Proactive by Design

SUPPLEMENTAL SITE INVESTIGATION REPORT

FORMER TRUK-AWAY LANDFILL

Warwick Industrial Drive
Warwick, Rhode Island

RIDEM File No. SR-35-1576

March 2021
File No. 34648.01

PREPARED FOR:
RI Department of Environmental Management
Providence, Rhode Island

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March 31, 2021
Job No. 34648.01

Mr. Christopher Walusiak
Rhode Island Department of Environmental Management
Office of Customer and Technical Assistance
235 Promenade Street, 3rd Floor
Providence, Rhode Island 02908

Re: *Supplemental Site Investigation Report*
Former Truk-Away Landfill
Warwick Industrial Drive
Warwick, Rhode Island
RIDEM File No. SR-35-1576

Dear Mr. Walusiak:

On behalf of the Truk-Away Landfill Joint Defense Group (Group), GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this *Supplemental Site Investigation Report* (SSIR) for the Former Truk-Away Landfill (Site). Authorization to proceed on this project was granted in accordance with GZA's signed proposal dated May 18, 2020. This letter describes the underground injection control (UIC) investigation, supplemental landfill gas survey and supplemental waste delineation recommended as part of Alternative #3 in GZA's *Site Investigation Report* (SIR), submitted to the Rhode Island Department of Environmental Management (RIDEM) on July 1, 2020. This report also includes responses to the RIDEM's December 15, 2020 comments on the July 2020 SIR. This letter report is subject to the limitations provided in **Appendix A.**

BACKGROUND

As described in Remedial Alternative #3 of the July 2020 SIR, GZA completed a Limited Design Phase Investigation (LDI) to address the following data gaps:

- Gas migration on the western side of the landfill (west of SG-3 and SG-4), where methane levels above 100% of the lower explosive limit (LEL) were observed; and
- Evaluation of a cesspool located by the ground penetrating radar (GPR) survey/test pit program on the western portion of the landfill, in the vicinity of the former onsite building. As part of this work, we also resampled the light non-aqueous phase liquid (LNAPL) in MW-3 and MW-EA-01 for polychlorinated biphenyls (PCBS) for comparison to the Toxic Substances Control Act's (TSCA's) 50 ppm limit.

In addition, we conducted a supplement test pit program to evaluate the extent of waste in the wetland northeast of the landfill.

SCOPE OF WORK

<u>Supplemental Landfill Gas Survey</u>

On December 16, 2020 GZA observed the completion of six additional landfill gas probes (SG-14 to SG-19) by Hoffman Environmental Services (Hoffman) of North Kingstown, Rhode Island. The

soil gas probes were installed west of existing probes SG-3 and SG-4, to evaluate the extent of landfill gas migration in this area. The soil gas probes consisted of five-foot long, 0.5-inch inner diameter steel pipes with holes drilled into the bottom 1 foot of pipe, and installed at a depth of approximately 4.5 feet bgs. See the soil gas logs provided in **Appendix B** for installation specifications.

Two additional rounds of soil gas monitoring (December 18, 2020 and January 13, 2021) were conducted for methane (as a percentage of the lower explosive limit-LEL), oxygen, carbon dioxide, hydrogen sulfide and carbon monoxide from the newly installed and previously installed probes. The results of this monitoring are summarized in **Table 1**. No methane was detected in the any of newly installed probes, indicating that landfill gas is not migrating offsite at these locations.

The screen section for two of the previously installed probes were completely submerged in water and the screen section for four of the other previously installed probes were either frozen or obstructed, as these probes produced no air flow when attached to the monitoring equipment. No readings were collected from these probes at this time. Methane was detected in two previously installed probes, SG-1 and SG-3. In SG-1, methane was detected at a level above 100% of the LEL.

Location	12/18/2020		01/13/2021	
	% Methane	% LEL	% Methane	% LEL
SG-1	29.5	590	27.3	546
SG-3	0.1	2.0	0.0	0.0

These two probes are located along the western edge of waste boundary. SG-1 is located approximately 125 feet from the property boundary. As such, the elevated methane readings at SG-1 are unlikely to pose a migration risk to offsite properties. During the prior two monitoring rounds conducted as part of the SIR, methane was not detected in SG-1. We recommend that one additional soil gas probe be installed close to the property boundary west of SG-1.

UIC Investigation

On December 4, 2020, GZA observed Hoffman excavate the UIC using a TB225 Compact Takeuchi Excavator. GZA attempted to collect a water sample from the UIC; however, no standing water was present. On December 6, 2020, GZA observed the completion of four borings (designated UIC, GZ-1, MW-113 and MW-114) by Hoffman using a direct-push Geoprobe® rig. Borings were advanced to depths of between 10 and 22 ft bgs.

One boring was completed through the center of the UIC, and the other three borings were completed adjacent to the UIC. The boring locations are shown on **Figure 1**. Two locations (MW-113 and MW-114) were completed as groundwater monitoring wells on the assumed downgradient side of the UIC, consisting of a 0.010-inch factory slotted nominal 2-inch inside diameter, flush joint schedule 40 PVC well screen with solid PVC riser. The annular space between the well screen and the borehole was filled with a filter sand pack. The sand pack was carried up to a depth of 2-feet above the slotted section of the well screen where a 2-foot thick bentonite seal was placed. Drill cuttings were then placed above the bentonite seal to ground surface.

A GZA field engineer was present during the exploration activities to coordinate and document the program, classify soils, prepare boring logs and field-screen soil samples. Samples were characterized in the field and boring logs maintained for each borehole. Copies of boring logs are provided in **Appendix B**.

Soil samples were collected continuously by pneumatically advancing a 5-foot, 2-inch ID steel split-spoon equipped with a dedicated acetate lining. Samples were recovered from a depth of 0 to 5, 5 to 10, 10 to 15 and 15 to 20 feet bgs. A new acetate liner was employed for each sample. Soil samples recovered for screening were transferred to clean, unpreserved 8-ounce glass jars using a stainless-steel trowel.

Soil samples recovered during the boring program were observed to generally consist of fine to coarse sand with varying degrees of gravel and silt in all borings. Wood and/or brick were observed in GZ-1 and MW-114 and blue staining was observed in MW-113. Refer to the boring logs in **Appendix B** for additional subsurface information.

Soil samples recovered during drilling activities were field-screened for total volatile organic compounds (TVOCs) using an Ion Science Tiger Photoionization Detector (PID) equipped with a 10.6 eV lamp and calibrated with a mixture of isobutylene in air. TVOC screening results are provided on the boring logs attached as **Appendix B**. All TVOC readings were low, i.e. below 1 ppm.

Soil samples were collected and placed into laboratory provided bottles, preserved as appropriate, packed in an ice chest and transported under chain-of-custody protocol to ESS Laboratory in Cranston, Rhode Island. A total of four samples (MW-113/S-1A, MW-114/S-1B, UIC/S-1B and UIC/S-2) and one trip blank were analyzed for one or more of the following parameters:

- VOCs via EPA Method 8260;
- Semi-VOCs (SVOCs) via EPA Method 8270;
- Total petroleum hydrocarbons (TPH) via EPA Method 8100M;
- Pesticides via EPA Method 8081B;
- PCBs via EPA Method 8082A;
- 15 Solid Waste Metals via EPA Method 6010C;
- Mercury via EPA Method 7471B; and
- Cyanide via EPA Method 9014.

Sample UIC/S-1B was taken from 3-5 feet bgs from directly below the UIC, sample UIC/S-2 was taken from 5-10 feet bgs, immediately above the groundwater table, sample MW-113/S-1A was taken from 0-3 feet bgs where blue staining was observed and sample MW-114/S-1B was taken from 3-5 feet bgs from below the bottom of the UIC.

Groundwater Sampling

On December 16, 2020, groundwater samples were collected from the two newly installed wells (MW-113 and MW-114). Groundwater samples were collected in general accordance with EPA's September 19, 2017 *Low Stress (low flow) Purging and Sampling Procedure* (low flow SOP). As part of that sampling methodology, well stabilization was evaluated through the measurement of specific water quality parameters recorded during the purging process. A variable speed peristaltic pump was utilized to control the rate of purging and limit the drawdown caused by this operation. To avoid cross contamination, dedicated 3/8-inch-outer-diameter (OD) polyethylene tubing, installed in each of the existing wells, was utilized as the intake and discharge tubing for the pumps. Pharmaceutical grade tubing was employed as the pump head tubing and connected to the intake and discharge tubing by clamps sufficient to prevent the introduction of air into the sample.

Prior to sampling, each well was gauged for light and dense non-aqueous phase liquids (LNAPL and DNAPL); no LNAPL or DNAPL was observed in either of the new wells. During the sampling, field readings were recorded for pH, temperature, specific conductance, dissolved oxygen, oxygen reduction potential (ORP) and turbidity using a YSI Dss Pro Series multi-meter with a flow-through cell. Field equipment used to perform the testing was calibrated according to the manufacturer's instructions before sampling. Field readings are presented in the low flow sampling logs, attached as **Appendix D** and are summarized on **Table 2**. Specific conductance was elevated and ORP was electronegative, which is consistent with a landfill environment.

Two groundwater samples were analyzed for the following parameters:

- VOCs via EPA Method 8260;
- SVOCs via EPA Method 8270;
- TPH via EPA Method 8100;
- Pesticides via EPA Method 8081;
- PCBs via EPA Method 8082;

- 15 Solid Waste Metals via EPA Method 6010; and
- Mercury via EPA Method 7471.

LNAPL Sampling

On December 16, 2020 LNAPL samples were collected from monitoring wells MW-3 and MW-EA-01, where LNAPL has historically been observed. Prior to sampling, each well was gauged for LNAPL. An approximately 1.15-foot thick layer of LNAPL was present in MW-3 and an approximately 0.70-foot thick layer of LNAPL was present in MW-EA-01. The samples were collected in non-preserved 40-mL glass vials with septa caps, packed in an ice filled cooler, and transported under chain-of-custody protocol to ESS Laboratory to be analyzed for PCBs via EPA Method 8082.

