<0.200	< 0.200	0.7 (s)
Nickel	SW6010C	μg/L	<40.0	<40.0	4.36	<40.0	<40.0	52.44	<40.0	<40.0	210.3	<40.0	NS	62.44	<40.0	NS	29.69	NS	NS	NS	NS	NS	NS	<40.0	<40.0	5.63	100 (s)
Potassium	SW6010C	μg/L	2,290	4,500.0	2,110.0	10,500	5,800.0	9,930.0	13,300	5,900.0	14,700.0	2,780	NS	5,470	5,970	NS	3,140	NS	NS	NS	NS	NS	NS	2,520	16,600.0	2,430.0	
Selenium	SW6010C	μg/L	<10.0	<10.0	<10.0	<10.0	<10.0	3.60 J	<10.0	<10.0	21.2	<10.0	NS	3.61 J	<10.0	NS	1.93 J	NS	NS	NS	NS	NS	NS	<10.0	<10.0	<10.0	10 (s)
Silver	SW6010C	μg/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0.18 J	<10.0	NS	1.51	<10.0	NS	<10.0	NS	NS	NS	NS	NS	NS	<10.0	<10.0	<10.0	50 (s)
Sodium	SW6010C	μg/L	3,610	2,000.0	2,980.0	21,500	22,700.0	21,900.0	5,580	5,600.0	6,120.0	3,670	NS	3,480	2,200	NS	1,840	NS	NS	NS	NS	NS	NS	17,300	29,700.0	21,800.0	20,000(s)
Vanadium	SW6010C	ug/L	<50.0	<50.0	2.45 J	<50.0	<50	29.54	<50.0	<50	60.69	<50.0	NS	34.12	<50	NS	14.85	NS	NS	NS	NS	NS	NS	<50.0	<50.0	2.66 J	
Zinc	SW6010C	ug/L	<20.0	45	16.14	34.4	<20.0	141.1	113	<20.0	497.7	37.7	NS	280.7	55.3	NS	75.59	NS	NS	NS.	NS	NS	NS	<20.0	<20.0	13.92	2,000 (g)

Notes:

USEPA = U.S. Environmental Protection Agency

NYDEC = New York State Department of Environmental Conservation

--- = indicates no applicable standard.

 μ g/L = micrograms per liter.

U = Not detected at the Practical Quantitation Limit. Sample quantitiation limits shown as <_.

NS = No sample collected.

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (TOGS) 1.1.1, August 1999.

* = NYSDEC Part 703.5 Guidance Value (no standard)

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.

Village of Cuba Landfill Site NYSDEC Site #902012 Periodic Review Report (2017/2018)

Table 3 - Baseline Leachate Indicator & Inorganic Parameters Detected in Groundwater & Surface Water

				MW-4			MW-7			MW-8		Blind	Dun	8354	ackson Hill					SW-04			MW-10				$\overline{}$	$\overline{}$	SW-01	$\overline{}$	
		Sample ID		1111-4						11111-0		J.III.	Dup		ack30111111		SW-02			311 04						SW-03			34 01		NYSDEC Ambient Water Quality
		Sample Type		Water			Water			Water		Wat	er	Water	Water		Water			Water			Water			Water			Water		Standard Class GA
Baseline Parameter List	USEPA Method	Sample Date	7/15/2014	10/24/2016	3/23/2017	7/14/2014	10/24/2016	3/23/2017	7/14/2014	10/24/2016	3/23/2017	10/24/2016	3/23/2017	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/27/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/27/2017	7/15/2014	10/24/2016	3/23/2017	7/15/2014	10/24/2016	3/23/2017	
Leachate Indicators																															
Alkalinity, as CaCO3	SM 2320 B	mg/L	156	NA	NA	177	NA	NA	NS	NA	NA	NA	NA	NA	NA	13.2	NS	NS	23.5	NA	NA	NS	NA	NA	107	NA	NA	116	NA	NA	
Ammonia (as N)	E350.1	mg/L	0.444	NA	NA	< 0.050	NA	NA	NS	NA	NA	NA	NA	NA	NA	< 0.050	NS	NS	< 0.050	NA	NA	NS	NA	NA	< 0.050	NA	NA	< 0.050	NA	NA	2(s)
Biochemical oxygen demand (BOD5)	SM5210B	mg/L	9.2	NA	NA	<2.0	NA	NA	NS	NA	NA	NA	NA	NA	NA	<2.0	NS	NS	<2.0	NA	NA	NS	NA	NA	<2.0	NA	NA	3.9	NA	NA	
Bromide	SW9056	mg/L	<1.0	NA	NA	<1.0	NA	NA	NS	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	<1.0	NA	NA	NS	NA	NA	<1.0	NA	NA	<1.0	NA	NA	2(g)
Chemical Oxygen Demand	E410.4	mg/L	22.1	NA	NA	<5.0	NA	NA	NS	NA	NA	NA	NA	NA	NA	35.5	NS	NS	30.3	NA	NA	NS	NA	NA	35	NA	NA	51.8	NA	NA	
Chloride	SW9056	mg/L	2.1	NA	NA	24.5	NA	NA	NS	NA	NA	NA	NA	NA	NA	<2.0	NS	NS	2.3	NA	NA	NS	NA	NA	5.9	NA	NA	8.7	NA	NA	250(s)
Color	SM2120B	color units	13	NA	NA	14	NA	NA	NS	NA	NA	NA	NA	NA	NA	90	NS	NS	190	NA	NA	NS	NA	NA	86	NA	NA	130	NA	NA	
Hardness, Calcium/Magnesium (as CaCO3)	M2340B	mg/L	169	NA	NA	241	NA	NA	124	NA	NA	NA	NA	NA	NA	12.8	NS	NS	17.3	NA	NA	NS	NA	NA	101	NA	NA	114	NA	NA	
(jeldahl Nitrogen - Total (as N)	E351.2	mg/L	0.67	NA	NA	0.71	NA	NA	NS	NA	NA	NA	NA	NA	NA	1.24	NS	NS	2.12	NA	NA	NS	NA	NA	1.11	NA	NA	4.46	NA	NA	
Nitrate (as N)	SW9056	mg/L	<1.0	NA	NA	<1.0	NA	NA	NS	NA	NA	NA	NA	NA	NA	<1.0	NS	NS	<1.0	NA	NA	NS	NA	NA	<1.0	NA	NA	<1.0	NA	NA	10(s)
Organic carbon-Total (TOC)	SM5310B	mg/L	7.8	NA	NA	1.2	NA	NA	NS	NA	NA	NA	NA	NA	NA	16.8	NS	NS	20.9	NA	NA	NS	NA	NA	18.0	NA	NA	16.9	NA	NA	
Phenolics, Total Recoverable	SW9065	mg/L	< 0.0050	NA	NA	< 0.0050	NA	NA	NS	NA	NA	NA	NA	NA	NA	< 0.005	NS	NS	< 0.005	NA	NA	NS	NA	NA	< 0.005	NA	NA	< 0.005	NA	NA	0.001(s)
Residue-filterable (TDS)	SM2540C	mg/L	168	NA	NA	277	NA	NA	NS	NA	NA	NA	NA	NA	NA	51	NS	NS	118	NA	NA	NS	NA	NA	174	NA	NA	155	NA	NA	
Sulfate (as SO4)	SW9056	mg/L	8.3	NA	NA	23	NA	NA	NS	NA	NA	NA	NA	NA	NA	<2.0	NS	NS	3.9	NA	NA	NS	NA	NA	5.3	NA	NA	6	NA	NA	250(s)
Inorganic Parameters	-							_																							
Aluminum	SW6010C	μg/L	709	740.0	37.7	32,900	NA	4,720	6,800	17,600.0	17,900.0	1,920	23,400	<100	148	285	NS	NS	8,960	640	1,830	NS	3,080	1,500	536	600	361	3,590	440	38.9	
Antimony	SW6010C	μg/L	<60.0	<60.0	<60.0	<60.0	NA	0.68 J	<60.0	<60.0	<60.0	<60.0	0.64 J	<60.0	0.85 J	<60.0	NS	NS	<60.0	<60.0	0.63 J	NS	<60.0	0.56 J	<60.0	<60.0	0.55 J	<60.0	<60.0	0.48	3 (q)
Arsenic	SW6010C	ug/L	<10	<10	<10	17.5	NA	3.31	<10	<10	8.7	<10	9.75	<10	0.55 J	<10.0	NS	NS	<10.0	<10	1.63	NS	<10	2.7	<10.0	<10	0.88	<10.0	<10	0.40	25 (s)
Barium	SW6010C	μg/L	20.7	34.0	12.72	277	NA	88.04	51.1	158.0	311.2	67	308.9	48	37.12	<20.0	NS	NS	56.9	<20.0	17.83	NS	941	53.01	<20.0	<20.0	8.03	43.7	<20.0	8.40	1000 (s)
Beryllium	SW6010C	μg/L	<3	<3	<3	<3	NA	0.37 J	<3	<3	1.76	<3	1.13	<3	<3	<3	NS	NS	<3	<3	<3	NS	<3	<3	<3	<3	<3	<3	<3	<3	3 (g)
Cadmium	SW6010C	μg/L	<5	<5	0.13 J	<5	NA	1.08	<5	<5	0.4	<5	0.26	<5	0.74	<5	NS	NS	<5	<5	0.29	NS	<5	0.35	<5	<5	<5	<5	<5	<5	5
Calcium	SW6010C	μg/L	48,900	30,700.0	31,000.0	46,800	NA	50,200	28,000	33,300.0	46,000.0	36,600	91,800	18,500	17,100	3,610	NS	NS	3,690	3,500	2,720	NS	117,000	112,000	27,600	4,000	5,510	29,400	20,400	23800	
Chromium	SW6010C	μg/L	<10	<10	<10	47.3	NA	13.55	<10	23.0	24.73	<10	39.08	<10	0.99	<10.0	NS	NS	10.2	<10	2.56	NS	<10	9.61	<10.0	<10	0.59 J	<10.0	<10	0.18 J	50 (s)
Cobalt	SW6010C	μg/L	<50	<50	<50	<50	NA	5.36	<50	<50	31.38	<50	28.39	<50	<50	<50.0	NS	NS	<50.0	<50	1.72	NS	<50	1.44	<50.0	<50	0.3 J	<50.0	<50	<50	
Copper	SW6010C	μg/L	<20.0	<20.0	0.95 J	4,990	NA	114.8	<20.0	53.0	203.8	<20.0	38.78	140	2.75	<20.0	NS	NS	<20.0	<20.0	3.4	NS	<20.0	6.89	<20.0	<20.0	1.72	21.8	<20.0	1.06	200 (s)
ron	SW6010C	μg/L	1,050	1,230.0	67.3	40,700	NA	10,200	5,780	20,900.0	34,400.0	2,950	49,900	3,170	315	370	NS	NS	8,470	480	2,970	NS	3,920	2,730	894	510	476	4,610	1,460	74.30	300 (a)
.ead	SW6010C	μg/L	<5	<50	<5	499	NA	21.57	<5	<50	28.11	<5	29.05	89	7.02	<5	NS	NS	<5	<5	4.02	NS	<5	2.05	<5	<5	0.54 J	<5	<5	<5	25
Magnesium	SW6010C	μg/L	11,500	8,800.0	7,170.0	30,000	NA	23,700	13,200	14,200.0	20,100.0	10,800	48,600	5,500	4,740	<1,000	NS	NS	1,970	<10	916	NS	33,000	17,200	7,720	<10	1,060	9,990	3,500	7070	
Manganese	SW6010C	μg/L	1,090	2,170.0	4,115.0	961	NA	348.2	65.9	333.0	1,231.0	5580	5,344	47	15.2	42.3	NS	NS	169	11	114.5	NS	1,710	122	204	14	9.85	1,010	989	6.64	300 (a)
Mercury	SW7470A	μg/L	<0.200	<0.200	<0.200	<0.200	NA	<.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	NS	NS	<0.200	<0.200	<0.200	NS	<0.200	<0.200	<0.200	<0.200	< 0.200	<0.200	<0.200	<0.200	0.7(s)
Nickel	SW6010C	μg/L	<40.0	<40.0	5.04	77.3	NA	11.66	<40.0	<40.0	43.56	<40.0	50.54	<40.0	0.56 J	<40.0	NS	NS	<40.0	<40.0	3.95	NS	<40.0	350	<40.0	<40.0	0.90 J	<40.0	<40.0	<40.0	100 (s)
Potassium	SW6010C	μg/L	3,800	2,500.0	2,250.0	10,600	NA	2,940	3,390	6,500.0	4,520.0	3,000	9,980	<2000	1,710	<2,000	NS	NS	3,970	2,800	1,440	NS	14,800	4,130	2,360	2,300	1,360	3,200	2,600	1370	
elenium	SW6010C	μg/L	<10.0	<10.0	<10.0	<10.0	NA	<10.0	<10.0	<10.0	5.45	<10.0	3.40 J	<10.0	<10.0	<10.0	NS	NS	<10.0	<10.0	<10.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	10 (s)
ilver	SW6010C	μg/L	<10.0	<10.0	<10.0	<10.0	NA	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	NS	NS	<10.0	<10.0	<10.0	NS	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	50 (s)
Sodium	SW6010C	μg/L	4,340	4,000.0	2,850.0	6,170	NA	5,940	4,520	5,000.0	4,500.0	4,700	23,800	13,900	14,800	<1,000	NS	NS	9,490	7,700	5,040	NS	28,300	17,900	4,010	5,600	3,500	4,990	2,100	5680	20,000(s)
/anadium	SW6010C	μg/L	<50.0	<50.0	<50.0	<50.0	NA	6.89	<50.0	<50.0	24.61	<50.0	28.40	<50.0	<50.0	<50.0	NS	NS	<50.0	<50.0	2.43 J	NS	<50.0	4.96	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	
Zinc .	SW6010C	ug/L	<20.0	<20.0	8.01 J	584	NA	49.47	<20.0	51	13.61	<20.0	126.9	343	59.6	<20.0	NS	NS	30.2	<20.0	17.34	NS	23	20.48	<20.0	<20.0	4.14 J	26.7	<20.0	<50.0	2.000 (a)

Zinc

USEPA = U.S. Environmental Protection Agency

NYDEC = New York State Department of Environmental Conservation

--- = indicates no applicable standard.