Exploration Location Survey and Groundwater Elevation Monitoring

On December 18, 2020 the locations of the six newly installed soil gas probes, four borings, and a wellhead elevation survey for the two new wells were surveyed by GZA using a Leica Zeno 20 (L1/L2) Collector with an AS-10 antenna using real-time kinematic (RTK) correction with an accuracy of 1.0 cm horizontal and 2.0 cm vertical.

Depth to static groundwater on a Site-wide basis ranged from approximately 3 to 23 feet bgs, based on readings collected in January and December, 2020, and groundwater elevations were found to range from 15 to 29 feet in reference to the North American Vertical Datum of 1988 (NAVD 88) based on these readings. Groundwater elevation measurements are summarized in **Table 3** and are shown on **Figure 1**. Based on the groundwater elevations, groundwater flow is inferred to flow radially out from the landfill mound to the adjacent wetlands.

We note that localized groundwater flow patterns may vary significantly from those shown due to heterogeneous subsurface conditions, the presence of underground utilities, river elevation changes, and variations in rainfall recharge.

LABORATORY RESULTS

Soil, groundwater and LNAPL sampling results are shown in **Tables 4, 5 and 6**, respectively. Laboratory certificates of analysis are provided in **Appendix E** and the results are summarized below.

Soil Analytical Results

A total of four soil samples and one trip blank were collected and submitted for analytical testing. Analytical results are shown in **Table 4**. No SVOCs or pesticides were detected above the method reporting limit (MRL) in any of the samples. Two VOCs (carbon disulfide and naphthalene) were detected in three soil samples above the MRL and were also detected in the trip blank indicating that they are not likely sourced from the landfill soils. TPH was detected in two samples above the MRL, but below RIDEM's Industrial and Commercial Direct Exposure Criteria (I/C-DEC), Residential DEC (RDEC) and GB Leachability Criteria. Various metals were detected above the MRL in all four samples, but were well below RIDEM's DEC (RIDEM has not established GB Leachability Criteria for metals). Two PCBs and cyanide were detected in MW-113 above the MRL but below RIDEM's RDEC.

Groundwater Analytical Results

A total of two groundwater samples and one trip blank were collected and submitted for analytical testing. Analytical results are shown in **Table 5**. Note that while groundwater at the Site and the surrounding area are classified as a GB resource, exceedences of the GA Groundwater Objective are also discussed below for comparison purposes only.

No VOCs or PCBs were detected above the MRL in either sample or the trip blank. One SVOC, bis(2-ethylhexyl)phthalate, was detected in MW-114 at a concentration equal to the GA Groundwater Objective (i.e., 0.006 mg/L). All other SVOCs were below the MRL. TPH was detected in both samples at concentrations ranging from 0.2 to 0.44 mg/L; there are no applicable GA or GB

Groundwater Objectives for TPH. Arsenic was detected in MW-113 above the GA Groundwater Objective and in MW-114 above the MRL, but below the GA Groundwater Objective; all other metals were below the MRL. One pesticide, gamma-Chlordane, was detected above the MRL in MW-114; all other pesticides were non-detect. No GB Groundwater Objectives have been established for SVOCs or metals.

LNAPL Analytical Results

Two LNAPL samples were collected and submitted for analytical testing. Analytical results are shown in **Table 6**. Two PCBs (Aroclor 1242 and Aroclor 1260) were detected in MW-EA-01 both at concentrations above the TSCA Compliance Monitoring Standard for PCBs in liquid of 50 ppm. PCBs were not detected in the LNAPL sample from MW-3.

Supplemental Waste Delineation

Between October 5 and 8, 2020, GZA observed the completion of 11 test pits (TP-101, TP-102, TP-102R, and TP-103 to TP-110) by Hoffman using a Caterpillar model 316 excavator with an approximate reach of 20 feet. See the *Exploration Location Plan* provided as **Figure 1** for approximate test pit locations.

The test pits were conducted in the wetlands north/northeast of the landfill to further refine the waste extent/volume estimates in these areas. Individual test pits were excavated in a trench configuration ranging from 10 to 50 feet long and between 1 and 6 feet deep. Trenching started at the visible landfill toe of slope and extended laterally and vertically outward into the wetland as practical based on the excavator's reach and ground conditions (i.e., ground stability and water infiltration into the trenches).

A GZA field engineer was present during the exploration activities to coordinate and document the program, record the thickness of cover soil, classify soils, prepare test pit logs, field-screen soil samples, photograph each location and field survey the edge of buried waste. Samples were characterized in the field and test pit logs maintained for each test pit. Copies of the test pit logs are provided in **Appendix B**.

Photographs of each test pit are provided in **Appendix C**. Waste was encountered in each test pit, except TP-102, which was excavated approximately 150 feet from the landfill toe of slope into the wetland area. Waste was thickest at the toe of slope of the landfill and generally consisted of plastic/glass bottles, wood and plastic sheeting/packaging. The waste thickness at the toe of slope ranged between 2 feet and 5 feet; waste thickness lessened in each test pit as it was advanced into the wetland. Cover soil thicknesses varied between 1 to 2 feet. The edge of buried waste was encountered in each test pit approximately 5 to 10 feet from the landfill toe of slope. A thin (generally less than 1-foot thick) layer of wind-blown debris (mainly plastic, especially plastic bags) was observed beyond the edge of buried waste. This is a common observation around many older landfills.

The apparent edge of waste was observed in each test pit where solid waste was encountered, except TP-108. The apparent edge of waste was surveyed by GZA and is shown on **Figure 1**. TP-108 was terminated due to unstable ground at the eastern/outboard edge of the test pit. Solid waste was tapering upward when the test pit was terminated. Based on observations from other test pits, the edge of waste was estimated at the edge of the phragmites vegetation.

Based on our observations and the previous waste delineation, waste appears to cover approximately 17,000 square feet of the wetlands around the landfill edge (both north and south of the landfill). Assuming an average waste thickness of four feet, based on the above described test pits, a waste volume of approximately 68,000 cubic feet (2,500 cubic yards) is present in wetlands around the landfill. Note, this does not include the thin layer of apparently wind deposited debris that we observed the demarcated edge of buried waste.

SUMMARY

The findings of this SSIR are summarized below:

- Landfill gas containing levels of methane above RIDEM's criteria of 25% of the LEL were observed in samples from one perimeter monitoring probe (SG-1) along the western edge of waste boundary. We recommend that one additional soil gas probe be installed close to the property boundary west of SG-1 as part of the RAWP.
- A total of four soil samples were collected from within or adjacent to the UIC and were submitted for analytical testing of VOCs, SVOCs, TPH, Pesticides, PCBs, 15 solid waste metals, mercury and/or cyanide. The resultant data showed no exceedances of RIDEM's R-DEC or GB Leachability Criteria;
- The two new wells installed adjacent to the UIC were sampled and submitted for analytical testing of VOCs, SVOCs, TPH, Pesticides, PCBs, 15 solid waste metals and mercury. The resultant data, when compared to the RIDEM's GA Groundwater Objectives, indicated exceedances for the SVOC bis(2-Ethylhexyl)phthalate in MW-114 and arsenic in MW-113. There were no GB Groundwater Objective exceedances observed;
- An approximately 1.15-foot thick layer of LNAPL was present in MW-3 and an approximately 0.70-foot thick layer of LNAPL was present in ME-EA-01. LNAPL has historically been observed in both of these wells. The LNAPL in both wells was sampled and submitted for analytical testing of PCBs. Two PCBs, Aroclor 1242 and Aroclor 1260, were detected in MW-EA-01 at levels above the TSCA limit of 50 ppb. PCBs were not detected in LNAPL MW-3; and
- Buried waste appears to be present in the wetland over and area of approximately 17,000 square feet around the landfill edge (both north and south of the landfill). Assuming an average waste thickness of four feet, based on the above described test pits, a waste volume of approximately 68,000 cubic feet (2,500 cubic yards) is present in wetlands around the landfill.

PROPOSED REMEDIAL ALTERNATIVES-RESPONSE TO RIDEM COMMENTS

On December 15, 2020, RIDEM provided on the SIR and responses to these comments are provided below. The recommended Remedial Alternative (Alternative #3) from the SIR has been modified to address RIDEM's comments and based on the LDI, as described below:

RIDEM Comment No. 1

Per section 1.9.7(B)(1)(Upper Concentration Limits) of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases 250-RICR-140-30-1: The free-phase petroleum (light non-aqueous phase liquids – LNAPL) that has been encountered in groundwater monitoring wells MW-3 and MW-EA-01 should be addressed in the proposed remedial objectives. Historic sampling results indicate that the LNAPL product contains PCBs that have exceeded the analytical thresholds established by the Toxic Substances Control Act (TSCA). As a result, the proposed remedial objective will need to account for PCBs accordingly.

We have contacted EPA in writing concerning this issue and will update the Department following our discussion with EPA.

RIDEM Comment No. 2

The results of previous and current site investigation activities indicate the presence of LNAPL containing PCBs, a GB groundwater exceedance and surface water sampling results exceeding both chronic and acute surface water criteria at multiple sampling locations. Due to these exceedances, the Department will require a final cap that meets the permeability requirements and is consistent with Section 2.2.12 (Final Cover System) of Part 2 - Solid Waste Landfills, of the Solid Waste Regulations (250-RICR-140-05-2). The final cover system design should also incorporate appropriate gas controls in accordance with Sections 2.1.9(B.)(10.) and 2.3.8 of these Regulations (250-RICR-140-05-2).

Agreed; as described below, the recommended Remedial Alternative has been modified to meet these requirements.

RIDEM Comment No. 3

As part of a future Remedial Action Work Plan/Closure Plan submittal, the Department will require that waste encountered in the surrounding wetland areas is removed to the best extent practicable. Solid waste removed from these areas shall either be consolidated under the approved final cover system or removed and disposed of at a licensed Solid Waste Management Facility.

We agree that deposited solid waste will be removed from adjacent wetland areas and consolidated under the proposed cap, to the extent practicable. We do not intend to remove apparent windblow solid waste from adjacent wetlands.