 μ g/L = micrograms per liter. U = Not detected at the Practical Quantitation Limit. Sample quantitiation limits shown as <_.

143 – 140 sample collected.

Exceeds 6 NYCRR Part 703.5 Class GA Ambient Groundwater Standard or Guidance Value

Ambient Water Quality Standards and Guidance Values from Division of Water and Technical and Operational Guidance Series (TOGS) 1.1.1, August 1999.

* = NYSDEC Part 703.5 Guidance Value (no standard)

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.

TABLE 4 - INSTITUTIONAL AND ENGINEERING CONTROLS COMPLIANCE SUMMARY PERIODIC REVIEW REPORT – 2017/2018

Institutional/Engineering Control	Description	Objective	Monitoring	Performance/Status
	In	stitutional Controls		
Land Use Restriction	Restricts the use of the landfill property.	Controls potential for direct contact with waste materials, leachate, and contaminated groundwater.	NA	Use of the property has been restricted through the recorded Declaration of Covenants and Restrictions with Allegany County.
Groundwater Use Restriction	Restricts the use of groundwater.	Controls potential for direct contact with contaminated groundwater.	NA	Groundwater use restriction in effect as part of the Declaration of Covenants and Restrictions with Allegany County for the Cuba Landfill Site area groundwater.
Excavation Work Plan	Describes procedures to be used to manage excavated contaminated soil and /or waste from the Site (sampling, analysis, disposal requirements).	To provide for appropriate handling, management, and disposal of contaminated soil and/or waste.	NA	Excavation plan to be implemented in accordance with approved Site management plan. To date, no excavation of contaminated soil or waste has occurred during the reporting period.
Soil Vapor Intrusion Evaluation	Determines the potential for soil vapor intrusion and if mitigation measures, such as creating a vapor barrier or a passive sub-slab depressurization system, are necessary.	Eliminate potential exposure to vapors in the proposed structure.	NA	The potential for vapor intrusion must be evaluated for any buildings to be developed on or around the Site, and any potential impacts that are identified must be monitored or mitigated. Measures to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the soil vapor instrusion evaluation, the NYSDOH guidance, and construction details of the proposed structure.
	Eng	ineering Controls		
Engineered Landfill Cap	Comprised of a geocompoSite gas venting layer, a 40-mil LLDPE textured geomembrane, geocompoSite drainage layer, and an 18-in. soil barrier protection layer. Topsoil and a reinforced vegetated surface are over the barrier protection layer.	Prevent exposure to remaining contamination in soil/fill at the Site by placing cap over the remaining and consolidated waste	Monitoring via Site inspections and leachate indicator monitoring.	Cap is vegetated, stable, and effective. Maintenance operations are limited to repairs to minor localized erosion and control of animal burrows in surficial cover soils. Leachate indicators are analyzed periodically. Leachate generation rates are decreasing, as would be expected following the construction of an engineered cap.
Passive Gas Vents	Polyvinyl chloride pipe gas vents were installed within the landfill cap boundaries.	Collect landfill gas generated under the cap and to convey the gas to the existing landfill gas collection system to control potential for lateral migration.	Monitored via Site inspections and monitoring of landfill gas with portable monitoring equipment.	Gas monitoring results are typical of landfill gas and appropriate operation of the gas control system is in place.

Institutional/Engineering Control	Description	Objective	Monitoring	Performance/Status
Landfill Surface Drainage	A berm constructed of soil and waste materials below the liner system defined each swale. Following the placement of the geocompoSite drainage layer, a strip of the geocompoSite was cut out in each swale for the placement of perforated 6-in. corrugated polyethylene pipe topped with pea gravel and wrapped with geotextile that was later heat seamed to the geocompoSite on either side.	Fach swale was constructed to allow	Monitored through Site inspections and groundwater/surface water sampling.	A media monitoring program is in place for groundwater. Groundwater and surface water samples are collected on an annual basis, per SMP. Stream and tributary water quality has not been impacted from surface water discharges from the Site. VOC and metal concentrations are generally decreasing or remaining stable in groundwater.
Phytoremediation	168 willow trees were planted south of the retention pond. Two (2) varieties of bare-root willow trees were selected to be planted. The tree varieties include golden curls willow and prairie cascade willow.	Trees were intended to mitigate potential leachate seepage south of the Site. Staining was previously observed in stream water during RI sampling along the southern boundary of the Site.	inspections.	To date, there has been no evidence of excessive leachate on the access road south of the willow trees planted for phytoremediation. Approx. 30% of the willow trees have died at the east end of the planting area.
Site Security	8-ft chain link fence gates were installed at the entrances of the property on Deep Snow Road, one (1) to the southwest of the Site and one (1) to the north of the Site. Gates have been secured with locks.	Minimize the potential for trespassing and vehicular traffic.	Monitoring via Site inspection.	Security measures in place and effective.
Access Road	A permanent maintenance road was constructed by placing 6 in. of road paving material over a non-woven geotextile.	Provides access controls to the Site, minimizing the potential for human encroachment on the landfill cap surface.	Monitoring via Site inspection.	Access road in place and effective.

Village of Cuba Landfill Site Cuba, New York (2017/2018)

Periodic Review Report



Project Location	Name <u>Cul</u> n ID Time	Da Landfill MW-7 13:45	Monitoring	z/Inspection Field Samp	o <u>n</u> Sample II de Time	14:00	4		ob # <u>50191-01</u> ampling Eyent # <u>0</u> 5 ate <u>3/23/17</u>
SAMPL	ING NOTI	<u>es</u>							
[purge vol	ume (milliliter Water in casi	ter <u>46</u> ged <u>//.2</u> s per minute) x ng - 2" diameter	time duration	(minutes) x ().00026 gal/m	illiliter]			Vell Diameter 2" Vell Integrity: Cap V Casing V Locked V Collar
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		(IIII/IIIII)	8.8	7.48			0,575	(mv)	Comments
					-			-	
			-						
	H								
	2		./: /			<u> </u>			
[Purge Obse Purge Wate	ervations: _ er Containe	rized:	Ty turk	icl, No	octor	-, .		
EQUIP		CUMENTA							
	Tubing:								
Type of	Water Qua	ality Meter:	Horiba U-	22; LaMo	otte 2020		Calibra	ated:	<u>US</u>
ANALY	TICAL PA	RAMETE	25			10	CATION N	OTES.	
Paramet			Samplé Co	ollected		<u> </u>	CATIONI	OTES	
<u>VOCs</u>	- 1	40 ml	_//_	<u></u>	_				
1/4/_ /	vietals_				_				
					w-w				
Signatu		sa R	Theapor	-	_				



Location	n ID	ba Landfill MW-10T 12:20)		o <u>n</u> Sample ID ole Time	MW- 13.0	10D 90	Jol _ Sa _ Da	b # <u>50191-01</u> mpling Event # <u>2 5</u> ate <u>3/23/17</u>
SAMPL	ING NOT	<u>ES</u>							
[purge voli	ume (millilite: Water in casi	rater 59 ater 76 ged // rs per minute) x ing – 2" diameter	time duration	(minutes) x (0.00026 gal/mi	illiliter]		Wo	ell Diameter 2 ' ell Integrity: / Cap Casing Locked Collar
Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond.	ORP (mV)	Comment
	76.2	(1111/11111)	8 4	7.64	3.6/	8G	(mS/cm)	(mV) 204,2	Comments
	/ 5 %/-			7.07.		7.52		~ // /	
							-		
	_	ervations: _							
I	Purge Wat	er Containe	rized:	VO					
EQUIPN	MENT DO	CUMENTA	TION						
Type of	Pum p:	2011							
		1/4" HDPE							
Type of	Water Qu	ality Meter:	Horiba U-	22; LaMo	otte 2020		Calibra	ated:	<u> </u>
ANATV	TICAL DA	ARAMETEI	29			IO	CATION N	OTES	
Paramet			Sample Co	llected		<u>LO</u>	CATION	OTES	
<u>VOCs</u>	/ /	40 ml	J/						
TAL	yetals						7		
				<u> </u>	_	<u> </u>			
									Ш
Signatur Checked	re: Lau	esce K/	Gregor	- 15					



Project 1	Name Cul	oa Landfill	Monitoring	z/Inspectio	on			Jo	b # <u>5019</u> 1-01
Location	n ID	oa Landfill MW-8		Field	Sample II	<u>MW-8</u>	,		
Activity	Time	11:30		Samp	ole Time _	11:50)	_ Da	impling Event # <u>25</u> ate <u>3/23/7</u>
SAMPL	ING NOT	<u>ES</u>							
Final De Screen I Total Vo [purge volu	epth to Wa Lengtholume Purg Ime (milliliter	ater 79. ter 79. ged 79. rs per minute) x ng - 2" diamete	feet gall time duration	Well Pump lons PID V (minutes) x	Depth o Intake De Well Head 0.00026 gal/m	illiliter]	fee	<u>t</u> W - -	Tell Diameter 2" Tell Integrity: Cap Casing Locked Collar
PURGE		ng 2 diunier	or = 0.105 gair	ons per 100t v	or deptili, 4° di	ameter = 0.05.	o ganons per i	oot of depth	Collai
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
11:40	79.65		8.9	7.29	9.77	2584 AU	0.325	167.2	
	01.	4.	- / 3	/					
F	ourge Observate	ervations: _ er Containe		NO C	2001				
EQUIPN	MENT DO	CUMENTA	TION	-					
	P amp : <u>E</u>	2							
Type of	Tubing:	4" HDPE							
Type of	Water Qua	ality Meter:	Horiba U-	·22; LaMo	otte 2020		Calibra	ated: <u>cpc</u>	5
ANALY Parameto VOCs	er <u>Vol</u>	RAMETEI umes 40 ml	RS Sample/Co	ollected		<u>LO</u>	CATION N	NOTES	
TAL M	ictals	***********	$\sqrt{}$		_				
	· · · · · · · · · · · · · · · · · · ·								
			0. /	·					
Signatur Checked	e: <i>au</i> l By:	wa K	Fregor		_				



Location	n ID	Da Landfill MW-9 (0.15		Field	on Sample ID ple Time				ob # <u>50191-01</u> ampling Event # <u>05</u> Date <u>3 / 23 / 7</u>
SAMPL	ING NOTI	<u>es</u>							
[purge volu	ume (milliliter Water in casi	ter	time duration	(minutes) x	0.00026 gal/m	illiliter]			Vell Diameter 2" Vell Integrity: Cap Casing Locked Collar
Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp.	рН	Dissolved	Turbidity	Cond.	ORP	
F	Purge Obse	ervations: _er Containe		Junits)	O2 (mg/L)	(NTU)	(mS/cm)	(mV)	Comments Well was dry
Type of Type of	Pump:	Pails M'HDRE Ality Meter:	Horiba U-		otte 2020	<u>LO</u>	Calibra CATION N	OTES	well
TAL	Metals re: <u>Lau</u>	na K	NO						



Project ?	Name <u>Cul</u>	oa Landfill	Monitoring	z/Inspectio	<u>on</u>			Jo	b # <u>501</u> 91-01
Location	n ID	MW-13		Field	Sample II	MW-	-13 0	_ Sa	mpling Event # 0 5 ate _ 3/23/17
Activity	Time	10:30		Samp	ole Time	10:5	0	_ Da	ite 3/23/17
SAMPL	ING NOT	<u>es</u>							
Initial D	epth to W	ater	4.5 feet	<u>Meas</u>	urement P	oint <u>TO</u>	R	_ W	ell Diameter 2"
Final De	epth to Wa	.ter2	9.3 feet	<u>well</u>	Depth	29.5	fee	<u>t</u> W	ell Integrity:
Screen I	Length	//	1,0 feet	<u>Pump</u>	Intake De	pth		-	Cap //
fourge vol	ume (millilite	rs per minute) x	time duration	(minutes) x	Well Head	illiliter]		_	Casing // Locked //
		ng – 2" diamet					3 gallons per f	oot of depth	Collar
<u>PURGE</u>								-	
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
10:51	29.3	_	8.6	6.75	10.33	12.34	0.061	130.7	Comments
				//	ļ,				
! I	Purge Wote	ervations: _ er Containe	rized:	I, NO Od	01				
1	ruige wall	er Comanie	112eu/	¥O		·			
EQUIPN	MENT DO	<u>CUMENTA</u>	TION						
T of	Pump: E	Santa .							
	Tubing:								
- L		ality Meter:	Horiba U-	-22; LaMo	otte 2020		Calibra	ated: <u>(f</u> l	<
- 1								J	
		RAMETE		11 . 1		LO	CATION N	<u>NOTES</u>	
Paramet VOCs		umes 40 ml	Sample Co	ollected					
	retals	40 IIII		· · · · · · · · · · · · · · · · · · ·	_				
					_				
Signatui	re: La.	ia K	Loam						
Checked			- compre					<u> </u>	



Location	n ID	oa Landfill MW-LD 9:50		z/Inspection Field Samp	on Sample ID ole Time	9.50	D	Job Sar Da	0 # <u>50191-01</u> mpling Event # <u>05</u> te <u>3/23/7</u>
	ING NOTI	<u> </u>	·						<i>ii</i>
[purge volu	ıme (milliliter Water in casi	's per minute) x	time duration	(minutes) x	Surement Po Depth p Intake De Well Head 0.00026 gal/mi of depth, 4" dia	lliliter]		We to	ell Diameter
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
9:49	792		60.6	Comments					
		ervations:er Containe		NO NO	odor				
Type of Type of	Pump:/ Tubing:	Bailer		-22: LaMo	otte 2020		Calibra	ated: <u>U</u>	S
ANALY Paramete VOCs	TICAL PA	ARAMETEI lumes 40 ml			_	<u>LO</u>	CATION N	0	
Signatur		uses R	frege	V					