Other components of proposed Remedial Alternative #3, described in the SIR are unchanged. The full recommended alternative is provided below:

Alternative #3 – *Site Capping and Institutional Controls*: This third, and recommended, alternative includes Institutional Controls (consisting of an ELUR), landfill capping and long-term environmental monitoring. This alternative involves a combination of remedial measures and incorporates requirements of the applicable Site Remediation and Solid Waste regulatory programs. This alternative consists of:

Landfill Capping

Re-grade the Site, or portions thereof, to meet minimum drainage slope (i.e., 3% to 5%) and maximum stable slope (i.e., 3:1) requirements of Section 2.2.12 of the Solid Waste Regulations No. 2. This action will help to control soil erosion, reduce infiltration of precipitation, eliminate ponded/perched water and associated leachate generation, and manage stormwater drainage.

Low Permeability Soil Cap - Install a cap over the landfill so that all areas of the Site that received solid waste are provided with a cap thickness of not less than 2 feet. The cap will incorporate a geomembrane that meets the permeability requirements and is consistent with Section 2.2.12 (Final Cover System) of Solid Waste Regulation No. 2:

- Existing soil, waste and borrow soils will be graded to meet subgrade slope requirements;
- 6-inches of clean fine to coarse sand (bedding layer);
- 40-mil LLDPE membrane;
- 6-inches of permeable drainage sand;
- 12 inches of barrier protection material (sand and gravel); and
- 6 inches of plantable soil/topsoil, seeded to establish vegetative cover.

Waste deposited within wetland areas will removed and consolidated on the landfill prior to capping. Excavated wetland areas will be restored by replacing with plantable soil and seeding with a wetland mix. The cap design will incorporate passive or active LFG vents, 1 per acre, to limit the lateral migration of methane and other volatile contaminants.

The source of the cover material for use above the membrane will be evaluated to demonstrate that it does not contain contaminants at concentrations above the Method 1 R-DEC. Existing cover soils may be utilized in the final cap if they meet the R-DEC and existing cover soils and waste may be used for shaping and grading of the cap subgrade. This activity may require an approved beneficial use determination (BUD) from RIDEM.

This will address the regulatory requirement to properly close the landfill and mitigate any direct exposure risk associated with contact with waste or contaminated soils, if present.

ELUR

To protect the long-term effectiveness of the remedy RIDOA will establish an ELUR for the property. The ELUR will serve to:

- Restrict the property's use from any residential development;
- Require that the Site's landfill cap and other engineered controls remain in good condition;
- Prohibit the use of groundwater at the Site for drinking water;
- Contain a Soil Management Plan (SMP) for any post-closure soil disturbance;
- Provide for annual inspection by an Environmental Professional; and
- Existing soil, waste and borrow soils will be graded to meet subgrade slope requirements.

Environmental Monitoring

An environmental monitoring program (EMP), which incorporates, to the extent practical, the monitoring wells and soil gas probes installed as part of the SIR will be developed. The groundwater sampling program will incorporate the use of EPA's Low-Flow well purging and sampling protocols. The analytical program will include the organic and inorganic target analytes identified in Appendix A of RIDEM's Solid Waste Regulations No. 2. According to these regulations (Section 2.1.9), groundwater monitoring needs to be performed at the Site for 30 years. We propose that monitoring be conducted quarterly during closure and for 2 years following closure. Thereafter, the frequency should be reduced to semi-annual and then annual (assuming the data supports such a reduction in monitoring frequency). The groundwater monitoring program will include certain scheduled milestones at which the frequency of the sampling can be re-evaluated.

As part of groundwater monitoring, LNAPL (where observed) will be manually bailed and containerized on a quarterly basis.

A surface water monitoring program will be conducted in conjunction with the groundwater monitoring program, to evaluate changes in surface water concentrations over time.

Perimeter soil gas monitoring will be performed in conjunction with the groundwater monitoring program. Soil gas monitoring will include field screening for total volatile organics via PID screening, H_2S, and Methane as LEL.

The EMP will be used to assess the effectiveness of landfill capping and source control on reducing groundwater contaminant concentrations both on- and off-Site. Additionally, the perimeter soil gas monitoring will be used to evaluate the effectiveness of the passive landfill gas venting at limiting lateral methane and VOC migration, and to assess the need for active migration control.

In proposing this alternative, it is GZA's opinion that this Alternative is consistent with the current and foreseeable reuse of the Site and mitigates current and future risks from identified onsite contamination and off-Site mitigation.

To address Rule 1.8.5 of the Remediation Regulations, the following statements of certification are provided.

GZA GeoEnvironmental, Inc. certifies to the best of its knowledge, that this Site Investigation Report is complete and accurate.

Edward A. Summerly, P.G.
Principal / District Office Manager
GZA GeoEnvironmental, Inc.

As a designee of the State of Rhode Island, I certify, to the best of my knowledge, that this Site Investigation Report is a complete and accurate representation of the Site and the release, and contains all known facts surrounding the release.

Michael Donegan

Michael Donegan, On Behalf of:
State of Rhode Island

We trust this report addresses the applicable regulatory requirements, and we look forward to the Department's issuance of a Program Letter. If you require any additional information or have comments on the content of the report, please feel free to contact either Rick or Ed at (401) 427-2776 or (401) 427-2707, or via email at richard.carlone@gza.com or edward.summerly@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Richard A. Carlone, P.E.
Senior Project Manager

Edward A. Summerly, P.G.
Principal / District Office Manager

Attachments: Tables 1 through 6
Figure 1
Appendix A – Limitations
Appendix B – Exploration Logs
Appendix C – Test Pit Photographs
Appendix D – Low Flow Logs
Appendix E – Analytical Reports

TABLES

TABLE 1
SUMMARY OF LANDFILL GAS QUALITY FIELD MEASUREMENTS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

Location	Date Installed	% Methane (CH4)	% LEL	% Oxygen (O2)	%Carbon Dioxide (CO2)	% Hydrogen Sulfide (H2S)	% Methane (CH4)	% LEL	% Oxygen (O2)	%Carbon Dioxide (CO2)	% Hydrogen Sulfide (H2S)	% Carbon Monoxide (CO)	% Methane (CH4)	% LEL	% Oxygen (O2)	%Carbon Dioxide (CO2)	% Hydrogen Sulfide (H2S)	% Carbon Monoxide (CO)	% Methane (CH4)	% LEL	% Oxygen (O2)	%Carbon Dioxide (CO2)	% Hydrogen Sulfide (H2S)	% Carbon Monoxide (CO)
		01/14/2020					02/14/2020						12/18/2020						01/13/2021					
SG-1	12/18/2019	0.0	0.0	21.70	0.1	0	0.0	0.0	20.9	0.1	0	0	29.5	590.0	2.3	17.6	9	0	27.3	546.0	0.4	16.3	8	0
SG-2	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-3	12/4/2019	16.3	326	1.30	7.3	0	0.0	0.0	20.9	0.1	0	0	0.1	2.0	16.0	3.0	0	0	0.0	0.0	21.0	0.1	0	0
SG-4	12/18/2019	2.6	52	15.90	5.3	0	4.6	92	8.2	11.4	0	0	0.0	0	7.4	13.4	0	0	0.0	0.0	9.6	10.0	0	0
SG-5	12/18/2019	0.0	0.0	17.80	4.1	0	0.0	0.0	17.3	4.4	0	0	0.0	0.0	15.5	6.0	0	0	0.0	0.0	15.4	5.4	0	0
SG-6	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-7	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-8	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-9	12/18/2019	0.0	0.0	22.20	0.1	0	0.10	2.0	20.9	0.1	0	0	--	--	--	--	--	--	--	--	--	--	--	--
SG-10	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-11	12/18/2019	0.0	0.0	19.50	2.8	0		0.0	19.9	2.4	0	0	0.0	0.0	17.0	4.1	0	0	0.0	0.0	18.8	2.0	0	0
SG-12	12/18/2019	0.0	0.0	13.10	7.1	0	0.0	0.0	16.4	4.9	0	0	0.0	0.0	10.1	8.6	0	0	0.0	0.0	11.5	7.4	0	0
SG-13	12/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SG-14	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	20.80	0.6	0	0	0.0	0.0	20.2	0.4	0	0
SG-15	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	20.90	0.7	0	0	0.0	0.0	20.4	0.4	0	0
SG-16	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	21.40	0.1	0	0	0.0	0.0	20.4	0.4	0	0
SG-17	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	21.20	0.7	0	0	0.0	0.0	20.6	0.4	0	0
SG-18	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	21.20	0.1	0	0	--	--	--	--	--	--
SG-19	12/16/2020	--	--	--	--	--	--	--	--	--	--	--	0.0	0.0	20.70	0.7	0	0	0.0	0.0	19.8	0.7	0	0

Notes

1. The readings were collected using a LANDTEC GEM5000.

2. Landfill gas measurements could not be taken from SG-2, SG-6, SG-7, SG-8 or SG-13 in January/February 2020 due to standing water present in the probe.

3. CO readings were not taken during the 1/14/2020 round because the rental meter did not have a CO probe.

4. SG-8 was destroyed in October 2020.

5. Landfill gas measurements could not be taken from SG-2 or SG-13 in December 2020 and/or January 2021 due to standing water present in the probe.

6. Landfill gas measurements could not be taken from SG-6, SG-7, SG-9, SG-10, SG-13 and SG-18 in December 2020 and/or January 2021 due to the soil gas probe screen being either frozen or obstructed, and not allowing air to flow into the LANDTEC.

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING PARAMETERS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

PARAMETERS	UNITS	MW-113	MW-114
		12/16/2020	12/16/2020
		Result	Result
pH	SU	6.7	6.4
Temperature	(oC)	8.5	7.1
Specific Conductivity	µS/cm	118.8	122.5
Dissolved Oxygen	mg/L	0.15	0.22
Oxidation Reduction Potential	mV	-128.6	-86.9
Turbidity	NTU	8.58	7.73
Depth to water	feet	15.00	15.22

Notes

1. The above readings, with the exception of depth to water, were collected using a YSI Pro Dss Series multi-meter with a flow-through cell and represent readings collected immediately prior to well sampling, i.e. were collected when well purging was complete. Depth to water readings shown are initial readings, i.e. were collected before well purging began.

TABLE 3
SUMMARY OF GROUNDWATER LEVELS AND ELEVATIONS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

MONITORING WELLS	DATE INSTALLED	SAMPLE ZONE LENGTH	PVC ELEVATION	January/February 2020				December 2020			
				DTP (FEET)	ELEV. (FEET)	DTW (FEET)	ELEV. (FEET)	DTP (FEET)	ELEV. (FEET)	DTW (FEET)	ELEV. (FEET)
MW-1	11/17/2000	NR	32.278	--	--	15.85	16.43	--	--	--	--
MW-3	11/22/2000	NR	43.824	20.48	23.34	21.29	22.53	21.35	22.47	22.50	21.32
MW-5	11/13/2000	NR	30.949	--	--	12.67	18.28	--	--	--	--
MW-6	11/15/2000	NR	38.071	--	--	20.35	17.72	--	--	--	--
MW-7	11/9/2000	NR	19.77	--	--	3.85	15.92	--	--	--	--
MW-8	11/16/2000	NR	35.475	--	--	18.36	17.12	--	--	--	--
MW-EA-01	3/4/2008	10	44.438	17.65	26.788	18.35	26.09	18.00	26.438	18.70	25.74
MW-101	12/31/2019	10	NR	--	--	5.20	--	--	--	--	--
MW-102	12/31/2019	10	23.151	--	--	6.80	16.35	--	--	--	--
MW-103	12/29/2019	10	20.08	--	--	4.72	15.36	--	--	--	--
MW-104	12/29/2019	10	22.792	--	--	6.54	16.25	--	--	--	--
MW-105	12/29/2019	10	22.429	--	--	4.64	17.79	--	--	--	--
MW-106S	12/29/2019	10	23.925	--	--	4.15	19.78	--	--	--	--
MW-106D	1/1/2020	5	24.436	--	--	7.70	16.74	--	--	--	--
MW-107R	2/14/2020	10	35.401	--	--	17.15	18.25	--	--	--	--
MW-109	12/2/2019	15	45.424	--	--	20.35	25.07	--	--	--	--
MW-110	1/1/2020	15	44.413	--	--	23.30	21.11	--	--	--	--
MW-111	1/1/2020	15	44.403	--	--	15.95	28.45	--	--	--	--
MW-112	12/4/2019	15	45.476	--	--	16.45	29.03	--	--	--	--
MW-113	12/8/2020	10	32.159	--	--	--	--	--	--	15.00	17.16
MW-114	12/8/2020	10	32.369	--	--	--	--	--	--	15.22	17.15

Notes:
NR indicates not recorded.
MW-101 destroyed before wellhead survey conducted.
DTP indicates depth to product where present and DTW indicates depth to water.

TABLE 4
SUMMARY OF SOIL SAMPLING RESULTS
Former Truk-Away Landfill
Warwick,, Rhode Island
January 2021

PARAMETERS	UNITS	RIDEM DIRECT EXPOSURE CRITERIA	RIDEM DIRECT EXPOSURE CRITERIA	RIDEM GB	20L0288-01		20L0288-02		20L0288-03		20L0288-04		20L0288-05	
					MW-113/S-1A		MW-114/S-1B		UIC/S-1B		UIC/S-2		Trip Blank	
		Residential	Industrial/ Commercial	Leachibility Criteria	12/8/2020		12/8/2020		12/8/2020		12/8/2020		12/8/2020	
					0-3 feet		3-5 feet		3-5 feet		5-10 feet			
Volatile Organic Compounds														
Carbon Disulfide	mg/kg	NE	NE	NE	0.247	U	**0.0521**	B,J	0.181	U	**0.0300**	B,J	**0.0420**	B,J
Naphthalene	mg/kg	NE	NE	NE	0.247	U	0.237	U	**0.0381**	J	0.143	U	**0.0500**	J
Remaining VOCs					ND		ND		ND		ND		ND	
Semi-Volatile Organic Compounds														
All SVOCs	mg/kg				ND		ND		ND		ND		NT	
Total Petroleum Hydrocarbons														
TPH	mg/kg	500	2,500	500	**282**		42.2	U	**390**		37.5	U	NT	
Total Metals														
Antimony	mg/kg	10	820	NE	9.79	U	5.39	U	8.54	U	4.70	U	NT	
Arsenic	mg/kg	7	7	NE	4.89	U	**2.84**		**4.82**		2.35	U	NT	
Barium	mg/kg	5500	10000	NE	**26.7**		**9.42**		**13.6**		**16.5**		NT	
Beryllium	mg/kg	1.5	1.5	NE	**0.22**		**0.64**		**0.24**		**0.42**		NT	
Cadmium	mg/kg	39	1000	NE	**2.26**		0.54	U	0.85	U	**0.49**		NT	
Chromium	mg/kg	1400	10000	NE	**26.2**		**7.18**		**10.4**		**8.10**		NT	
Cobalt	mg/kg	NE	NE	NE	**4.59**		**3.94**		**6.07**		**3.83**		NT	
Copper	mg/kg	3100	10000	NE	**68.5**		**8.00**		**17.9**		**11.2**		NT	
Lead	mg/kg	150	500	NE	**148**		5.39	U	**11.8**		**18.0**		NT	
Mercury	mg/kg	23	610	NE	**0.070**		0.035	U	0.032	U	0.028	U	NT	
Nickel	mg/kg	1000	10000	NE	**23.3**		**7.26**		**12.2**		**7.79**		NT	
Selenium	mg/kg	390	10000	NE	9.79	U	5.39	U	8.54	U	4.70	U	NT	
Silver	mg/kg	200	10000	NE	0.98	U	0.54	U	0.85	U	**0.52**		NT	
Thallium	mg/kg	5.5	140	NE	0.49	U	5.39	U	0.43	U	4.70	U	NT	
Vanadium	mg/kg	550	10000	NE	**11.4**		**9.87**		**9.93**		**8.08**		NT	
Zinc	mg/kg	6000	10000	NE	**277**		**35.1**		**42.0**		**57.7**		NT	
Pesticides														
All Pesticides	mg/kg				ND		ND		ND		ND		NT	
Polychlorinated Biphenyls														
Aroclor 1254	mg/kg	10	10	10	**0.7**		0.06	U	0.06	U	0.05	U	NT	
Aroclor 1260	mg/kg	10	10	10	**0.5**		0.06	U	0.06	U	0.05	U	NT	
Remaining PCBs	mg/kg				ND		ND		ND		ND		NT	
Classical Chemistry														
Total Cyanide	mg/kg	200	10,000	NE	**5.54**		NT		NT		NT		NT	

Notes:
1: For the complete list of target analytes refer to the attached laboratory certificates of analysis.
2. Bold values indicate the constituent was detected above the laboratory reporting limit. Orange highlight indicates an exceedence of RIDEM's GB Leachability Criteria. Yellow highlight indicates an exceedance of RIDEM's I/C DEC Criteria. Green highlight indicates an exceedance of RIDEM's R-DEC Criteria.
3. "U" indicates that the parameter is not detected.
4. "NE" indicates that a standard for the parameter is not established.
5. "ND" indicates that the paramater is not detected.
6. "NT" indicates that the paramater was not tested for.
7. "J" indicates that the parameter was reported between MDL and MRL.
8. "B" indicates that the parameter was present in Method Blank.

TABLE 5
SUMMARY OF GROUNDWATER SAMPLING RESULTS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

PARAMETERS	UNITS	RIDEM GA GROUNDWATER QUALITY STANDARD	RIDEM GB GROUNDWATER QUALITY STANDARD	20L0566-01 MW-113 12/16/2020		20L0566-02 MW-114 12/16/2020		20L0566-03 Trip Blank 01/07/2020
Volatile Organic Compounds								
All VOCs	mg/L			ND		ND		ND
Semi-Volatile Organic Compounds								
bis(2-Ethylhexyl)phthalate	mg/L	0.006	NE	0.006	U	**0.006**		NT
Remaining SVOCs	mg/L			ND		ND		NT
Total Petroleum Hydrocarbons								
Total Petroleum Hydrocarbons	mg/L	NE	NE	**0.20**		**0.44**		NT
Total Metals								
Antimony	mg/L	0.006	NE	0.001	U	0.001	U	NT
Arsenic	mg/L	0.01	NE	**0.014**		**0.009**		NT
Barium	mg/L	2	NE	0.025	U	0.025	U	NT
Beryllium	mg/L	0.004	NE	0.0005	U	0.0005	U	NT
Cadmium	mg/L	0.005	NE	0.0025	U	0.0025	U	NT
Chromium	mg/L	0.1	NE	0.010	U	0.010	U	NT
Cobalt	mg/L	NE	NE	0.010	U	0.010	U	NT
Copper	mg/L	NE	NE	0.010	U	0.010	U	NT
Lead	mg/L	0.015	NE	0.010	U	0.010	U	NT
Mercury	mg/L	0.002	NE	0.00020	U	0.00020	U	NT
Nickel	mg/L	0.1	NE	0.025	U	0.025	U	NT
Selenium	mg/L	0.05	NE	0.025	U	0.025	U	NT
Silver	mg/L	NE	NE	0.005	U	0.005	U	NT
Thallium	mg/L	0.002	NE	0.0005	U	0.0005	U	NT
Vanadium	mg/L	NE	NE	0.010	U	0.010	U	NT
Zinc	mg/L	NE	NE	0.025	U	0.025	U	NT
Pesticides								
gamma-Chlordane	mg/L	NE	NE	0.000047	U	**0.000101**		NT
Remaining Pesticides	mg/L			ND		ND		NT

TABLE 5
SUMMARY OF GROUNDWATER SAMPLING RESULTS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

PARAMETERS	UNITS	RIDEM GA GROUNDWATER QUALITY	RIDEM GB GROUNDWATER QUALITY	20L0566-01 MW-113	20L0566-02 MW-114	20L0566-03 Trip Blank
Polychlorinated Biphenyls						
All PCBs	ug/L	0.5	NE	ND	ND	NT

Notes:

1: For the complete list of target analytes refer to the attached laboratory certificates of analysis.

2. Bold values indicate the constituent was detected above the laboratory reporting limit. Yellow highlight indicates an exceedance of RIDEM's GA Groundwater Quality Criteria. Orange highlight indicates an exceedance of RIDEM's GB Groundwater Quality Criteria.

3. "U" indicates that the parameter is not detected.

4. "NE" indicates that a standard for the parameter is not established.

5. "ND" indicates that the parameter is not detected.