Project Name <u>Cul</u> Location ID Activity Time	MU1-12		/Inspection Field Samp	o <u>n</u> Sample ID ole Time	14.0	-12 10		# 50191-01 inpling Event # 05 te 3/23/17
Initial Depth to Wascreen Length Total Volume Purg [purge volume (milliliter Volume of Water in casi PURGE DATA	ater	time duration	(minutes) x (0.00026 gal/m	illiliter]		We we we we were with the weath was a contract of the we we we were with the weath we we we we we were with the weath we were well as	ell Diameter
Depth to	Purge Rate	Temp.	pН	Dissolved	Turbidity	Cond.	ORP	
Time Water (ft)	(ml/min)	(deg. C)	(units)	O2 (mg/L)	(NTU)	(mS/cm)	(mV)	Comments
Purge Observage Water			No ode	12-27	dup t		195	
Type of Pump:	"HDPE	Horiba II-	22: LaMo	otte 2020		Calibra	ated: ///	a.
ANALYTICAL PA	ARAMETEI umes 40 ml	Sample Co		——————————————————————————————————————	<u>LOC</u>	CATION N	7	



Project 1	Name Cul	oa Landfill	Monitoring	/Inspection	on			Job	# <u>50191-01</u>
Location	ı ID	MW-15				MW-1	5	_ San	npling Event #05
Activity	Time	9:40		Samp	Sample ID ole Time _	10:10		_ _ Dat	npling Event # 05 se 3/23/17
SAMPL	ING NOTI	<u>ES</u>							
[purge volu Volume of	ıme (milliliter Water in casi	ater 2 ter 2 ged 2 rs per minute) x ng - 2" diamet	time duration	(minutes) x (0.00026 gal/mi	illiliter]		We t We - - foot of depth	Il Diameter
PURGE	Depth to	Purge Rate	Temp.	рН	Dissolved	Turbidity	Cond.	ORP	
Time	Water (ft)	(ml/min)	(deg. C)	(units)	O2 (mg/L)	(NTU)	(mS/cm)	(mV)	Comments
10:05	290		9.1	7.32	6.71	1431	0.106	173.6	
F	Purge Obse	ervations:	fuchi	d NO Or	doc				
F	Purge Wate	er Containe	rized:	NO					
		<u>CUMENTA</u>							
	Pump: 15	Bailer W" HDPE-							
~ 1		ality Meter	Horiba U-	-22; LaMo	otte 2020		Calibr	ated: <u>ye</u>	5
ANALY Paramet		RAMETEI lumes	RS Sample Co	ollected		LO	CATION I	<u>NOTES</u>	
VOCs TAL		40 ml	yes yes		<u> </u>				
Signatur	e: Jai	no K	Gregor						
Checked	l By:		Ø.						



Location Activity SAMPL	n ID Time ING NOTI	Da Landfill MW-11 10:39 ES ater 23 ter 23 ged 5		Field Samp	Sample ID ple Time			_ San_ Dat	# 50191-01 Inpling Event # 25 Re 3/23/17 Il Diameter 2" Il Integrity: Cap / Casing / Locked / Collar /
[purge volu Volume of	ıme (milliliter Water in casi	rs per minute) x	time duration	(minutes) x	0.00026 gal/mi	lliliter]		- foot of depth	Locked / Collar /
PURGE	DATA Depth to	Purge Rate	Temp.	pН	Dissolved	Turbidity	Cond.	ORP	
Time 10:35	Water (ft) 25.75	(ml/min)	(deg. C)	(units) 7.60	O2 (mg/L) 28,09	(NTU) 131	(mS/cm)	(mV) = 674.3	Comments
		ervations: _er Containe		atly to	erbid, NO	odel			
Type of Type of	Pump: ½ Tubing: —			22; LaMo	otte 2020		Calibra	ated:	5
Paramet VOCs TAL M	er Vol 3 x veta/s	40 ml	Sample Co	bllected		<u>LOC</u>	CATION	NOTES	
Signatur Checked	re: <u>Lac</u> l By:	ca XX	higo						



Project Location	Name <u>Cut</u> n ID Time	oa Landfill MW-10 12:27	Monitoring	z/Inspection Field Samp	on Sample ID ole Time	MW-12:40	' <u>O</u>	Job _ Sar _ Da	# 50191-01 mpling Event # 05 te 3/23/17
SAMPL	ING NOTI	<u>es</u>							
[purge vol	ume (milliliter f Water in casi	ter 52 ter 55 ged 0.8 s per minute) x ng - 2" diameter	time duration	(minutes) x	0.00026 gal/mi	illiliter]		_ We t We - - foot of depth	ell Diameter
T:	Depth to	Purge Rate	Temp.	рН	Dissolved	Turbidity	Cond.	ORP	
Time 12:40	Water (ft) 55.0	(ml/min)	(deg. C)	(units)	02 (mg/L)	(NTU) 82.7	(mS/cm) 0.395	(mV) 198.8	Comments
	Purge Obse	ervations: _er Containe	clear, a	NO adar					
Type of Type of ANALY	Pump Tubing: Water Quarter	W'' HDPE' ality Meter: ARAMETE	Horiba U-		otte 2020	<u>LO</u>	Calibr CATION 1	ated: <u>yks</u>	, ,
Paramete VOCs TAL	3 x	umes 40 ml	Sample Co	bllected	_				
Signatu	re: Jaw	na Kh	Legor		_				



Project Name Cuba Landfill Monitoring Location ID Mw-4 Activity Time //24	Field Sample II	MW-4 (1:50		Job San Dat	# <u>50191-01</u> mpling Event # <u>0 5</u> te <u>3 (2 3 / 7</u>
SAMPLING NOTES					
Initial Depth to Water 20.5 feet Final Depth to Water 24.9 feet Screen Length 10.0 feet Total Volume Purged 6.0 gall [purge volume (milliliters per minute) x time duration Volume of Water in casing - 2" diameter = 0.163 gall PURGE DATA	(minutes) x 0.00026 gal/n	nilliliter]		We We	ell Diameter 2" ell Integrity: Cap Casing Locked Collar
Depth to Purge Rate Temp. Time Water (ft) (ml/min) (deg. C)	pH Dissolved	Turbidity	Cond.	ORP	
Time Water (ft) (ml/min) (deg. C) 11. 43 249 — 5.4	(units) O2 (mg/L) 8.19 29.98	(NTU)	(mS/cm) 0.001	(mV)	Comments
Purge Observations:	ly turbicl, the	clear			
Type of Rump: Balls Type of Tubing: HDPE Type of Water Quality Meter: Horiba U- ANALYTICAL PARAMETERS Parameter Volumes Sample Co VOCs 3 x 40 ml The metals		<u>LOC</u>	Calibra	ited: <u>egs</u>	
Signature: Jana K Gregor	10				

Village of Cuba Landfill Site March 2017



Photo No. 1 MW-1S.



Photo No. 2 Worn spot on cap.



Photo No. 3 View of willow trees; some ponding on access road.



Photo No. 4 Eastern view of the cap.





Photo No. 5 View of western portion of Site and detention pond.



Photo No. 6 Vegetation on cap.



Photo No. 7 Exposed material on cap.



Photo No. 8 Location of SW-02.





ANALYTICAL REPORT

Lab Number: L1709087

Client: Lu Engineers

339 East Avenue

Suite 200

Rochester, NY 14604

ATTN: Laura Gregor
Phone: (585) 385-7417
Project Name: CUBA LANDFILL

Project Number: 50191-01

Report Date: 03/31/17

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087 **Report Date:** 03/31/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1709087-01	SW-4	WATER	CUBA, NY	03/23/17 14:55	03/24/17
L1709087-02	SW-1	WATER	CUBA, NY	03/23/17 14:20	03/24/17
L1709087-03	MW-1S	WATER	CUBA, NY	03/23/17 10:10	03/24/17
L1709087-04	MW-1D	WATER	CUBA, NY	03/23/17 09:50	03/24/17
L1709087-05	8354 JACKSON HILL ROAD	WATER	CUBA, NY	03/23/17 15:20	03/24/17
L1709087-06	TRIP BLANK	WATER	CUBA, NY	03/23/17 00:00	03/24/17
L1709087-07	FIELD DUP	WATER	CUBA, NY	03/23/17 00:00	03/24/17
L1709087-08	MW-12	WATER	CUBA, NY	03/23/17 14:00	03/24/17
L1709087-09	MW-7	WATER	CUBA, NY	03/23/17 14:00	03/24/17
L1709087-10	MW-8	WATER	CUBA, NY	03/23/17 11:30	03/24/17
L1709087-11	MW-10	WATER	CUBA, NY	03/23/17 12:40	03/24/17
L1709087-12	MW-10D	WATER	CUBA, NY	03/23/17 13:00	03/24/17
L1709087-13	MW-4	WATER	CUBA, NY	03/23/17 11:50	03/24/17
L1709087-14	MW-11	WATER	CUBA, NY	03/23/17 11:05	03/24/17
L1709087-15	MW-13	WATER	CUBA, NY	03/23/17 10:50	03/24/17
L1709087-16	SW-3	WATER	CUBA, NY	03/23/17 14:35	03/24/17
L1709087-17	BLIND DUP	WATER	CUBA, NY	03/23/17 00:00	03/24/17
L1709087-18	UNLABELED	WATER	CUBA, NY	03/23/17 00:00	03/24/17



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.



Project Name: CUBA LANDFILL Lab Number: L1709087
Project Number: 50191-01 Report Date: 03/31/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

A sample identified as "BLIND DUP" and Unlabeled vials were received but not listed on the Chain of Custody. At the client's request, the samples were not analyzed.

Metals

The WG988823-3 MS recoveries, performed on L1709087-01, are outside the acceptance criteria for aluminum (45%) and iron (0%). A post digestion spike was performed and was within acceptance criteria. The WG988823-4 Laboratory Duplicate RPDs, performed on L1709087-01, are outside the acceptance criteria for aluminum (24%), chromium (23%), and iron (23%). The elevated RPDs have been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

King L. Wisters Lisa Westerlind

Authorized Signature:

Title: Technical Director/Representative

Date: 03/31/17



ORGANICS



VOLATILES



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Date Collected: 03/23/17 14:55 Lab ID: L1709087-01

Client ID: SW-4 Sample Location: CUBA, NY Matrix: Water

Analytical Method: 1,8260C Analytical Date: 03/30/17 15:59

Analyst: NL

Date Collected:	03/23/17 14:55
Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-01 Date Collected: 03/23/17 14:55

Client ID: SW-4 Date Received: 03/24/17 Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - West	borough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	<u>'</u> 1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	ND		ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	104		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	97		70-130	
Dibromofluoromethane	93		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

SAMPLE RESU

Lab ID: Date Collected: 03/23/17 14:20

Client ID: SW-1
Sample Location: CUBA, NY
Matrix: Water
Analytical Method: 1,8260C

Analytical Date: 03/30/17 16:35

Analyst: NL

Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 **Report Date:** 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-02 Date Collected: 03/23/17 14:20

Client ID: SW-1 Date Received: 03/24/17 Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westh	oorough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	<u>'</u> 1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	1.8	J	ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	104		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	98		70-130	
Dibromofluoromethane	94		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Lab ID: L1709087-03 Date Collected: 03/23/17 10:10

Client ID: MW-1S Sample Location: CUBA, NY Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 03/30/17 17:10

Analyst: KD Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 **Report Date:** 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-03 Date Collected: 03/23/17 10:10

Client ID: MW-1S Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - West	borough Lab					
	-					
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	105		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	98		70-130	
Dibromofluoromethane	93		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

L1709087

Report Date: 03/31/17

Lab Number:

Lab ID: L1709087-04

Client ID: MW-1D Sample Location: CUBA, NY Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 03/30/17 17:45

Analyst: KD

Date Collected:	03/23/17 09:50
Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-04 Date Collected: 03/23/17 09:50

Client ID: MW-1D Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	tborough Lab					
o-Xylene	ND		ua/I	2.5	0.70	1
•	ND ND		ug/l			
cis-1,2-Dichloroethene			ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	2.6	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	102		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	97		70-130	
Dibromofluoromethane	93		70-130	



L1709087

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number:

Report Date: 03/31/17

Lab ID: L1709087-05

Client ID: 8354 JACKSON HILL ROAD

Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C Analytical Date: 03/30/17 18:20

Analyst: KD Date Collected: 03/23/17 15:20

Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-05 Date Collected: 03/23/17 15:20

Client ID: 8354 JACKSON HILL ROAD Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Result	Qualifier	Units	RL	MDL	Dilution Factor
h Lab					
ND		ug/l	2.5	0.70	1
ND		ug/l	2.5	0.70	1
ND		ug/l	5.0	1.0	1
ND		ug/l	2.5	0.70	1
ND		ug/l	5.0	1.5	1
ND		ug/l	2.5	0.70	1
2.0	J	ug/l	5.0	1.5	1
ND		ug/l	5.0	1.0	1
ND		ug/l	5.0	1.9	1
ND		ug/l	5.0	1.0	1
ND		ug/l	5.0	1.0	1
ND		ug/l	5.0	1.0	1
ND		ug/l	2.5	0.70	1
ND		ug/l	2.0	0.65	1
ND		ug/l	2.5	0.70	1
ND		ug/l	2.5	0.70	1
ND		ug/l	2.5	0.70	1
ND		ug/l	5.0	0.25	1
	ND N	ND N	ND	ND	ND

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	105		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	97		70-130	
Dibromofluoromethane	94		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

OAMII EE NEOC

Lab ID: L1709087-06
Client ID: TRIP BLANK

Sample Location: CUBA, NY
Matrix: Water

Analytical Method: 1,8260C Analytical Date: 03/30/17 18:56

Analyst: KD

;. U3/3U/17

Date Collected: 03/23/17 00:00

Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	tborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1

Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 00:00

Client ID: TRIP BLANK Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - West	borough Lab					
-						
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	103		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	97		70-130	
Dibromofluoromethane	95		70-130	



Project Name: CUBA LANDFILL

Water

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Lab ID: L1709087-07 Date Collected: 03/23/17 00:00

Client ID: Date Received: 03/24/17 FIELD DUP Sample Location: Field Prep: Not Specified CUBA, NY

Analytical Method: 1,8260C

Analytical Date: 03/31/17 11:37

Analyst: NL

Matrix:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Wes	stborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	0.70	J	ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	ND		ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	ND		ug/l	1.0	0.07	1	
Chloroethane	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Trichloroethene	0.65		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
p/m-Xylene	ND		ug/l	2.5	0.70	1	



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-07 Date Collected: 03/23/17 00:00

Client ID: FIELD DUP Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westbo	orough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	2.6	J	ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	111		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	91		70-130	
Dibromofluoromethane	109		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Lab ID: L1709087-08

Client ID: MW-12 Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/30/17 15:35

Analyst: NL Date Collected: 03/23/17 14:00

Date Received: 03/24/17 Field Prep: Not Specified

Parameter Result Qualifier Units RL MDL **Dilution Factor** Volatile Organics by GC/MS - Westborough Lab ND Methylene chloride 0.70 1 ug/l 2.5 1,1-Dichloroethane 0.70 J 2.5 0.70 1 ug/l Chloroform ND 0.70 ug/l 2.5 1 Carbon tetrachloride ND 0.50 ug/l 0.13 1 1,2-Dichloropropane ND 1.0 0.14 1 ug/l 1 ND 0.50 0.15 Dibromochloromethane ug/l 1,1,2-Trichloroethane ND 1.5 0.50 1 ug/l Tetrachloroethene ND 0.50 0.18 1 ug/l ND 2.5 0.70 1 Chlorobenzene ug/l ND Trichlorofluoromethane 2.5 0.70 1 ug/l 1,2-Dichloroethane ND ug/l 0.50 0.13 1 ND 1,1,1-Trichloroethane 2.5 0.70 1 ug/l Bromodichloromethane ND 0.50 0.19 1 ug/l trans-1,3-Dichloropropene ND ug/l 0.50 0.16 1 ND cis-1,3-Dichloropropene 0.50 0.14 1 ug/l Bromoform ND 2.0 0.65 1 ug/l 1,1,2,2-Tetrachloroethane ND 0.50 1 ug/l 0.17 ND 0.50 1 Benzene 0.16 ug/l Toluene ND 2.5 0.70 1 ug/l Ethylbenzene ND 2.5 0.70 1 ug/l Chloromethane ND 2.5 0.70 1 ug/l Bromomethane ND 2.5 0.70 1 ug/l Vinyl chloride ND 1.0 0.07 1 ug/l Chloroethane ND 2.5 0.70 1 ug/l 1,1-Dichloroethene ND 0.50 0.17 1 ug/l trans-1,2-Dichloroethene ND 2.5 0.70 1 ug/l Trichloroethene 0.78 0.50 0.18 1 ug/l 1,2-Dichlorobenzene ND ug/l 2.5 0.70 1 ND 1,4-Dichlorobenzene ug/l 2.5 0.70 1 ND ug/l 2.5 0.70 p/m-Xylene 1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 14:00

Client ID: MW-12 Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westl	oorough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	<u>'</u> 1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	1.7	J	ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	103		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	107		70-130	
Dibromofluoromethane	99		70-130	



Project Name: CUBA LANDFILL

L1709087-09

CUBA, NY

MW-7

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Date Collected: 03/23/17 14:00

Date Received: 03/24/17 Field Prep: Not Specified

Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/30/17 16:08

Analyst: NL

Lab ID:

Client ID:

Sample Location:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - We	estborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	1.3	J	ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	ND		ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	4.5		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	ND		ug/l	1.0	0.07	1	
Chloroethane	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethene	0.56		ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Trichloroethene	6.4		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
p/m-Xylene	ND		ug/l	2.5	0.70	1	



L1709087

03/31/17

Project Name: CUBA LANDFILL

L1709087-09

CUBA, NY

MW-7

Project Number: 50191-01

Lab ID:

Client ID:

Sample Location:

SAMPLE RESULTS

Date Collected:

Lab Number:

Report Date:

03/23/17 14:00 Date Received: 03/24/17

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Wes	tborough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	2.9		ug/l	2.5	0.70	1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	ND		ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	104		70-130	
Toluene-d8	100		70-130	
4-Bromofluorobenzene	104		70-130	
Dibromofluoromethane	100		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Date Collected: 03/23/17 11:30 Lab ID: L1709087-10

Client ID: MW-8 Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/30/17 16:41

Analyst: NL

Date Collected.	03/23/17 11.30
Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - West	borough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	7.6		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	12		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.72		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	21		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 11:30

Client ID: MW-8 Date Received: 03/24/17 Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborou	ugh Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	8.4		ug/l	2.5	0.70	1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	ND		ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
lodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	106		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	103		70-130	
Dibromofluoromethane	101		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Lab ID: L1709087-11

Client ID: MW-10 Sample Location: CUBA, NY Matrix: Water

Analytical Method: 1,8260C Analytical Date: 03/30/17 17:14

Analyst: NL Date Collected: 03/23/17 12:40 Date Received: 03/24/17

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 12:40

Client ID: MW-10 Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Wes	tborough Lab						
o-Xylene	ND		ua/l	2.5	0.70	1	
cis-1,2-Dichloroethene	ND ND		ug/l	2.5	0.70	<u>'</u> 1	
,			ug/l			<u> </u>	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	ND		ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
Iodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	106		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	104		70-130	
Dibromofluoromethane	102		70-130	



03/23/17 13:00

Not Specified

03/24/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Date Collected:

Date Received:

Field Prep:

Lab ID: L1709087-12

Client ID: MW-10D Sample Location: CUBA, NY Matrix: Water

Analytical Method: 1,8260C Analytical Date:

Analyst: NL

03/30/17 17:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	0.99	J	ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1

ug/l

2.5

2.5

1.0

2.5

0.50

2.5

0.50

2.5

2.5

2.5

0.70

0.70

0.07

0.70

0.17

0.70

0.18

0.70

0.70

0.70

ND

ND

ND

ND

ND

ND

0.64

ND

ND

ND



1

1

1

1

1

1

1

1

1

1

p/m-Xylene

Chloromethane

Bromomethane

Vinyl chloride

Chloroethane

1,1-Dichloroethene

1,2-Dichlorobenzene

1,4-Dichlorobenzene

Trichloroethene

trans-1,2-Dichloroethene

Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 13:00

Client ID: MW-10D Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - West	borough Lab					
-						
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	107		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	104		70-130	
Dibromofluoromethane	103		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Lab ID: L1709087-13

Client ID: MW-4
Sample Location: CUBA, NY
Matrix: Water
Analytical Method: 1,8260C

Analytical Date: 03/30/17 18:20

Analyst: NL

03/30/1

Date Collected: 03/23/17 11:50

Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - We	estborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	38		ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	0.44	J	ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	0.20	J	ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	12		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	1.6		ug/l	1.0	0.07	1	
Chloroethane	9.6		ug/l	2.5	0.70	1	
1,1-Dichloroethene	3.1		ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Trichloroethene	5.3		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1	
p/m-Xylene	ND		ug/l	2.5	0.70	1	



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-13 Date Collected: 03/23/17 11:50

Client ID: MW-4 Date Received: 03/24/17 Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - West	borough Lab						
o-Xylene	ND		ug/l	2.5	0.70	1	
cis-1,2-Dichloroethene	12		ug/l	2.5	0.70	<u>'</u> 1	
Dibromomethane	ND		ug/l	5.0	1.0	1	
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1	
Acrylonitrile	ND		ug/l	5.0	1.5	1	
Styrene	ND		ug/l	2.5	0.70	1	
Acetone	ND		ug/l	5.0	1.5	1	
Carbon disulfide	ND		ug/l	5.0	1.0	1	
2-Butanone	ND		ug/l	5.0	1.9	1	
Vinyl acetate	ND		ug/l	5.0	1.0	1	
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1	
2-Hexanone	ND		ug/l	5.0	1.0	1	
Bromochloromethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1	
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1	
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1	
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1	
lodomethane	ND		ug/l	5.0	0.25	1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	105		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	104		70-130	
Dibromofluoromethane	103		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

Data Collected 03/23/17 11:05 Lab ID: L1709087-14

Client ID: MW-11 Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/30/17 18:53

Analyst: NL

Date Collected:	03/23/17 11:05
Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	24		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.6		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	6.4		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	1.5	J	ug/l	2.5	0.70	1
1,1-Dichloroethene	1.4		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	4.0		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-14 Date Collected: 03/23/17 11:05

Client ID: MW-11 Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

•					•	•
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	tborough Lab					
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	7.0		ug/l	2.5	0.70	 1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	111		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	103		70-130	
Dibromofluoromethane	106		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-15

Client ID: MW-13 Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/31/17 11:14

Analyst: NL

Date Collected:	03/23/17 10:50
Date Received:	03/24/17
Field Pren:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	6.6		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	5.9		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	9.0		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.93		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	9.5		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 **Report Date:** 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 10:50

Client ID: MW-13 Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westb	orough Lab					
o-Xylene	ND		ua/l	2.5	0.70	1
cis-1,2-Dichloroethene	6.1		ug/l ug/l	2.5	0.70	<u>'</u> 1
Dibromomethane	ND		ug/l	5.0	1.0	<u>'</u> 1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	<u>.</u> 1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	1.7	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
Iodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	114		70-130	
Toluene-d8	92		70-130	
4-Bromofluorobenzene	74		70-130	
Dibromofluoromethane	115		70-130	

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab Number: L1709087

Report Date: 03/31/17

03/23/17 14:35 Lab ID: L1709087-16 Date Collected:

Client ID: SW-3 Sample Location: CUBA, NY Matrix: Water Analytical Method: 1,8260C

Analytical Date: 03/30/17 16:05

Analyst: NL

Date Collected.	03/23/11 14.30
Date Received:	03/24/17
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

SAMPLE RESULTS

Lab ID: Date Collected: 03/23/17 14:35

Client ID: SW-3 Date Received: 03/24/17
Sample Location: CUBA, NY Field Prep: Not Specified

Parameter Result Qualifier Units RI MDI Dilution Factor

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westboroug	jh Lab					
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1
lodomethane	ND		ug/l	5.0	0.25	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	90		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	106		70-130	
Dibromofluoromethane	98		70-130	



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 10:06

Parameter	Result	Qualifier Units	: RL	MDL	
Volatile Organics by GC/MS	- Westborough Lab	for sample(s):	08-14 Batch:	WG989705-5	
Methylene chloride	ND	ug/l	2.5	0.70	
1,1-Dichloroethane	ND	ug/l	2.5	0.70	
Chloroform	ND	ug/l	2.5	0.70	
Carbon tetrachloride	ND	ug/l	0.50	0.13	
1,2-Dichloropropane	ND	ug/l	1.0	0.14	
Dibromochloromethane	ND	ug/l	0.50	0.15	
1,1,2-Trichloroethane	ND	ug/l	1.5	0.50	
Tetrachloroethene	ND	ug/l	0.50	0.18	
Chlorobenzene	ND	ug/l	2.5	0.70	
Trichlorofluoromethane	ND	ug/l	2.5	0.70	
1,2-Dichloroethane	ND	ug/l	0.50	0.13	
1,1,1-Trichloroethane	ND	ug/l	2.5	0.70	
Bromodichloromethane	ND	ug/l	0.50	0.19	
trans-1,3-Dichloropropene	ND	ug/l	0.50	0.16	
cis-1,3-Dichloropropene	ND	ug/l	0.50	0.14	
Bromoform	ND	ug/l	2.0	0.65	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	0.17	
Benzene	ND	ug/l	0.50	0.16	
Toluene	ND	ug/l	2.5	0.70	
Ethylbenzene	ND	ug/l	2.5	0.70	
Chloromethane	ND	ug/l	2.5	0.70	
Bromomethane	ND	ug/l	2.5	0.70	
Vinyl chloride	ND	ug/l	1.0	0.07	
Chloroethane	ND	ug/l	2.5	0.70	
1,1-Dichloroethene	ND	ug/l	0.50	0.17	
trans-1,2-Dichloroethene	ND	ug/l	2.5	0.70	
Trichloroethene	ND	ug/l	0.50	0.18	
1,2-Dichlorobenzene	ND	ug/l	2.5	0.70	
1,4-Dichlorobenzene	ND	ug/l	2.5	0.70	



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 10:06

Parameter	Result	Qualifier Units	s RL	MDL	
Volatile Organics by GC/MS	- Westborough Lab	for sample(s):	08-14 Batch:	WG989705-5	
p/m-Xylene	ND	ug/l	2.5	0.70	
o-Xylene	ND	ug/l	2.5	0.70	
cis-1,2-Dichloroethene	ND	ug/l	2.5	0.70	
Dibromomethane	ND	ug/l	5.0	1.0	
1,2,3-Trichloropropane	ND	ug/l	2.5	0.70	
Acrylonitrile	ND	ug/l	5.0	1.5	
Styrene	ND	ug/l	2.5	0.70	
Acetone	ND	ug/l	5.0	1.5	
Carbon disulfide	ND	ug/l	5.0	1.0	
2-Butanone	ND	ug/l	5.0	1.9	
Vinyl acetate	ND	ug/l	5.0	1.0	
4-Methyl-2-pentanone	ND	ug/l	5.0	1.0	
2-Hexanone	ND	ug/l	5.0	1.0	
Bromochloromethane	ND	ug/l	2.5	0.70	
1,2-Dibromoethane	ND	ug/l	2.0	0.65	
1,1,1,2-Tetrachloroethane	ND	ug/l	2.5	0.70	
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5	0.70	
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5	0.70	
lodomethane	ND	ug/l	5.0	0.25	

		Acceptance				
Surrogate	%Recovery	Qualifier	Criteria			
1,2-Dichloroethane-d4	96		70-130			
Toluene-d8	98		70-130			
4-Bromofluorobenzene	103		70-130			
Dibromofluoromethane	97		70-130			



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 09:30

Parameter	Result	Qualifier Unit	s RL	MDL	
Volatile Organics by GC/MS	- Westborough Lab	for sample(s):	01-06 Ba	tch: WG989722-	5
Methylene chloride	ND	ug/	l 2.5	0.70	
1,1-Dichloroethane	ND	ug/	1 2.5	0.70	
Chloroform	ND	ug/	l 2.5	0.70	
Carbon tetrachloride	ND	ug/	I 0.50	0.13	
1,2-Dichloropropane	ND	ug/	I 1.0	0.14	
Dibromochloromethane	ND	ug/	I 0.50	0.15	
1,1,2-Trichloroethane	ND	ug/	l 1.5	0.50	
Tetrachloroethene	ND	ug/	0.50	0.18	
Chlorobenzene	ND	ug/	l 2.5	0.70	
Trichlorofluoromethane	ND	ug/	l 2.5	0.70	
1,2-Dichloroethane	ND	ug/	I 0.50	0.13	
1,1,1-Trichloroethane	ND	ug/	l 2.5	0.70	
Bromodichloromethane	ND	ug/	I 0.50	0.19	
trans-1,3-Dichloropropene	ND	ug/	I 0.50	0.16	
cis-1,3-Dichloropropene	ND	ug/	0.50	0.14	
Bromoform	ND	ug/	1 2.0	0.65	
1,1,2,2-Tetrachloroethane	ND	ug/	0.50	0.17	
Benzene	ND	ug/	I 0.50	0.16	
Toluene	ND	ug/	l 2.5	0.70	
Ethylbenzene	ND	ug/	l 2.5	0.70	
Chloromethane	ND	ug/	l 2.5	0.70	
Bromomethane	ND	ug/	l 2.5	0.70	
Vinyl chloride	ND	ug/	I 1.0	0.07	
Chloroethane	ND	ug/	l 2.5	0.70	
1,1-Dichloroethene	ND	ug/	I 0.50	0.17	
trans-1,2-Dichloroethene	ND	ug/	l 2.5	0.70	
Trichloroethene	ND	ug/	0.50	0.18	
1,2-Dichlorobenzene	ND	ug/	l 2.5	0.70	
1,4-Dichlorobenzene	ND	ug/	I 2.5	0.70	