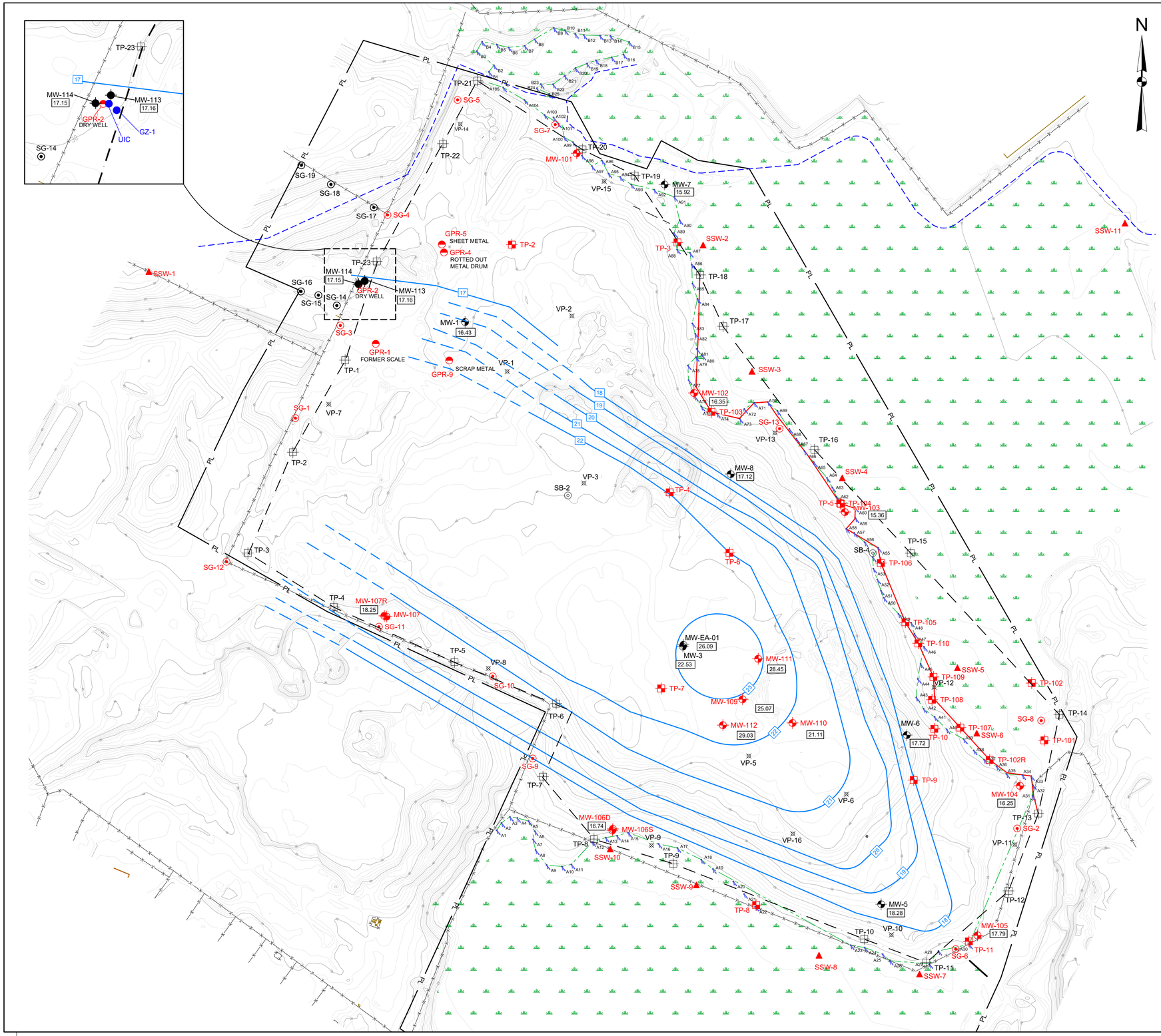
6. "NT" indicates that the parameters was not tested.

TABLE 6
SUMMARY OF LNAPL TESTING RESULTS
Former Truk-Away Landfill
Warwick, Rhode Island
January 2021

PARAMETERS	UNITS	TSCA PCB Standard	20L0565-01 MW-EA-01 12/16/2020		20L0565-02 MW-3 12/16/2020	
Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	50	0.50	U	0.49	U
Aroclor 1221	mg/kg	50	0.50	U	0.49	U
Aroclor 1232	mg/kg	50	0.50	U	0.49	U
Aroclor 1242	mg/kg	50	**66.9**	P,LC	0.49	U
Aroclor 1248	mg/kg	50	0.50	U	0.49	U
Aroclor 1254	mg/kg	50	0.50	U	0.49	U
Aroclor 1260	mg/kg	50	**68.4**		0.49	U
Aroclor 1262	mg/kg	50	0.50	U	0.49	U
Aroclor 1268	mg/kg	50	0.50	U	0.49	U

Notes:
1. Bold values indicate the constituent was detected above the laboratory reporting limit. Yellow highlight indicates an exceedance of the Toxic Substances Control Act (TSCA) Compliance Monitoring standard for PCBs in liquid.
2. "U" indicates that the parameter is not detected.
3. "P" indicates that the percent difference between primary and confirmation laboratory results exceeded 40%.
4. "LC" indicates that the lower value is used due to matrix interferences.

FIGURES



NOTES

1. BASE MAP AND GROUND CONTOURS DEVELOPED FROM A TOPOGRAPHIC SURVEY CONDUCTED BY WSP USA, INC ON NOVEMBER 22, 2019.
2. GROUND PENETRATING RADAR SURVEY WAS PERFOMED BY THIELSCH ENGINEERING ON OCTOBER 2, 2019 AND OBSERVED BY GZA PERSONNEL.
3. THE LOCATIONS OF THE SEDIMENT AND SURFACE WATER SAMPLES WERE APPROXIMATELY DETERMINED USING A TRIMBLE R1 GNSS RECEIVER WITH 50CM ACCURACY BY GZA ON DECEMBER 10, 2019. DATA CAN ONLY BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.
4. THE LOCATION OF THE TEST PITS, MONITORING WELLS AND SOIL GAS PROBES WERE APPROXIMATELY DETERMINED USING A LEICA ZENO 20 WITH 50CM ACCURACY BY GZA PERSONNEL ON FEBRUARY 25, 2020 AND DECEMBER 16, 2020. THE DATA CAN ONLY BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.
5. GROUND WATER CONTOURS ARE APPROXIMATE AND WERE INTERPOLATED FROM EXISTING GROUND WATER ELEVATIONS OBSERVED BY GZA PERSONNEL. MW-101 WAS DESTROYED BEFORE ELEVATION SURVEY.

LEGEND

MW-113	GROUNDWATER MONITORING WELLS INSTALLED BY HOFFMAN ENVIRONMENTAL SERVICES ON DECEMBER 16, 2020, AND OBSERVED BY GZA PERSONNEL..
SG-14	SOIL GAS PROBES INSTALLED BY HOFFMAN ENVIRONMENTAL SERVICES ON DECEMBER 16, 2020, AND OBSERVED BY GZA PERSONNEL.
TP-3	TEST PITS PERFORMED BY HOFFMAN ENVIRONMENTAL SERVICES ON DECEMBER 2 AND DECEMBER 4, 2019, AND OBSERVED BY GZA PERSONNEL
TP-101	TEST PITS PERFORMED BY HOFFMAN ENVIRONMENTAL SERVICES BETWEEN OCTOBER 5 AND OCTOBER 8, 2020, AND OBSERVED BY GZA PERSONNEL
MW-107	GROUNDWATER MONITORING WELLS INSTALLED BY HOFFMAN ENVIRONMENTAL SERVICES ON DECEMBER 2, DECEMBER 4, DECEMBER 29, AND DECEMBER 31, 2019 AND JANUARY 1, 2020, AND OBSERVED BY GZA PERSONNEL
15.36	GROUNDWATER ELEVATION OBSERVED BY GZA PERSONNEL ON FEBRUARY 25, 2020 AND DECEMBER 16, 2020.
SG-13	SOIL AND GAS PROBES INSTALLED BY HOFFMAN ENVIRONMENTAL ON DECEMBER 4 AND DECEMBER 14, 2019, AND OBSERVED BY GZA PERSONNEL
SSW-1	SEDIMENT & SURFACE WATER SAMPLE
GPR-5	LOCATION OF GROUND PENETRATING RADAR SURVEY
TP-2	TEST PITS PERFORMED BY TCM SERVICES, INC. ON OCTOBER 18 AND 19, 2000
GZ-1 / UIC	BORINGS PERFORMED BY HOFFMAN ENVIRONMENTAL SERVICES ON DECEMBER 16, 2020, AND OBSERVED BY GZA PERSONNEL.
A51	WETLAND FLAG AND FLAG NUMBER
	EDGE OF WETLAND
PL	APPROXIMATE PROPERTY LINE
	STREAM
	ADJUSTED WASTE LIMITS BASED ON SUPPLEMENTAL TEST PITS
	LIMITS OF WASTE (ADJUSTED)
	EXISTING FENCE
17	INFERRED GROUNDWATER CONTOUR
	WETLAND AREA

0 50' 100' 200' 300'
SCALE IN FEET 1" = 100'

NO.	ISSUE/DESCRIPTION	BY	DATE

TRUK-AWAY LANDFILL
WARWICK INDUSTRIAL DRIVE
WARWICK, RHODE ISLAND

EXPLORATION LOCATION PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TRUK-AWAY JOINT DEFENSE GROUP

PROJ MGR:	RAC	REVIEWED BY:	EAS	CHECKED BY: RAC
DESIGNED BY:	RAC	DRAWN BY:	MEA	SCALE: AS NOTED
DATE: JANUARY, 2021		PROJECT NO. 03.34648.00		REVISION NO. 0

FIGURE 1
SHEET NO.