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 09:30

Parameter	Result	Qualifier Units	s RL	MDL	
Volatile Organics by GC/MS	- Westborough Lab	for sample(s):	01-06 Batch	: WG989722-5	
p/m-Xylene	ND	ug/l	l 2.5	0.70	
o-Xylene	ND	ug/l	1 2.5	0.70	
cis-1,2-Dichloroethene	ND	ug/l	l 2.5	0.70	
Dibromomethane	ND	ug/l	J 5.0	1.0	
1,2,3-Trichloropropane	ND	ug/l	l 2.5	0.70	
Acrylonitrile	ND	ug/l	J 5.0	1.5	
Styrene	ND	ug/l	1 2.5	0.70	
Acetone	ND	ug/l	J 5.0	1.5	
Carbon disulfide	ND	ug/l	J 5.0	1.0	
2-Butanone	ND	ug/l	J 5.0	1.9	
Vinyl acetate	ND	ug/l	J 5.0	1.0	
4-Methyl-2-pentanone	ND	ug/l	J 5.0	1.0	
2-Hexanone	ND	ug/l	J 5.0	1.0	
Bromochloromethane	ND	ug/l	1 2.5	0.70	
1,2-Dibromoethane	ND	ug/l	l 2.0	0.65	
1,1,1,2-Tetrachloroethane	ND	ug/l	l 2.5	0.70	
1,2-Dibromo-3-chloropropane	ND	ug/l	l 2.5	0.70	
trans-1,4-Dichloro-2-butene	ND	ug/l	l 2.5	0.70	
lodomethane	ND	ug/l	J 5.0	0.25	

		Acceptance					
Surrogate	%Recovery	Qualifier	Criteria				
1,2-Dichloroethane-d4	110		70-130				
Toluene-d8	98		70-130				
4-Bromofluorobenzene	99		70-130				
Dibromofluoromethane	99		70-130				



L1709087

Project Name: CUBA LANDFILL

Project Number: 50191-01 Repo

Report Date: 03/31/17

Lab Number:

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 10:23

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS	- Westborough Lab	for sample	e(s): 1	6 Batch:	WG989739-5
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/30/17 10:23

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS	- Westborough Lab	for sample(s): 16	Batch:	WG989739-5
p/m-Xylene	ND	ug/l	2.5	0.70
o-Xylene	ND	ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND	ug/l	2.5	0.70
Dibromomethane	ND	ug/l	5.0	1.0
1,2,3-Trichloropropane	ND	ug/l	2.5	0.70
Acrylonitrile	ND	ug/l	5.0	1.5
Styrene	ND	ug/l	2.5	0.70
Acetone	ND	ug/l	5.0	1.5
Carbon disulfide	ND	ug/l	5.0	1.0
2-Butanone	ND	ug/l	5.0	1.9
Vinyl acetate	ND	ug/l	5.0	1.0
4-Methyl-2-pentanone	ND	ug/l	5.0	1.0
2-Hexanone	ND	ug/l	5.0	1.0
Bromochloromethane	ND	ug/l	2.5	0.70
1,2-Dibromoethane	ND	ug/l	2.0	0.65
1,1,1,2-Tetrachloroethane	ND	ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5	0.70
lodomethane	ND	ug/l	5.0	0.25

		Acceptance					
Surrogate	%Recovery	Qualifier	Criteria				
1,2-Dichloroethane-d4	85		70-130				
Toluene-d8	100		70-130				
4-Bromofluorobenzene	107		70-130				
Dibromofluoromethane	96		70-130				



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/31/17 09:18

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS -	Westborough Lab	for sample(s): 07,15	Batch:	WG989985-5
Methylene chloride	ND	ug/l	2.5	0.70
1,1-Dichloroethane	ND	ug/l	2.5	0.70
Chloroform	ND	ug/l	2.5	0.70
Carbon tetrachloride	ND	ug/l	0.50	0.13
1,2-Dichloropropane	ND	ug/l	1.0	0.14
Dibromochloromethane	ND	ug/l	0.50	0.15
1,1,2-Trichloroethane	ND	ug/l	1.5	0.50
Tetrachloroethene	ND	ug/l	0.50	0.18
Chlorobenzene	ND	ug/l	2.5	0.70
Trichlorofluoromethane	ND	ug/l	2.5	0.70
1,2-Dichloroethane	ND	ug/l	0.50	0.13
1,1,1-Trichloroethane	ND	ug/l	2.5	0.70
Bromodichloromethane	ND	ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND	ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND	ug/l	0.50	0.14
Bromoform	ND	ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	0.17
Benzene	ND	ug/l	0.50	0.16
Toluene	ND	ug/l	2.5	0.70
Ethylbenzene	ND	ug/l	2.5	0.70
Chloromethane	ND	ug/l	2.5	0.70
Bromomethane	ND	ug/l	2.5	0.70
Vinyl chloride	ND	ug/l	1.0	0.07
Chloroethane	ND	ug/l	2.5	0.70
1,1-Dichloroethene	ND	ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND	ug/l	2.5	0.70
Trichloroethene	ND	ug/l	0.50	0.18
1,2-Dichlorobenzene	ND	ug/l	2.5	0.70
1,4-Dichlorobenzene	ND	ug/l	2.5	0.70



Project Number: 50191-01

Lab Number: L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 03/31/17 09:18

Parameter	Result	Qualifier Units	s RL	MDL	
Volatile Organics by GC/MS - V	Vestborough Lat	o for sample(s):	07,15 Batch:	: WG989985-5	
p/m-Xylene	ND	ug/	1 2.5	0.70	
o-Xylene	ND	ug/	1 2.5	0.70	
cis-1,2-Dichloroethene	ND	ug/	1 2.5	0.70	
Dibromomethane	ND	ug/	l 5.0	1.0	
1,2,3-Trichloropropane	ND	ug/	1 2.5	0.70	
Acrylonitrile	ND	ug/	1 5.0	1.5	
Styrene	ND	ug/	1 2.5	0.70	
Acetone	ND	ug/	l 5.0	1.5	
Carbon disulfide	ND	ug/	l 5.0	1.0	
2-Butanone	ND	ug/	l 5.0	1.9	
Vinyl acetate	ND	ug/	l 5.0	1.0	
4-Methyl-2-pentanone	ND	ug/	l 5.0	1.0	
2-Hexanone	ND	ug/	l 5.0	1.0	
Bromochloromethane	ND	ug/	1 2.5	0.70	
1,2-Dibromoethane	ND	ug/	Ί 2.0	0.65	
1,1,1,2-Tetrachloroethane	ND	ug/	Ί 2.5	0.70	
1,2-Dibromo-3-chloropropane	ND	ug/	Ί 2.5	0.70	
trans-1,4-Dichloro-2-butene	ND	ug/	1 2.5	0.70	
lodomethane	ND	ug/	1 5.0	0.25	

		Acceptance				
Surrogate	%Recovery	Qualifier	Criteria			
1,2-Dichloroethane-d4	106		70-130			
Toluene-d8	101		70-130			
4-Bromofluorobenzene	85		70-130			
Dibromofluoromethane	108		70-130			



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RP. Qual Lim	
Volatile Organics by GC/MS - Westborough L	ab Associated	sample(s):	08-14 Batch:	WG989705-3	WG989705-4			
Methylene chloride	110		110		70-130	0	20)
1,1-Dichloroethane	100		100		70-130	0	20)
Chloroform	100		99		70-130	1	20)
Carbon tetrachloride	100		99		63-132	1	20)
1,2-Dichloropropane	99		99		70-130	0	20)
Dibromochloromethane	110		110		63-130	0	20)
1,1,2-Trichloroethane	100		110		70-130	10	20)
Tetrachloroethene	100		100		70-130	0	20)
Chlorobenzene	100		100		75-130	0	20)
Trichlorofluoromethane	110		110		62-150	0	20)
1,2-Dichloroethane	99		97		70-130	2	20)
1,1,1-Trichloroethane	93		95		67-130	2	20)
Bromodichloromethane	100		100		67-130	0	20)
trans-1,3-Dichloropropene	98		99		70-130	1	20)
cis-1,3-Dichloropropene	100		100		70-130	0	20)
Bromoform	120		120		54-136	0	20)
1,1,2,2-Tetrachloroethane	110		110		67-130	0	20)
Benzene	100		100		70-130	0	20)
Toluene	100		100		70-130	0	20)
Ethylbenzene	98		100		70-130	2	20)
Chloromethane	120		130		64-130	8	20)



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	08-14 Batch:	WG989705-3	WG989705-4		
Bromomethane	170	Q	170	Q	39-139	0	20
Vinyl chloride	130		130		55-140	0	20
Chloroethane	130		130		55-138	0	20
1,1-Dichloroethene	110		110		61-145	0	20
trans-1,2-Dichloroethene	100		100		70-130	0	20
Trichloroethene	100		98		70-130	2	20
1,2-Dichlorobenzene	100		100		70-130	0	20
1,4-Dichlorobenzene	100		100		70-130	0	20
p/m-Xylene	100		100		70-130	0	20
o-Xylene	100		100		70-130	0	20
cis-1,2-Dichloroethene	110		100		70-130	10	20
Dibromomethane	100		110		70-130	10	20
1,2,3-Trichloropropane	100		100		64-130	0	20
Acrylonitrile	120		120		70-130	0	20
Styrene	95		100		70-130	5	20
Acetone	100		110		58-148	10	20
Carbon disulfide	94		99		51-130	5	20
2-Butanone	100		110		63-138	10	20
Vinyl acetate	97		98		70-130	1	20
4-Methyl-2-pentanone	94		100		59-130	6	20
2-Hexanone	92		92		57-130	0	20



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L17

L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recover	/ Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough I	_ab Associated	sample(s):	08-14 Batch:	WG989705-3	WG989705-4				
Bromochloromethane	120		110		70-130	9		20	
1,2-Dibromoethane	100		100		70-130	0		20	
1,1,1,2-Tetrachloroethane	100		110		64-130	10		20	
1,2-Dibromo-3-chloropropane	94		93		41-144	1		20	
trans-1,4-Dichloro-2-butene	100		98		70-130	2		20	
Iodomethane	79		98		70-130	21	Q	20	

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	
1,2-Dichloroethane-d4	93		91		70-130	
Toluene-d8	97		98		70-130	
4-Bromofluorobenzene	99		99		70-130	
Dibromofluoromethane	99		97		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits	
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-06 Batch:	WG989722-3	WG989722-4			
Methylene chloride	97		100		70-130	3	20	
1,1-Dichloroethane	96		100		70-130	4	20	
Chloroform	96		100		70-130	4	20	
Carbon tetrachloride	75		81		63-132	8	20	
1,2-Dichloropropane	100		100		70-130	0	20	
Dibromochloromethane	86		91		63-130	6	20	
1,1,2-Trichloroethane	110		110		70-130	0	20	
Tetrachloroethene	92		100		70-130	8	20	
Chlorobenzene	100		100		75-130	0	20	
Trichlorofluoromethane	85		87		62-150	2	20	
1,2-Dichloroethane	100		110		70-130	10	20	
1,1,1-Trichloroethane	75		82		67-130	9	20	
Bromodichloromethane	98		100		67-130	2	20	
trans-1,3-Dichloropropene	69	Q	75		70-130	8	20	
cis-1,3-Dichloropropene	81		88		70-130	8	20	
Bromoform	78		84		54-136	7	20	
1,1,2,2-Tetrachloroethane	100		110		67-130	10	20	
Benzene	100		100		70-130	0	20	
Toluene	98		100		70-130	2	20	
Ethylbenzene	100		110		70-130	10	20	
Chloromethane	84		87		64-130	4	20	



Project Name: CUBA LANDFILL

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arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
olatile Organics by GC/MS - Westboroug	n Lab Associated	sample(s):	01-06 Batch:	WG989722-3	WG989722-4				
Bromomethane	95		90		39-139	5		20	
Vinyl chloride	85		93		55-140	9		20	
Chloroethane	97		100		55-138	3		20	
1,1-Dichloroethene	84		90		61-145	7		20	
trans-1,2-Dichloroethene	92		98		70-130	6		20	
Trichloroethene	98		100		70-130	2		20	
1,2-Dichlorobenzene	98		100		70-130	2		20	
1,4-Dichlorobenzene	98		100		70-130	2		20	
p/m-Xylene	100		110		70-130	10		20	
o-Xylene	105		110		70-130	5		20	
cis-1,2-Dichloroethene	96		100		70-130	4		20	
Dibromomethane	100		110		70-130	10		20	
1,2,3-Trichloropropane	100		110		64-130	10		20	
Acrylonitrile	110		120		70-130	9		20	
Styrene	110		115		70-130	4		20	
Acetone	110		100		58-148	10		20	
Carbon disulfide	75		130		51-130	54	Q	20	
2-Butanone	130		130		63-138	0		20	
Vinyl acetate	88		98		70-130	11		20	
4-Methyl-2-pentanone	100		110		59-130	10		20	
2-Hexanone	120		120		57-130	0		20	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual		CSD covery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	01-06	Batch:	WG989722-3	WG989722-4				
Bromochloromethane	100			110		70-130	10		20	
1,2-Dibromoethane	110			120		70-130	9		20	
1,1,1,2-Tetrachloroethane	86			92		64-130	7		20	
1,2-Dibromo-3-chloropropane	93			97		41-144	4		20	
trans-1,4-Dichloro-2-butene	100			110		70-130	10		20	
Iodomethane	84			100		70-130	17		20	

LCS		LCSD		Acceptance	
%Recovery	Qual	%Recovery	Qual	Criteria	
105		105		70-130	
98		99		70-130	
98		98		70-130	
96		97		70-130	
	%Recovery 105 98 98	%Recovery Qual 105 98 98	%Recovery Qual %Recovery 105 105 98 99 98 98	%Recovery Qual %Recovery Qual 105 105 98 99 98 98	%Recovery Qual %Recovery Qual Criteria 105 105 70-130 98 99 70-130 98 98 70-130



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s): 1	6 Batch: WG9	89739-3 W	/G989739-4		
Methylene chloride	110		110		70-130	0	20
1,1-Dichloroethane	100		110		70-130	10	20
Chloroform	93		96		70-130	3	20
Carbon tetrachloride	74		78		63-132	5	20
1,2-Dichloropropane	100		110		70-130	10	20
Dibromochloromethane	80		89		63-130	11	20
1,1,2-Trichloroethane	110		120		70-130	9	20
Tetrachloroethene	81		86		70-130	6	20
Chlorobenzene	95		100		75-130	5	20
Trichlorofluoromethane	80		88		62-150	10	20
1,2-Dichloroethane	86		93		70-130	8	20
1,1,1-Trichloroethane	81		83		67-130	2	20
Bromodichloromethane	92		94		67-130	2	20
trans-1,3-Dichloropropene	87		95		70-130	9	20
cis-1,3-Dichloropropene	100		100		70-130	0	20
Bromoform	72		78		54-136	8	20
1,1,2,2-Tetrachloroethane	100		110		67-130	10	20
Benzene	96		100		70-130	4	20
Toluene	92		99		70-130	7	20
Ethylbenzene	90		96		70-130	6	20
Chloromethane	100		120		64-130	18	20



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s): 16	Batch: WG9	989739-3	WG989739-4		
Bromomethane	91		87		39-139	4	20
Vinyl chloride	110		120		55-140	9	20
Chloroethane	140	Q	150	Q	55-138	7	20
1,1-Dichloroethene	96		100		61-145	4	20
trans-1,2-Dichloroethene	100		110		70-130	10	20
Trichloroethene	93		92		70-130	1	20
1,2-Dichlorobenzene	93		100		70-130	7	20
1,4-Dichlorobenzene	94		100		70-130	6	20
p/m-Xylene	100		105		70-130	5	20
o-Xylene	100		105		70-130	5	20
cis-1,2-Dichloroethene	100		110		70-130	10	20
Dibromomethane	96		110		70-130	14	20
1,2,3-Trichloropropane	110		120		64-130	9	20
Acrylonitrile	110		120		70-130	9	20
Styrene	90		95		70-130	5	20
Acetone	110		130		58-148	17	20
Carbon disulfide	110		120		51-130	9	20
2-Butanone	120		130		63-138	8	20
Vinyl acetate	110		120		70-130	9	20
4-Methyl-2-pentanone	110		110		59-130	0	20
2-Hexanone	110		130		57-130	17	20



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recove		%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s): 1	6 Batch:	WG989739-3	WG989739-4			
Bromochloromethane	100		110		70-130	10		20
1,2-Dibromoethane	100		110		70-130	10		20
1,1,1,2-Tetrachloroethane	87		93		64-130	7		20
1,2-Dibromo-3-chloropropane	82		86		41-144	5		20
trans-1,4-Dichloro-2-butene	80		87		70-130	8		20
Iodomethane	63	Q	58	Q	70-130	8		20

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	
1,2-Dichloroethane-d4	80		86		70-130	
Toluene-d8	100		102		70-130	
4-Bromofluorobenzene	94		97		70-130	
Dibromofluoromethane	97		98		70-130	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough I	_ab Associated	sample(s):	07,15 Batch:	WG989985-3	WG989985-4				
Methylene chloride	77		100		70-130	26	Q	20	
1,1-Dichloroethane	79		110		70-130	33	Q	20	
Chloroform	86		110		70-130	24	Q	20	
Carbon tetrachloride	95		110		63-132	15		20	
1,2-Dichloropropane	100		110		70-130	10		20	
Dibromochloromethane	110		110		63-130	0		20	
1,1,2-Trichloroethane	110		120		70-130	9		20	
Tetrachloroethene	100		100		70-130	0		20	
Chlorobenzene	100		100		75-130	0		20	
Trichlorofluoromethane	110		100		62-150	10		20	
1,2-Dichloroethane	110		110		70-130	0		20	
1,1,1-Trichloroethane	92		110		67-130	18		20	
Bromodichloromethane	100		110		67-130	10		20	
trans-1,3-Dichloropropene	110		110		70-130	0		20	
cis-1,3-Dichloropropene	110		110		70-130	0		20	
Bromoform	110		100		54-136	10		20	
1,1,2,2-Tetrachloroethane	100		120		67-130	18		20	
Benzene	99		110		70-130	11		20	
Toluene	98		100		70-130	2		20	
Ethylbenzene	97		100		70-130	3		20	
Chloromethane	100		92		64-130	8		20	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	07,15 Batch:	WG989985-3	WG989985-4				
Bromomethane	85		84		39-139	1		20	
Vinyl chloride	120		110		55-140	9		20	
Chloroethane	120		110		55-138	9		20	
1,1-Dichloroethene	100		110		61-145	10		20	
trans-1,2-Dichloroethene	85		110		70-130	26	Q	20	
Trichloroethene	100		100		70-130	0		20	
1,2-Dichlorobenzene	100		110		70-130	10		20	
1,4-Dichlorobenzene	100		100		70-130	0		20	
p/m-Xylene	105		110		70-130	5		20	
o-Xylene	105		110		70-130	5		20	
cis-1,2-Dichloroethene	89		110		70-130	21	Q	20	
Dibromomethane	110		110		70-130	0		20	
1,2,3-Trichloropropane	98		110		64-130	12		20	
Acrylonitrile	84		130		70-130	43	Q	20	
Styrene	120		115		70-130	4		20	
Acetone	88		120		58-148	31	Q	20	
Carbon disulfide	100		110		51-130	10		20	
2-Butanone	92		120		63-138	26	Q	20	
Vinyl acetate	76		110		70-130	37	Q	20	
4-Methyl-2-pentanone	82		93		59-130	13		20	
2-Hexanone	82		87		57-130	6		20	



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number:

L1709087

Report Date:

03/31/17

Parameter	LCS %Recovery	Qual	LCS %Reco	_	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics by GC/MS - Westborough L	ab Associated	sample(s):	07,15 Ba	tch: V	WG989985-3	WG989985-4				
Bromochloromethane	100		12	0		70-130	18		20	
1,2-Dibromoethane	120		110	0		70-130	9		20	
1,1,1,2-Tetrachloroethane	100		10	0		64-130	0		20	
1,2-Dibromo-3-chloropropane	98		97	7		41-144	1		20	
trans-1,4-Dichloro-2-butene	88		98	3		70-130	11		20	
Iodomethane	41	Q	57	7	Q	70-130	33	Q	20	

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	
1,2-Dichloroethane-d4	107		110		70-130	
Toluene-d8	98		101		70-130	
4-Bromofluorobenzene	95		97		70-130	
Dibromofluoromethane	94		104		70-130	

METALS



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

03/31/17

L1709087

Lab ID: L1709087-01

Client ID: SW-4 Sample Location: CUBA, NY Matrix: Water

Date Collected: 03/23/17 14:55

Lab Number:

Report Date:

Date Received: 03/24/17

Field Prep: Not Specified

Antimony, Total 0.00063 J mg/l 0.00400 0.00042 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al Arsenic, Total 0.00163 mg/l 0.00050 0.00016 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al Barium, Total 0.01783 mg/l 0.00050 0.00017 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al	lyst
Antimony, Total 0.00063 J mg/l 0.00400 0.00042 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al Arsenic, Total 0.00163 mg/l 0.00050 0.00016 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al Barium, Total 0.01783 mg/l 0.00050 0.00017 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al	
Arsenic, Total 0.00163 mg/l 0.00050 0.00016 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al Barium, Total 0.01783 mg/l 0.00050 0.00017 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A Al	М
Barium, Total 0.01783 mg/l 0.00050 0.00017 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
	М
Bervllium, Total ND ma/l 0.00050 0.00010 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
<u> </u>	М
Cadmium, Total 0.00029 mg/l 0.00020 0.00005 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Calcium, Total 2.72 mg/l 0.100 0.0394 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Chromium, Total 0.00256 mg/l 0.00100 0.00017 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Cobalt, Total 0.00172 mg/l 0.00050 0.00016 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Copper, Total 0.00340 mg/l 0.00100 0.00038 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Iron, Total 2.97 mg/l 0.0500 0.0191 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Lead, Total 0.00402 mg/l 0.00100 0.00034 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Magnesium, Total 0.916 mg/l 0.0700 0.0242 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	.M
Manganese, Total 0.1145 mg/l 0.00100 0.00044 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Mercury, Total ND mg/l 0.00020 0.00006 1 03/27/17 12:01 03/27/17 20:45 EPA 7470A 1,7470A E.	Α
Nickel, Total 0.00395 mg/l 0.00200 0.00055 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Potassium, Total 1.44 mg/l 0.100 0.0309 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Selenium, Total ND mg/l 0.00500 0.00173 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Silver, Total ND mg/l 0.00040 0.00016 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Sodium, Total 5.04 mg/l 0.100 0.0293 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Thallium, Total ND mg/l 0.00050 0.00014 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Vanadium, Total 0.00243 J mg/l 0.00500 0.00157 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	М
Zinc, Total 0.01734 mg/l 0.01000 0.00341 1 03/28/17 10:58 03/29/17 12:11 EPA 3005A 1,6020A AI	M



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

L1709087

Lab Number: **Report Date:**

03/31/17

Lab ID: L1709087-02

SW-1 Client ID: Sample Location: CUBA, NY Matrix: Water

Date Collected: Date Received: 03/23/17 14:20

03/24/17

Field Prep:

Not Specified

Prep Method Dilution Date Date Analytical Factor Prepared Analyzed Method

Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Mar	nsfield Lab										
Aluminum, Total	0.0389		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Antimony, Total	0.00048	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00040	J	mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Barium, Total	0.00840		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Calcium, Total	23.8		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Chromium, Total	0.00018	J	mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Copper, Total	0.00106		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Iron, Total	0.0743		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Magnesium, Total	7.07		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Manganese, Total	0.00664		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 20:58	EPA 7470A	1,7470A	EA
Nickel, Total	ND		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Potassium, Total	1.37		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Sodium, Total	5.68		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:14	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

CUBA, NY

SAMPLE RESULTS

Lab ID: L1709087-03 Client ID: MW-1S

Matrix: Water

Sample Location:

Date Collected: 03/23/17 10:10

Date Received: 03/24/17

Lab Number:

Report Date:

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	sfield Lab										
Aluminum, Total	13.4		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00779		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Barium, Total	0.2162		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00083		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00006	J	mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Calcium, Total	27.8		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Chromium, Total	0.02147		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Cobalt, Total	0.01450		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Copper, Total	0.02427		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Iron, Total	30.8		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Lead, Total	0.01553		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Magnesium, Total	8.70		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Manganese, Total	0.9832		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:00	EPA 7470A	1,7470A	EA
Nickel, Total	0.02969		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Potassium, Total	3.14		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Selenium, Total	0.00193	J	mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Sodium, Total	1.84		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Vanadium, Total	0.01485		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM
Zinc, Total	0.07559		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:18	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab ID: L1709087-04

Client ID: MW-1D Sample Location: CUBA, NY Matrix: Water

Date Collected: 03/23/17 09:50

Date Received: 03/24/17

Lab Number:

Report Date:

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Man	sfield Lab										
Aluminum, Total	28.7		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Antimony, Total	0.00068	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00425		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Barium, Total	0.1848		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00160		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00119		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Calcium, Total	26.9		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Chromium, Total	0.04325		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Cobalt, Total	0.02742		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Copper, Total	0.6895		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Iron, Total	44.1		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Lead, Total	0.2680		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Magnesium, Total	17.0		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Manganese, Total	1.096		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:01	EPA 7470A	1,7470A	EA
Nickel, Total	0.06244		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Potassium, Total	5.47		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Selenium, Total	0.00361	J	mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Silver, Total	0.00151		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Sodium, Total	3.48		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Thallium, Total	0.00065		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Vanadium, Total	0.03412		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM
Zinc, Total	0.2807		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:21	EPA 3005A	1,6020A	AM



Not Specified

Project Name: Lab Number: CUBA LANDFILL L1709087

Project Number: 50191-01 **Report Date:** 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-05

Date Collected: 03/23/17 15:20 Client ID: 8354 JACKSON HILL ROAD Date Received: 03/24/17

Field Prep:

Sample Location: CUBA, NY

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Aluminum, Total	0.148		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Antimony, Total	0.00085	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00055		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Barium, Total	0.03712		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00074		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Calcium, Total	17.1		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Chromium, Total	0.00099	J	mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Copper, Total	0.00275		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Iron, Total	0.315		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Lead, Total	0.00702		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Magnesium, Total	4.74		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Manganese, Total	0.01520		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:03	EPA 7470A	1,7470A	EA
Nickel, Total	0.00056	J	mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Potassium, Total	1.71		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Sodium, Total	14.8		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM
Zinc, Total	0.05960		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:31	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Date Collected: 03/23/17 00:00

Date Received: 03/24/17

Lab Number:

Report Date:

Field Prep: Not Specified

Lab ID: L1709087-07
Client ID: FIELD DUP
Sample Location: CUBA, NY
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	sfield Lab										
Aluminum, Total	23.4		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Antimony, Total	0.00064	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00975		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Barium, Total	0.3089		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00113		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00026		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Calcium, Total	91.8		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Chromium, Total	0.03908		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Cobalt, Total	0.02839		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Copper, Total	0.03878		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Iron, Total	49.9		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Lead, Total	0.02905		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Magnesium, Total	48.6		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Manganese, Total	5.344		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:05	EPA 7470A	1,7470A	EA
Nickel, Total	0.05054		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Potassium, Total	9.98		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Selenium, Total	0.00340	J	mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Sodium, Total	23.8		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Thallium, Total	0.00018	J	mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Vanadium, Total	0.02840		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM
Zinc, Total	0.1269		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:35	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Lab ID: L1709087-08