APPENDIX A

LIMITATIONS

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

APPENDIX B

EXPLORATION LOGS

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-101
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/5/2020
Date Finish: 10/5/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

Weather: showers, am cloudy, PM
Time Start: 9:45
Time Finish: 10:15

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/5/2020		0.5	▽
10/5/2020		1	▼
			▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Top 6": Brown fine Sand and Silt, Organic topsoil		E		1, 2
2	Next 1.5': Gray fine Sand, trace Solid Waste (~1%) plastic debris				3
3	Last 4': Gray, fine SAND some Silt				4
4					
5					
6	End of exploration at 6 feet.				
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:
20 ft. × 3 ft.
North
Volume = **13 ±** cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:
Trace (Tr) 0-10%
Little (Li) 10-20%
Some (So) 20-35%
And 35-50%

Excavation Effort:
Easy E
Moderate M
Difficult D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed at 0.5' bgs after 20 min stab time.
2 - Approximately 1% solid waste observed, likely wind blown debris.
3 - Slight organic odor.
4 - CH4: 0.0, VOC: 0.2, H2S: 0.0

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-101

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:49 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-102
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/5/2020
Date Finish: 10/5/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

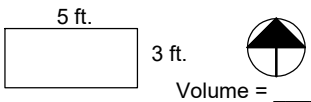
Weather: showers, am cloudy, PM
Time Start: 10:45
Time Finish: 12:45

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/5/2020		2	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1			E		
2 ▼	Peat, Phragmites, no Solid Waste observed		E		1
3			E		2
4			E		3
5	End of exploration at 4.5 feet.				4
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 3 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed at 2' bgs after 2 hour stab time.
2 - No solid waste observed.
3 - No odors observed.
4 - CH4: 0.0, H2S: 0.0, VOC: 0.0

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-102

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:51 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-102R
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/8/2020
Date Finish: 10/8/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

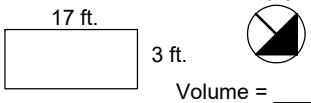
Weather: Clear 70s
Time Start: 9:05
Time Finish: 9:35

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/8/2020		3	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Top 12": Brown fine SAND and Silt, Organic topsoil		E		1
2			E		2
3	▼ 3 1/2': Gray, fine to medium SAND and Solid Waste (variable), trace fine Gravel, trace Silt		E		3
4			E		4
5	End of exploration at 4.5 feet.				5
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 9 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Trace amounts of solid waste present in western edge of test pit and no solid waste was present in eastern edge of test pit.
2 - Solid waste composed of; wood and bags of trash, bottles/glass, trees, large groups of plastic.
3 - Groundwater observed at 3' bgs after 15 min stab time.
4 - Organic odor.
5 - CH4: 0.0, H2S: 0.0, VOC: 0.3

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-102R

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-103
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/6/2020
Date Finish: 10/6/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

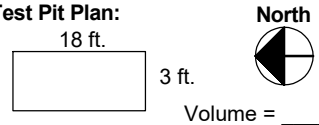
Weather: Clear 70s
Time Start: 13:00
Time Finish: 13:35

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/6/2020		4	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Top 12": Brown fine Sand and Silt, Organic topsoil		E		1
2	12": Gray fine Sand and Silt, some Solid Waste (variable)		E		2
3	48": Gray, fine to coarse SAND, little fine Gravel, trace Silt, trace Cobbles		M	10%, A	3
4	▼ End of exploration at 4 feet.		M	10%, A	4
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 8 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater encountered at 4' bgs after 20 min stab time.
2 - Solid waste tapered from 30% to 5%, west to east.
3 - Slight organic odor.
4 - CH4: 0.0, H2S: 0.0, VOC: 0.4

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-103

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:52 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-104
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/7/2020
Date Finish: 10/7/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

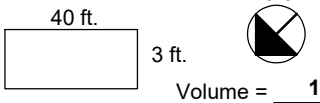
Weather: Cloudy 70s
Time Start: 08:55
Time Finish: 09:30

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/7/2020		2	▽ ▼ ▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Top 12": Brown fine Sand and Silt, Organic topsoil		E		
2	▼		E		1
3	36": Gray, fine to medium SAND, trace fine Gravel, trace Silt, trace (1%) wind blown Solid Waste		E		2
4					3
	End of exploration at 4 feet.		E		4
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = **18 ±** cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed entering at 2' bgs with a 20min stab time.
2 - Trace solid waste (<1%) consisted of blown plastic.
3 - No odor observed.
4 - CH4: 0.0, H2S: 0.0, VOC: 0.2

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-104

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-105
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/7/2020
Date Finish: 10/7/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

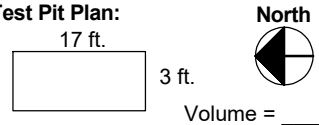
Weather: Clear 70s
Time Start: 10:25
Time Finish: 11:00

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/7/2020		2.5	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	12": Brown fine Sand and Silt, Organic topsoil		E		
2	24": Brown Sand and Silt, Solid Waste (variable), trace fine Gravel, trace Silt		E		1
3	▼		E		2
4	36": Gray fine to medium SAND, some Silt		E		3
5			E		4
6	End of exploration at 3 feet.		E		
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 6 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed at 30" bgs after 10 min stab time.
2 - Solid waste present at south end of trench, possible wind blown waste present throughout.
3 - Slight organic odor.
4 - CH4: 0.0, H2S: 0.0, VOC: 0.2

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-105

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:54 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-106
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/7/2020
Date Finish: 10/7/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

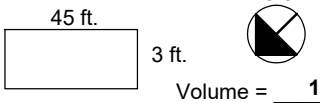
Weather: Sunny 70s
Time Start: 11:55
Time Finish: 13:30

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/7/2020		2	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Brown fine Sand and Silt, Organic topsoil				
2	Brown fine to medium SAND trace fine Gravel, trace Solid Waste ▼				1
3	Gray fine to medium SAND, trace fine Gravel, trace Silt				3
	End of exploration at 3 feet.				2
4					4
5					5
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = **15 ±** cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed at 2' bgs after 10min stab time.
3 - Approximately 1% solid waste layer in sandy fill from 1 to 2' bgs for the first 7 lineal feet of trench
2 - Trench varies in depth from 3' at northeast end of trench to 6' in southwest end.
4 - No odor observed.
5 - CH4: 0.0, H2S: 0.0, VOC: 0.3

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-106

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:55 AM

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-107
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/8/2020
Date Finish: 10/8/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

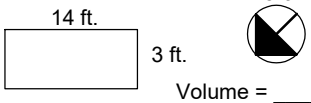
Weather: Clear 70s
Time Start: 08:30
Time Finish: 09:00

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/8/2020		2	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	6": Brown, trace Sand and Silt, Organic topsoil		E		
2	▼ Next 42": Gray fine to medium SAND and Solid Waste, trace fine Gravel, trace Silt		E		1, 2
3			E		3, 4
4	End of exploration at 4 feet.		E		5, 6
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 6 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed entering at 2' bgs after 15 min stab time.
2 - Solid waste tapered from 30% at the west end of the trench to trace amounts at east end of trench.
3 - Sulfur organic odor.
4 - Solid waste composed of glass, wood, full plastic bags.
5 - Start of trench was at the approximate location of TP-10.
6 - CH4: 0.0, H2S: 0.0, VOC: 0.3

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-107

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-108
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/8/2020
Date Finish: 10/8/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

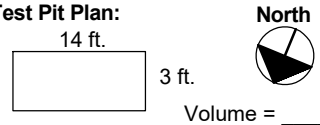
Weather: Clear 70s
Time Start: 10:00
Time Finish: 10:40

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/8/2020		4	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	6": Brown Sand and Silt, Organic topsoil		E		1
2			E		2
3	Next 4 1/2': Gray Sand and Solid Waste (variable), trace fine Gravel, trace Silt		E		3
4	▼		E		4
5	End of exploration at 5 feet.		E		5
6					6
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = 8 ± cu.yd.

LEGEND:
▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater encountered entering at 4' bgs after 10min stab time.
2 - Solid waste included plastic, wood and bottles/ cans.
3 - Eastern edge of test pit was terminated due to unstable ground. Solid waste was tapering upward when test pit was terminated. Based on observations from other test pits, the edge of waste was marked at the edge of the phragmites. Edge of waste is estimated at this location.
4 - Organic odor.
5 - Petroleum odor/ sheen observed in groundwater.
6 - CH4: 0.0, H2S: 0.0, VOC: 0.3

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-108

TEST PIT LOG

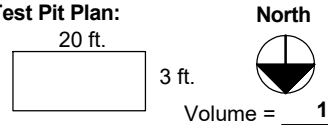
GZA GeoEnvironmental, Inc. *Engineers and Scientists*	**Truk-Away Landfill Joint Defense Group Industrial Drive Warwick, Rhode Island**	**EXPLORATION NO.: TP-109 SHEET: 1 of 1 PROJECT NO: 03.0034648.01 REVIEWED BY: Rick Carlone**
Logged By: Ben Ramos **Contractor:** Hoffman Environmental Services **Foreman:** Kyle Hoffman	**Boring Location:** See Plan **Ground Surface Elev. (ft.):** **Date Start:** 10/8/2020 **Date Finish:** 10/8/2020	**H. Datum:** **V. Datum:**
Equipment: CAT **Model:** 316 FL **Reach (ft.):** 20' **Capacity (cu.yd.):** 3 yd	**Weather:** Clear 70s **Time Start:** 10:30 **Time Finish:** 11:05	

Groundwater Depth (ft.)

Date	Time	Depth (ft.)	Symbol
10/8/2020		4	▼

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	6": Brown, fine Sand and Silt, Organic topsoil				
	Next 12": Light brown, fine to medium SAND, trace fine Gravel, trace Silt, trace light Solid Waste		E		
2			E		
3	Next 3 1/2': Gray fine Sand, solid waste (west side of trench only), trace fine Gravel, trace Silt		E		
4	▼		E		1
5	End of exploration at 5 feet.		E		2 3
6					4
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan:



Volume = **11 ±** cu.yd.

LEGEND:

▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Groundwater observed at 4' bgs after 15min stab time.
2 - Solid waste made up of plastic sheeting and wood.
3 - No odor observed.
4 - CH4: 0.0, H2S: 0.0, VOC: 0.2

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-109

TEST PIT LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: TP-110
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Ben Ramos
Contractor: Hoffman Environmental Services
Foreman: Kyle Hoffman

Boring Location: See Plan
Ground Surface Elev. (ft.):
Date Start: 10/8/2020
Date Finish: 10/8/2020

H. Datum:
V. Datum:

Equipment: CAT
Model: 316 FL
Reach (ft.): 20'
Capacity (cu.yd.): 3 yd

Weather: Clear 70s
Time Start: 11:11
Time Finish: 11:13

Groundwater Depth (ft.)

Date	Time	Depth (ft)	Symbol
Not Measured			▽ ▼ ▽

Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	12": Brown, fine Sand and Silt, Organic topsoil, trace wind blown Solid Waste (1%)		E		1
	End of exploration at 1 feet.				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Test Pit Plan: **North**

- ft.

ft.

Volume = _____ cu.yd.

LEGEND:

▼ Observed Water Level

Proportions Used:

Trace (Tr)	0-10%
Little (Li)	10-20%
Some (So)	20-35%
And	35-50%

Excavation Effort:

Easy	E
Moderate	M
Difficult	D

Boulder Size Range Designation:

Diameter	Letter Designation
6 to 16 in.	A
16 to 36 in.	B
> 36 in.	C

REMARKS

1 - Test pit terminated at 1.5' bgs due to unstable excavation.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: TP-110

GZA TEMPLATE TEST PIT; 12/7/2020; 8:57:58 AM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: UIC
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Sam Alernaz

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Direct Push

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 15
Date Start - Finish: 12/8/2020 - 12/8/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: Acetate Sleeve
Sampler O.D. (in.): 2.0
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
12/8/2020	10:00	0	10	

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
		S-1	0.0-5.0	60	32			S-1: Top 4": Dark brown topsoil S-1A (16"): Dark gray-brown, fine to medium SAND, trace fine Gravel, trace Silt S-1B (12"): Dark gray, fine to coarse SAND, little fine Gravel, trace Silt	1 2	0.0 0.0	0.5	TOPSOIL SAND		No Equipment Installed
5		S-2	5.0-10.0	60	20			S-2: Dark gray, coarse SAND and fine GRAVEL, trace fine to medium SAND, trace coarse Gravel, trace Silt	3	0.0	5	SAND AND GRAVEL		
10		S-3	10.0-15.0	60	43			S-3A (7"): Dark gray, medium to coarse SAND, little fine Gravel, trace fine Sand, trace Silt, wet S-3B (36"): Dark gray, fine SAND, little Silt, wet	4	0.0 0.0	10	SAND		
15								End of exploration at 15 feet.	5		15			
20														
25														
30														

REMARKS

1 - The headspace of the soil samples was screened for total volatile organic compund (TVOCs) using an Ion Science Tiger (PID) equipped with an 10.6 ev lamp.
2 - Soil sample UIC/ S-1B taken at 3-5ft bgs from below the UIC.
3 - Soil sample UIC/S-2 taken from immediately above Groundwater table.
4 - Groundwater observed at ±10 ft bgs.
5 - End of exploration at ±15 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: UIC

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:14 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: GZ-1
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Sam Alernaz

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Direct Push

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 15
Date Start - Finish: 12/8/2020 - 12/8/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: Acetate Sleeve
Sampler O.D. (in.): 2.0
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
12/8/2020	10:25	0	14	

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
5		S-1	0.0-5.0	60	43			S-1: Top 3": Brown topsoil S-1A (12"): Light gray-brown, fine to medium SAND, trace coarse Sand, trace Silt S-1B (16"): Light brown, fine to medium SAND, trace coarse Sand, trace Silt, trace Wood S-1C (12"): Dark gray, fine to medium SAND, trace coarse Sand, trace Silt	1	0.0 0.0 0.0	0.5	TOPSOIL FILL		No Equipment Installed
10		S-2	5.0-10.0	60	42			S-2A: (12"): Dark gray, fine to medium SAND, trace fine Gravel, trace Silt, trace Brick S-2B (30"): Dark gray, fine to medium SAND, little Silt		0.0 0.0	7			
15		S-3	10.0-15.0	60	48			S-3: Dark gray, fine to medium SAND, little Silt, wet	2	0.0 0.0	15	SAND		
20								End of exploration at 15 feet.	3					
25														
30														

REMARKS

1 - The headspace of the soil samples was screened for total volatile organic compund (TVOCs) using an Ion Science Tiger (PID) equipped with an 10.6 ev lamp.
2 - Groundwater observed at ± 14ft bgs.
3 - End of exploration at ± 15ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: GZ-1

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:03 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: MW-113
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Sam Alernaz

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Direct Push

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 22
Date Start - Finish: 12/8/2020 - 12/8/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: Acetate Sleeve
Sampler O.D. (in.): 2.0
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
12/8/2020	12:35	0	14	
12/8/2020	13:55	80min	14.81	

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data
		S-1	0.0-5.0	60	34			S-1: Top 3": Dark brown topsoil S-1A (18"): Dark brown, fine to coarse SAND, little Silt, trace fine Gravel, blue staining	1	0.0
								S-1B (13"): Dark brown, medium to coarse SAND, trace fine Gravel, trace Silt	2	0.0
5		S-2	5.0-10.0	60	32			S-2A: (10"): Dark gray, fine to coarse SAND and fine GRAVEL, little Silt S-2B (22"): Dark gray, medium to coarse SAND, trace Silt		0.0
									3	0.0
10		S-3	10.0-15.0	60	45			S-3A: (8"): Dark gray, fine to coarse SAND, trace fine Gravel, trace Silt S-3B (37"): Dark gray, fine Sand, trace Silt, wet		0.0
										0.0
15		S-4	15.0-20.0	60	60			S-4A: (25"): Dark gray, fine SAND, trace Silt, wet S-4B (35"): Light brown to orange brown, fine SAND, trace Silt, wet	4	0.0
										0.0
20									5	
								End of exploration at 22 feet.	6	
25										
30										

Stratum Description	Depth (ft.)	Elev. (ft.)
TOPSOIL	0.5	
SAND	5	
SAND AND GRAVEL	6	
SAND	22	

Equipment Installed: Standpipe; Native Backfill; Bentonite Seal; Filter Sand; Well Screen

REMARKS

1 - The headspace of the soil samples was screened for total volatile organic compound (TVOCs) using an Ion Science Tiger (PID) equipped with an 10.6 ev lamp.
2 - Soil sample MW-113/S-1A taken at 0-3ft bgs where blue staining was observed.
3 - Dark gray striations observed in MW-113/S-2B.
4 - Groundwater observed at ±14 ft bgs.
5 - Installed observation well (2" PVC) at ±22 ft bgs, screened from 22-12 ft bgs, filter sand from 22-11 ft bgs, bentonite seal from 11-9 ft bgs, native backfill from 9-0 ft bgs, finished with a steel standpipe cemented in place.
6 - End of exploration at ± 22 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: MW-113

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:05 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: MW-114
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Sam Alernaz

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Direct Push

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 22
Date Start - Finish: 12/8/2020 - 12/8/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: Acetate Sleeve
Sampler O.D. (in.): 2.0
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
12/8/2020	11:10	0	15	
12/8/2020	12:00	50min	15.10	

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
		S-1	0.0-5.0	60	52			S-1: Top 3": Dark brown topsoil S-1A (19"): Light brown to dark brown fine to medium SAND, trace coarse Sand, trace fine Gravel, trace Silt, trace Wood S-1B (30"): Light gray, fine SAND, trace fine Gravel, trace Silt	1	0.0	0.5	TOPSOIL FILL		Standpipe
5		S-2	5.0-10.0	60	39			S-2A: (8"): Light gray, fine SAND, little Silt S-2B (31"): Light gray to dark gray, fine Sand, trace Silt	2 3 4	0.0 0.0	3			Native Backfill
10		S-3	10.0-15.0	60	44			S-3A: (11"): Light gray to dark gray, fine SAND, trace Silt S-3B (33"): Dark gray, fine to medium SAND, little Silt	5 6	0.1 0.0 0.0		SAND		Bentonite Seal
15		S-4	15.0-20.0	60	60			S-4A: (37"): Dark gray, fine SAND, little Silt, wet S-4B (23"): Light brown, fine to medium SAND, trace Silt, wet	7	0.0 0.0				Filter Sand Well Screen
20									8		22			
								End of exploration at 22 feet.	9					
25														
30														

REMARKS

1 - The headspace of the soil samples was screened for total volatile organic compound (TVOCs) using an Ion Science Tiger (PID) equipped with an 10.6 ev lamp.
2 - Light brown striations observed in MW-114/S-1B.
3 - Soil sample MW-114/S-1B taken at 3-5 ft bgs.
4 - Light brown striations observed in S-2A.
5 - Light gray and dark gray striations observed in S-2B.
6 - Light brown striations observed in S-3B.
7 - Groundwater observed at ±15 ft bgs.
8 - Installed observation well (2" PVC) at ±22 ft bgs, screened from 22-12 ft bgs, filter sand from 22-11 ft bgs, bentonite seal from 11-9 ft bgs, native backfill from 9-0 ft bgs, finished with a steel standpipe cemented in place.
9 - End of exploration at ± 22 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: MW-114

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:07 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-14
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal; Native Backfill; Drilled Screen
5								End of exploration at 4.5 feet.	1 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-14

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:08 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-15
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal, Native Backfill, Drilled Screen
5								End of exploration at 4.5 feet.	1, 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-15

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:09 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-16
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal, Native Backfill, Drilled Screen
5								End of exploration at 4.5 feet.	1, 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-16

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:10 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-17
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal; Native Backfill; Drilled Screen
5								End of exploration at 4.5 feet.	1 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-17

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:11 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-18
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal; Native Backfill; Drilled Screen
5								End of exploration at 4.5 feet.	1 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-18

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:12 PM

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Truk-Away Landfill
Joint Defense Group
Industrial Drive
Warwick, Rhode Island

EXPLORATION NO.: SG-19
SHEET: 1 of 1
PROJECT NO: 03.0034648.01
REVIEWED BY: Rick Carlone

Logged By: Rowan Hayes
Drilling Co.: Hoffman Environmental Services
Foreman: Anthony Gomez

Type of Rig: N/A
Rig Model: N/A
Drilling Method: Post Driver

Boring Location: See Plan
Ground Surface Elev. (ft.):
Final Boring Depth (ft.): 4.5
Date Start - Finish: 12/16/2020 - 12/16/2020

H. Datum:
V. Datum:

Hammer Type: N/A
Hammer Weight (lb.): N/A
Hammer Fall (in.): N/A
Auger or Casing O.D./I.D Dia (in.):

Sampler Type: N/A
Sampler O.D. (in.): N/A
Sampler Length (in.): N/A
Rock Core Size:

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
Not Measured				

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (RQD)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)	Equipment Installed
								No soil sampling						Solid Metal; Native Backfill; Drilled Screen
5								End of exploration at 4.5 feet.	1 2					
10														
15														
20														
25														
30														

REMARKS

1 - End of exploration at ±4.5 ft bgs.
2 - Soil gas probe (1/2" diameter, 5 ft length, steel pipe with holes drilled, into bottom 1 ft of pipe) installed via post driver; screened from 4.5 to 3.5 ft bgs.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: SG-19

GZA TEMPLATE TEST BORING W/ EQUIP.; 1/12/2021; 3:51:13 PM

APPENDIX C

TEST PIT PHOTOGRAPHS

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 1 TP-101, Southwest end of trench, no solid waste observed

Photo 2 TP-101, northeast end of trench, trace solid waste observed

Photo 3 TP-102, No solid waste observed

Photo 4 TP-102, excavated soil, no solid waste observed

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 5 TP-102R, southeast end of trench, solid waste observed

Photo 6 TP-102R, northwest end of trench, trace solid waste observed

Photo 7 TP-103, south end of trench, solid waste observed

Photo 8 TP-103, north end of trench, wind blown solid waste observed

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 9 TP-104, southwest end of trench, trace solid waste observed

Photo 10 TP-104, northeast end of trench, no solid waste observed

Photo 11 TP-105, southwest end of trench, solid waste observed

Photo 12 TP-105, northeast end of trench, trace solid waste observed

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 13 TP-106, southwest end of trench, trace solid waste observed

Photo 14 TP-106, northeast end of trench, no solid waste observed

Photo 15 TP-107, southwest end of trench, solid waste observed

Photo 16 TP-107, northeast end of trench, trace solid waste observed

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 17 TP-108, southwest end of trench, solid waste observed

Photo 18 TP-108, northeast end of trench, solid waste observed

Photo 19 TP-109, northeast end of trench, solid waste observed

Photo 20 TP-109, northeast end of trench, trace solid waste observed

Client Name: Truk Away Landfill Joint Defense Group	Site Location: Warwick, RI	Project No. 34648.01

Photo 21 TP-110, southwest end of trench, solid waste observed

Photo 22 TP-110, northeast end of trench, no solid waste observed

APPENDIX D

LOW FLOW LOGS

GROUNDWATER SAMPLING DATA SHEET

File No. 34648.01
Project: Truk-Away Landfill
Location: City: Warwick State: RI
Weather: 20s. Sunny

Well ID: MW-3
Sample Date: 12/16/2020
Sampler's Name: Rowan Hayes

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 12/16/2020 11:15

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	34.70	Standing Water in Well (feet):	13.35
Depth to LNAPL (feet):	21.35	Well Diameter (in.)	2
Depth to Water (feet):	22.50	Sample Depth (feet BGS):	21.5
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	--
Well Screened Interval (feet BGS):	to	Roadbox: TPVC to Ground Surface (feet)	--

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [X] Yes [ ] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [X] Bail [ ] Pump / [ ] Low Flow

Pump Type: N/A No. N/A **Flow-Thru Cell Vol (mL):** N/A

Meter Type: N/A No. N/A

INSTRUMENT MEASUREMENTS:

Start time: _____ **Stop time:** _____

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (mS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (ºC) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:30

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
PCBs	EPA Method 8082	1	VOA	40 mL	None	Ice

Sample observations:

Color: Brown Odor: Petroleum-like Clarity: Cloudy

Total Purge Volume: **Tubing Volume:**

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

NM - Not Measured NP - No Product observed BGS - below ground surface FT - feet in - inches mL - milliliters GAL - gallons mvolts - millivolts s.u. - standard units
mS/cm - microsiemens per centimeter mg/L - milligrams per liter ºC - degrees Celcius ntu - Nephelometric Turbidity Unit mL/min - milliliters per minute

LNAPL sample collected using 1" diameter bailer.

GROUNDWATER SAMPLING DATA SHEET

File No. 34648
Project: Truk-Away Landfill
Location: City: Warwick State: RI
Weather: 20s. Sunny

Well ID: MW-EA-01
Sample Date: 12/16/2020
Sampler's Name: Rowan Hayes

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 12/16/2020 10:45

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	25.00	Standing Water in Well (feet):	6.30
Depth to LNAPL (feet):	18.00	Well Diameter (in.)	2
Depth to Water (feet):	18.70	Sample Depth (feet BGS):	18.3
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	--
Well Screened Interval (feet BGS):	13 to 23	Roadbox: TPVC to Ground Surface (feet)	--

Well Condition: **Protective Casing-** [X] Poor [ ] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [ ] Yes [X] No **Well-** [X] Poor [ ] Good

EQUIPMENT

Sample Method: [X] Bail [ ] Pump / [ ] Low Flow

Pump Type: N/A No. N/A **Flow-Thru Cell Vol (mL):** N/A

Meter Type: N/A No. N/A

INSTRUMENT MEASUREMENTS:

Start time: _____ **Stop time:** _____

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (mS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (ºC) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 11:00

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
PCBs	EPA Method 8082	1	VOA	40 mL	None	Ice

Sample observations:

Color: Brown Odor: Petroleum-like Clarity: Cloudy

Total Purge Volume: **Tubing Volume:**

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

NM - Not Measured NP - No Product observed BGS - below ground surface FT - feet in - inches mL - milliliters GAL - gallons mvolts - millivolts s.u. - standard units
mS/cm - microsiemens per centimeter mg/L - milligrams per liter ºC - degrees Celcius ntu - Nephelometric Turbidity Unit mL/min - milliliters per minute

No protective casing installed.

LNAPL sample collected using 1" diameter bailer.

GROUNDWATER SAMPLING DATA SHEET

File No. 34648.01
Project: Truk-Away Landfill
Location: City: Warwick State: RI
Weather: 20s. Sunny

Well ID: MW-113
Sample Date: 12/16/2020
Sampler's Name: Rowan Hayes

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 12/16/2020 7:15

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	24.50	Standing Water in Well (feet):	9.50
Depth to LNAPL (feet):	--	Well Diameter (in.)	2
Depth to Water (feet):	15.00	Sample Depth (feet BGS):	17
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	--
Well Screened Interval (feet BGS):	12 to 22	Roadbox: TPVC to Ground Surface (feet)	--

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geotech GeoPump Model Ii No. Rental
Flow-Thru Cell Vol (mL): 500

Meter Type: Ysi Pro Dss No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 7:45 **Stop time:** 9:35

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (mS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (ºC) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
7:55	15.12	--	--	--	--	--	--	< 500	
8:15	15.12	--	--	--	--	--	--	< 500	
8:40	15.12	--	--	--	--	--	--	< 500	
9:00	15.12	-112.8	6.64	111.6	0.19	8.3	29.45	< 500	
9:20	15.12	-127.7	6.69	115.0	0.14	8.5	9.08	< 500	
9:30	15.12	-128.1	6.68	116.3	0.15	8.5	8.87	< 500	
9:35	15.12	-128.6	6.68	118.8	0.15	8.5	8.58	< 500	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 9:35

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	EPA Method 8260	3	VOA	40 mL	HCl	Ice
SVOC	EPA Method 8270	2	AG	1 L	NP	Ice
TPH	EPA Method 8100	1	AG	1L	NP	Ice
Pesticides	EPA Method 8081	1	AG	1L	NP	Ice
PCBs	EPA Method 8082	2	AG	1L	NP	Ice
15 Solid Waste Metals/Mercury	EPA Methods 6010/7470	1	Poly	250mL	HNO3	Ice

Sample observations:

Color: None Odor: None Clarity: Clear

Total Purge Volume: **Tubing Volume:**

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

NM - Not Measured NP - No Product observed BGS - below ground surface FT - feet in - inches mL - milliliters GAL - gallons mvolts - millivolts s.u. - standard units
mS/cm - microsiemens per centimeter mg/L - milligrams per liter ºC - degrees Celcius ntu - Nephelometric Turbidity Unit mL/min - milliliters per minute

GROUNDWATER SAMPLING DATA SHEET

File No. 34648.01
Project: Truk-Away Landfill
Location: City: Warwick State: RI
Weather: 20s. Sunny

Well ID: MW-114
Sample Date: 12/16/2020
Sampler's Name: Rowan Hayes

WATER LEVEL OBSERVATIONS

Measurement Date/Time: 12/16/2020 7:10

Point of Measurement: PVC Riser [X] Steel Casing [ ] Ground [ ]

Total Well Depth (feet):	24.80	Standing Water in Well (feet):	9.58
Depth to LNAPL (feet):	--	Well Diameter (in.)	2
Depth to Water (feet):	15.22	Sample Depth (feet BGS):	17
Depth to DNAPL (feet):	--	Standpipe: TPVC to Ground Surface (feet)	--
Well Screened Interval (feet BGS):	12 to 22	Roadbox: TPVC to Ground Surface (feet)	--

Well Condition: **Protective Casing-** [ ] Poor [X] Good **Lock-** [ ] Yes [X] No **Expansion Cap-** [X] Yes [ ] No **Well ID-** [ ] Yes [X] No **Concrete Collar-** [X] Yes [ ] No **Well-** [ ] Poor [X] Good

EQUIPMENT

Sample Method: [ ] Bail [X] Pump / [X] Low Flow

Pump Type: Geotech GeoPump Model Ii No. Rental

Flow-Thru Cell Vol (mL): 500

Meter Type: Ysi Pro Dss No. Rental

INSTRUMENT MEASUREMENTS:

Start time: 7:40 **Stop time:** 8:55

		1	2	3	4	5	6	7	8
Time: (start)	Depth to Water (ft) (drawdown <0.3 or stable)	ORP (mvolts) (± 10)	pH (s.u.) (± 0.1)	Spec. Cond. (mS/cm) (±3%)	DO (mg/L) (±10% or 3 