Client ID: MW-12 Sample Location: CUBA, NY Matrix: Water

Date Collected: 03/23/17 14:00

Lab Number:

Report Date:

Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansf	ield Lab										
Aluminum, Total	24.0		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Antimony, Total	0.00051	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Arsenic, Total	0.01039		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Barium, Total	0.3457		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00121		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00026		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Calcium, Total	93.1		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Chromium, Total	0.03968		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Cobalt, Total	0.03138		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Copper, Total	0.04228		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Iron, Total	50.7		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Lead, Total	0.03172		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Magnesium, Total	46.3		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Manganese, Total	6.411		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:06	EPA 7470A	1,7470A	EA
Nickel, Total	0.05244		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Potassium, Total	9.93		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Selenium, Total	0.00360	J	mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Sodium, Total	21.9		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Thallium, Total	0.00018	J	mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Vanadium, Total	0.02954		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM
Zinc, Total	0.1411		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:38	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

03/31/17

L1709087

Lab ID: L1709087-09

Client ID: MW-7 Sample Location: CUBA, NY Matrix: Water

Date Collected:

Lab Number:

Report Date:

03/23/17 14:00

Date Received: 03/24/17

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Aluminum, Total	4.72		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Antimony, Total	0.00068	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00331		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Barium, Total	0.08804		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00037	J	mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00108		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Calcium, Total	50.2		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Chromium, Total	0.01355		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Cobalt, Total	0.00536		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Copper, Total	0.1148		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Iron, Total	10.2		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Lead, Total	0.02157		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Magnesium, Total	23.7		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Manganese, Total	0.3482		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:08	EPA 7470A	1,7470A	EA
Nickel, Total	0.01166		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Potassium, Total	2.94		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Sodium, Total	5.94		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Vanadium, Total	0.00689		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM
Zinc, Total	0.04947		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:41	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

L1709087

Lab Number: **Report Date:**

03/31/17

SAMPLE RESULTS

Lab ID: L1709087-10

Client ID: MW-8 Sample Location: CUBA, NY Matrix: Water

Date Collected: Date Received: 03/23/17 11:30

03/24/17

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Aluminum, Total	17.9		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00870		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Barium, Total	0.3112		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00176		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00040		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Calcium, Total	46.0		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Chromium, Total	0.02473		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Cobalt, Total	0.03138		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Copper, Total	0.2038		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Iron, Total	34.4		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Lead, Total	0.02811		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Magnesium, Total	20.1		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Manganese, Total	1.231		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:23	EPA 7470A	1,7470A	EA
Nickel, Total	0.04356		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Potassium, Total	4.52		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Selenium, Total	0.00545		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Sodium, Total	4.50		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Vanadium, Total	0.02461		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM
Zinc, Total	0.1362		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:45	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

CAMPLE DECLUTO

L1709087

03/31/17

SAMPLE RESULTS

Lab ID: L1709087-11

Client ID: MW-10 Sample Location: CUBA, NY

Matrix: Water

Date Collected: 03/23/17 12:40

Date Received: 03/24/17

Lab Number:

Report Date:

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Man	sfield Lab										
Aluminum, Total	1.50		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Antimony, Total	0.00056	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00270		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Barium, Total	0.05301		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00035		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Calcium, Total	112.		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Chromium, Total	0.00961		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Cobalt, Total	0.00144		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Copper, Total	0.00689		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Iron, Total	2.73		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Lead, Total	0.00205		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Magnesium, Total	17.2		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Manganese, Total	0.1221		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:24	EPA 7470A	1,7470A	EA
Nickel, Total	0.00350		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Potassium, Total	4.13		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Sodium, Total	17.9		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Vanadium, Total	0.00496	J	mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM
Zinc, Total	0.02048		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:48	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Date Collected: 03/23/17 13:00

Lab Number:

Report Date:

Lab ID: L1709087-12 Client ID: MW-10D Sample Location: CUBA, NY

Matrix: Water Date Received: 03/24/17 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	sfield Lab										
Aluminum, Total	1.90		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00194		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Barium, Total	0.08974		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00013	J	mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Calcium, Total	45.5		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Chromium, Total	0.00272		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Cobalt, Total	0.00322		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Copper, Total	0.00399		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Iron, Total	3.90		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Lead, Total	0.00149		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Magnesium, Total	16.7		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Manganese, Total	2.352		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:26	EPA 7470A	1,7470A	EA
Nickel, Total	0.00563		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Potassium, Total	2.43		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Sodium, Total	21.8		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Vanadium, Total	0.00266	J	mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM
Zinc, Total	0.01392		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:51	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

L1709087

Lab Number: **Report Date:**

03/31/17

SAMPLE RESULTS

L1709087-13

Date Collected:

03/23/17 11:50

Client ID: Sample Location:

Date Received: CUBA, NY

Field Prep:

03/24/17 Not Specified

Matrix:

Lab ID:

Water

MW-4

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Man	sfield Lab										
Aluminum, Total	0.0377		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Barium, Total	0.01272		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00013	J	mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Calcium, Total	31.0		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	АМ
Copper, Total	0.00095	J	mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Iron, Total	0.0673		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Magnesium, Total	7.17		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Manganese, Total	4.115		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:28	EPA 7470A	1,7470A	EA
Nickel, Total	0.00504		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Potassium, Total	2.25		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Sodium, Total	2.85		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM
Zinc, Total	0.00801	J	mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:55	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

L1709087

Lab Number: **Report Date:**

03/31/17

SAMPLE RESULTS

Lab ID: L1709087-14

Client ID: Sample Location: MW-11

Matrix:

CUBA, NY Water

Date Collected:

03/23/17 11:05

Date Received:

03/24/17

Field Prep:

Not Specified

Analytical

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Aluminum, Total	1.58		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00130		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Barium, Total	0.03231		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00027		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Calcium, Total	42.7		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Chromium, Total	0.00208		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Cobalt, Total	0.00159		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Copper, Total	0.00387		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Iron, Total	2.85		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Lead, Total	0.00188		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Magnesium, Total	9.66		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Manganese, Total	1.824		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:29	EPA 7470A	1,7470A	EA
Nickel, Total	0.00436		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Potassium, Total	2.11		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Sodium, Total	2.98		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Vanadium, Total	0.00245	J	mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM
Zinc, Total	0.01614		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 12:58	EPA 3005A	1,6020A	AM



03/31/17

Project Name: CUBA LANDFILL

Project Number: 50191-01

SAMPLE RESULTS

Date Collected: 03/23/17 10:50

Lab Number:

Report Date:

Lab ID: L1709087-15

Client ID: MW-13 Sample Location: CUBA, NY

Matrix: Water Date Received: 03/24/17

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mar	nsfield Lab										
Aluminum, Total	98.1		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Arsenic, Total	0.01793		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Barium, Total	2.132		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Beryllium, Total	0.00520		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Cadmium, Total	0.00075		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Calcium, Total	94.4		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Chromium, Total	0.1697		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Cobalt, Total	0.1129		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Copper, Total	0.1701		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Iron, Total	187.		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Lead, Total	0.09483		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Magnesium, Total	33.9		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Manganese, Total	12.34		mg/l	0.01000	0.00440	10	03/28/17 10:58	03/29/17 13:35	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:31	EPA 7470A	1,7470A	EA
Nickel, Total	0.2103		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Potassium, Total	14.7		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Selenium, Total	0.0212		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Silver, Total	0.00018	J	mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Sodium, Total	6.12		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Thallium, Total	0.00057		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Vanadium, Total	0.06069		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
Zinc, Total	0.4977		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 13:02	EPA 3005A	1,6020A	AM
			-								



Project Name: CUBA LANDFILL

Project Number: 50191-01 **Report Date:** 03/31/17

SAMPLE RESULTS

Lab ID: L1709087-16

Client ID: SW-3 Sample Location: CUBA, NY Matrix: Water

Date Collected: 03/23/17 14:35

Date Received: 03/24/17 Field Prep: Not Specified

Lab Number:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mans	field Lab										
Aluminum, Total	0.361		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Antimony, Total	0.00055	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00088		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Barium, Total	0.00803		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Calcium, Total	5.51		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Chromium, Total	0.00059	J	mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Cobalt, Total	0.00030	J	mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Copper, Total	0.00172		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Iron, Total	0.476		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Lead, Total	0.00054	J	mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Magnesium, Total	1.06		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Manganese, Total	0.00985		mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	03/27/17 12:01	03/27/17 21:33	EPA 7470A	1,7470A	EA
Nickel, Total	0.00090	J	mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Potassium, Total	1.36		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Sodium, Total	3.50		mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM
Zinc, Total	0.00414	J	mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 13:28	EPA 3005A	1,6020A	AM



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number:

L1709087

Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals - Mansfield	Lab for sample(s):	01-05,07-	·16 Bat	ch: WG	988523-1				
Mercury, Total	ND	mg/l	0.00020	0.00006	5 1	03/27/17 12:01	03/27/17 20:42	1,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Q	ualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals - Mansfield	Lab for sai	mple(s):	01-05,07	-16 Bato	h: WG	988823-1				
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Antimony, Total	0.00070	J	mg/l	0.00400	0.00042	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Arsenic, Total	0.00018	J	mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Barium, Total	ND		mg/l	0.00050	0.00017	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Calcium, Total	ND		mg/l	0.100	0.0394	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Manganese, Total	0.00060	J	mg/l	0.00100	0.00044	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Potassium, Total	ND		mg/l	0.100	0.0309	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Sodium, Total	0.0412	J	mg/l	0.100	0.0293	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	03/28/17 10:58	03/29/17 11:51	1,6020A	AM



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3005A



Project Name: CUBA LANDFILL

Lab Number:

L1709087

Project Number: 50191-01

Report Date:

03/31/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Total Metals - Mansfield Lab Associated sample	e(s): 01-05,07-16	Batch: \	WG988523-2						
Mercury, Total	106		-		80-120	-			



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
otal Metals - Mansfield Lab Associated sample	e(s): 01-05,07-16	Batch: WG988823-2			
Aluminum, Total	101	-	80-120	-	
Antimony, Total	92	-	80-120	-	
Arsenic, Total	108	-	80-120	-	
Barium, Total	100	-	80-120	-	
Beryllium, Total	99	-	80-120	-	
Cadmium, Total	113	-	80-120	-	
Calcium, Total	110	-	80-120	-	
Chromium, Total	101	-	80-120	-	
Cobalt, Total	101	-	80-120	-	
Copper, Total	103	-	80-120	-	
Iron, Total	104	-	80-120	-	
Lead, Total	105	-	80-120	-	
Magnesium, Total	103	-	80-120	-	
Manganese, Total	101	-	80-120	-	
Nickel, Total	101	-	80-120	-	
Potassium, Total	102	-	80-120	-	
Selenium, Total	113	-	80-120	-	
Silver, Total	100	-	80-120	-	
Sodium, Total	101	-	80-120	-	
Thallium, Total	103	-	80-120	-	
Vanadium, Total	102	-	80-120	-	

Project Name: CUBA LANDFILL

Lab Number:

L1709087 03/31/17

Project Number: 50191-01

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sam	ple(s): 01-05,07-16	Batch: WG988823-2			
Zinc, Total	110	-	80-120	-	



Matrix Spike Analysis Batch Quality Control

Project Name: CUBA LANDFILL

Lab Number:

L1709087

Project Number: 50191-01

Report Date:

03/31/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MS Qual Fou	11100	Qual	Recovery Limits	RPD Qual	RPD Limits
Total Metals - Mansfield Lab	Associated sam	nple(s): 01-0)5,07-16 C	QC Batch ID: W	/G988523-3	QC Sample: L170	9087-0	1 Client ID	: SW-4	
Mercury, Total	ND	0.005	0.00530	106				75-125	-	20



Matrix Spike Analysis Batch Quality Control

Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

arameter	Native Sample	MS Added	MS Found	MS %Recovery		/ISD ound	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield L	ab Associated san	nple(s): 01-0	05,07-16	QC Batch ID: W	VG988823-	3 QC	Sample: L1709087-01	1 Client ID	: SW-4	
Aluminum, Total	1.83	2	2.73	45	Q	-	-	75-125	-	20
Antimony, Total	0.00063J	0.5	0.5046	101		-	-	75-125	-	20
Arsenic, Total	0.00163	0.12	0.1301	107		-	-	75-125	-	20
Barium, Total	0.01783	2	1.999	99		-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.04979	100		-	-	75-125	-	20
Cadmium, Total	0.00029	0.051	0.05893	115		-	-	75-125	-	20
Calcium, Total	2.72	10	13.9	112		-	-	75-125	-	20
Chromium, Total	0.00256	0.2	0.2013	99		-	-	75-125	-	20
Cobalt, Total	0.00172	0.5	0.4954	99		-	-	75-125	-	20
Copper, Total	0.00340	0.25	0.2607	103		-	-	75-125	-	20
Iron, Total	2.97	1	1.76	0	Q	-	-	75-125	-	20
Lead, Total	0.00402	0.51	0.5443	106		-	-	75-125	-	20
Magnesium, Total	0.916	10	10.4	95		-	-	75-125	-	20
Manganese, Total	0.1145	0.5	0.5948	96		-	-	75-125	-	20
Nickel, Total	0.00395	0.5	0.5086	101		-	-	75-125	-	20
Potassium, Total	1.44	10	11.4	100		-	-	75-125	-	20
Selenium, Total	ND	0.12	0.140	117		-	-	75-125	-	20
Silver, Total	ND	0.05	0.05010	100		-	-	75-125	-	20
Sodium, Total	5.04	10	14.7	97		-	-	75-125	-	20
Thallium, Total	ND	0.12	0.1251	104		-	-	75-125	-	20
Vanadium, Total	0.00243J	0.5	0.5075	102		-	-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: CUBA LANDFILL

Project Number: 50191-01 Lab Number:

L1709087

Report Date:

03/31/17

<u>Parameter</u>		Native Sample	MS Added	MS Found	MS %Recovery	MSI Four	11100	Recovery Limits	RPD	RPD Limits
Total Metals ·	- Mansfield Lab	Associated sam	nple(s): 01-	05,07-16	QC Batch ID: V	VG988823-3	QC Sample: L170908	7-01 Client ID	: SW-4	
Zinc, Total		0.01734	0.5	0.5499	106			75-125	-	20



Lab Number:

Lab Duplicate Analysis
Batch Quality Control

Project Name: CUBA LANDFILL

03/31/17 Project Number: 50191-01 Report Date:

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01	-05,07-16 QC Batch ID:	WG988523-4 QC San	nple: L170908	7-01 Clien	nt ID: SW-4
Mercury, Total	ND	ND	mg/l	NC	20



Lab Duplicate Analysis Batch Quality Control

Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087

arameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
otal Metals - Mansfield Lab Associated sample(s): 01-05,07-16 QC Batch I	D: WG988823-4 QC S	ample: L17090	87-01 Clier	nt ID: SW-4	
Aluminum, Total	1.83	2.32	mg/l	24	Q	20
Antimony, Total	0.00063J	0.00113J	mg/l	NC		20
Arsenic, Total	0.00163	0.00182	mg/l	11		20
Barium, Total	0.01783	0.01868	mg/l	5		20
Beryllium, Total	ND	0.00012J	mg/l	NC		20
Cadmium, Total	0.00029	0.00026	mg/l	9		20
Calcium, Total	2.72	2.68	mg/l	1		20
Chromium, Total	0.00256	0.00322	mg/l	23	Q	20
Cobalt, Total	0.00172	0.00201	mg/l	16		20
Copper, Total	0.00340	0.00354	mg/l	4		20
Iron, Total	2.97	3.76	mg/l	23	Q	20
Lead, Total	0.00402	0.00412	mg/l	3		20
Magnesium, Total	0.916	0.968	mg/l	6		20
Manganese, Total	0.1145	0.1193	mg/l	4		20
Nickel, Total	0.00395	0.00462	mg/l	16		20
Potassium, Total	1.44	1.54	mg/l	7		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Sodium, Total	5.04	5.01	mg/l	1		20



Lab Duplicate Analysis Batch Quality Control

Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number:

L1709087

Report Date:

03/31/17

Parameter	Nativ	e Sample	Duplicate Samp	ole Units	RPD	RPD Limits
Total Metals - Mansfield Lab	Associated sample(s): 01-05,07-1	6 QC Batch ID:	WG988823-4 Q	C Sample: L1709087	-01 Client I	D: SW-4
Thallium, Total		ND	ND	mg/l	NC	20
Vanadium, Total	0.	00243J	0.00317J	mg/l	NC	20
Zinc, Total	0	.01734	0.01980	mg/l	13	20



Project Name: CUBA LANDFILL

Lab Number: L1709087 **Report Date:** 03/31/17 Project Number: 50191-01

Sample Receipt and Container Information

YES Were project specific reporting limits specified?

Cooler Information Custody Seal

Cooler

Α Absent

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	•	Pres	Seal	Analysis(*)
L1709087-01A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-01B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-01C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-01D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BA-6020T(180),BE-TI(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),AS-TI(180),BA-TI(180),CA-6020T(180),CR-6020T(180),K-6020T(180),K-6020T(180),AG-TI(180),CU-6020T(180),AG-TI(180),CR-TI(180),NI-TI(180),CR-TI(180),NI-TI(180),BE-6020T(180),TL-TI(180),BE-6020T(180),CU-TI(180),SB-TI(180),SE-TI(180),SE-TI(180),SE-TI(180),SE-TI(180),CO-TI(180),SE-G020T(180),V-6020T(180),V-11(180),AG-6020T(180),V-11(180),AG-6020T(180),V-11(180),AG-6020T(180),FE-TI(180),HG-T(28),MG-6020T(180),CD-6020T(180),CD-11(180),CD-11(180),CD-11(180),CD-11(180),CD-11(180),CO-6020T(180),CO-6020
L1709087-02A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-02B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-02C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-02D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MG-TI(180),CD-TI(180),K-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-03A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-03B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-03C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087 **Report Date:** 03/31/17

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1709087-03D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-04A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-04B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-04C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-04D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FC-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-05A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-05B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-05C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-05D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),NI-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),SE-TI(180),CO-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-06A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-06B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-07A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-07B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-07C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087 **Report Date**: 03/31/17

Container Info			Temp				
Container ID	Container Type	Cooler	рΗ	deg C	Pres	Seal	Analysis(*)
L1709087-07D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),CO-TI(180),CO-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),K-TI(180),CD-TI(180),K-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-08A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-08B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-08C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-08D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),CO-TI(180),CO-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),K-TI(180),CD-TI(180),K-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-09A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-09B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-09C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-09D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),CO-TI(180),CO-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),K-TI(180),NA-TI(180)
L1709087-10A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-10B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-10C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-10D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),CO-TI(180),CO-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180),CA-TI(180),NA-TI(180)
L1709087-11A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)



Serial_No:03311716:56

Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087 Report Date: 03/31/17

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1709087-11B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-11C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-11D	Plastic 250ml HNO3 preserved	А	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180),K-TI(180),NA-TI(180)
L1709087-12A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-12B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-12C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-12D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),K-TI(180),NA-TI(180)
L1709087-13A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-13B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-13C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-13D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),CO-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-14A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-14B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-14C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)



Project Name: CUBA LANDFILL

Project Number: 50191-01

Lab Number: L1709087 **Report Date**: 03/31/17

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1709087-14D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),CO-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-15A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-15B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-15C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-15D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-16A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-16B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-16C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	NYTCL-8260-R2(14)
L1709087-16D	Plastic 250ml HNO3 preserved	A	<2	3.9	Y	Absent	BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1709087-17A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	HOLD-8260(14)
L1709087-17B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	HOLD-8260(14)
L1709087-17C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	HOLD-8260(14)
L1709087-17D	Plastic 250ml HNO3 preserved	Α	<2	3.9	Υ	Absent	HOLD-METAL(180)
L1709087-18A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	HOLD-8260(14)
L1709087-18B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	HOLD-8260(14)



Project Name: CUBA LANDFILL Lab Number: L1709087

Project Number: 50191-01 Report Date: 03/31/17

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated

values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis

of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of

analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of

analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any

adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for

which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's

reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL

includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less

than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the

values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the

associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound

list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a "Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers



Project Name:CUBA LANDFILLLab Number:L1709087Project Number:50191-01Report Date:03/31/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations
 of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- RE Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- 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. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Serial_No:03311716:56

Project Name:CUBA LANDFILLLab Number:L1709087Project Number:50191-01Report Date:03/31/17

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Serial_No:03311716:56

Alpha Analytical, Inc.
Facility: Company-wide

Department: Quality Assurance

Title: Certificate/Approval Program Summary

ID No.:**17873** Revision 10

Published Date: 1/16/2017 11:00:05 AM

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; 4-Ethyltoluene, Azobe

Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 300: DW: Bromide

EPA 6860: NPW and SCM: Perchlorate

EPA 9010: NPW and SCM: Amenable Cyanide Distillation

EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

SM 2540D: TSS EPA 3005A NPW

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F, EPA 353.2: Nitrate-N, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E.

Mansfield Facility:

Drinking Water

EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. EPA 245.1 Hg.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Document Type: Form

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	MW-10D		_	13:00	GW	1.67.		X		_	-			4
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SITE-WIDE INSPECTION FORM

Cuba Landfill Site Town of Cuba, Allegany County

NAME OF INSPECTOR: <u>Laura Gregor</u>
COMPANY OF INSPECTOR: <u>Lu Engineers</u>
DATE OF INSPECTION: 03/23/2017
CURRENT USE OF SITE: Closed Landfill
EVIDENCE OF VANDALISM (wells, vents, protective cover damage): None
EVIDENCE OF COVER SYSTEM INTRUSION (ruts, burrows, excavations): None
EVIDENCE OF PENETRATIONS (poles, posts, stakes): None
EVIDENCE OF HUMAN ENCROACHMENT (trash, fire pits, tire/footprints): Tire tracks on hill adjacent to the access road (Refer to photographs)
GENERAL SITE CONDITION (gates, access road, culverts): Good, gates are secure/locked; lumber on both sides of the entrance. Access road is in good condition and cap generally appears to be in good condition with the exception of a tire track and exposed erosion control material.

Erosion control material exposed on hill directly adjacent to the access road (Refer t photographs) EVIDENCE OF STRESSED VEGETATION OR BARE SPOTS: _None_
EVIDENCE OF STRESSED VEGETATION OR BARE SPOTS: _None_
EVIDENCE OF DAMAGE TO WELLS/VENTS:None
EVIDENCE OF COVER SYSTEM SUBSIDENCE NEAR WELLS/VENTS: MW-1S is heaved upward approximately 1.0 feet (Refer to photographs)
EVIDENCE OF WILDLIFE INTRUSION (nests, burrows, wasp nests): None
EVIDENCE OF SPILLED LIQUIDS (well tampering/vent blowout): None
GAS VENTS: Unusual conditions- belching, whistling, excessive gas production: None
MONITORING WELLS: Well covers in place and secure:Yes
EVIDENCE OF DRAINAGE ISSUES (i.e., blockage due to sedimentation, ponding) None

EVIDENCE OF SWALE OVERFLOW (i.e., stormwater pathway strays from swales):
<u>None</u>
EVIDENCE OF WILLOW TREE MORTALITY:
It appears that approximately 30% of the willow trees (eastern-most) are unhealthy
(Refer to photographs).
(Telefor to priotographs)v_

EVIDENCE OF PHYTOREMEDIATION FAILURE (i.e., excessive leachate on access road so
of willow trees):
Some standing water along the access road adjacent to the willow trees (Refer to
photographs)

LANDFILL/GAS VENT MONITORING DATA

Gas Vent	Explosivity	PID Reading (PID)
1	Within acceptable range	0.0
2	Within acceptable range	0.0
3	Within acceptable range	0.0
4	Within acceptable range	0.0
5	Within acceptable range	0.0
6	Within acceptable range	0.0
7	Within acceptable range	0.0
8	Within acceptable range	0.0
9	Within acceptable range	0.0
10	Within acceptable range	0.0
11	Within acceptable range	0.0
12	Within acceptable range	0.0
13	Within acceptable range	0.0
14	Within acceptable range	0.0

No elevated PID or Explosivity readings found.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation 625 Broadway, 11th Floor, Albany, NY 12233-7020 P: (518)402-9543 | F: (518)402-9547 www.dec.ny.gov

12/12/2017

Michele Miller Mayor Village of Cuba 17 East Main Street Cuba, NY 14727

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal

Site Name: Cuba Municipal Waste Disposal

Site No.: 902012

Site Address: Jackson Hill Road

Cuba, NY 14727

Dear Michele Miller:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **February 24, 2018**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.



All site-related documents and data, including the PRR, are to be submitted in electronic format to the Department of Environmental Conservation. The Department will not approve the PRR unless all documents and data generated in support of that report have been submitted in accordance with the electronic submissions protocol. In addition, the certification forms are required to be submitted in both paper and electronic formats.

Information on the format of the data submissions can be found at: http://www.dec.ny.gov/regulations/2586.html

The signed certification forms should be sent to David Szymanski, Project Manager, at the following address:

New York State Department of Environmental Conservation 270 Michigan Ave Buffalo, NY 14203-2915

Phone number: 716-851-7220. E-mail: david.szymanski@dec.ny.gov

The contact information above is also provided so that you may notify the project manager about upcoming inspections, or for any other questions or concerns that may arise in regard to the site.

Enclosures

PRR General Guidance Certification Form Instructions Certification Forms

ec: w/ enclosures

David Szymanski, Project Manager Chad Staniszewski, Hazardous Waste Remediation Engineer, Region 9

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

- 1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.
- 2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.
- 3. If you <u>cannot</u> certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.
- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.



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



Sit	Site Details te No. 902012	Box 1	
Sit	te Name Cuba Municipal Waste Disposal		
Cit	re Address: Jackson Hill Road Zip Code: 14727 ry/Town: Cuba bunty: Allegany re Acreage: 38.9		
Re	eporting Period: January 25, 2017 to January 25, 2018		
		VEC	NO
		YES	NO
1.	Is the information above correct?	X	
	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?		X
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?		X
	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?		
E.	and the second of the second o		
		Box 2	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Closed Landfill	X	
7.	Are all ICs/ECs in place and functioning as designed?	×	
	IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below a DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.	nd	
Α (Corrective Measures Work Plan must be submitted along with this form to address th	ese iss	ues.
Sig	nature of Owner, Remedial Party or Designated Representative Date	2 - 12	

SITE NO. 902012

Description of Institutional Controls

Parcel

Owner

155.00-1-6.15

Village of Cuba

Institutional Control

Site Management Plan

Ground Water Use Restriction Soil Management Plan Landuse Restriction Surface Water Use Restriction Monitoring Plan O&M Plan

A Site Management Plan (SMP) was approved in August 2011 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 Declarartion 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

Site Management Plan

Soil Management Plan

Monitoring Plan
O&M Plan
Ground Water Use Restriction
Landuse Restriction
Surface Water Use Restriction

A Site Management Plan (SMP) was approved in August 2011 to manage remaining contamination at the Site in perpetuity or until extinguishment of the Environmental Notice in accordance with ECL Article 71, Title 36.

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- · 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:

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- · 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.

Box 4

Description of Engineering Controls

<u>Parcel</u>

Engineering Control

155.00-1-6.15

Cover System
Subsurface Barriers Fencing/Access Control

155.00-1-7

Subsurface Barriers

Cover System Fencing/Access Control

Box 5	
-------	--

	Portedia Pariana Parant (PPP) Continue
	Periodic Review Report (PRR) Certification Statements
	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 certification;
	 b) to the best of my knowledge and belief, the work and conclusions described in this certificat are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.
	YES NO
	×
	If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutio or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:
	(a) the Institutional Control and/or 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 a 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
	X \square
	IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.
,	Corrective Measures Work Plan must be submitted along with this form to address these issues.
	ignature 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.

am certifying as Designs ted R programment of Prince (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

IC/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.

at 329 EAST AVENUE GULTE 200 ROCHESTER print name print business address NU am certifying as a Professional Engineer for the OWNED (Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification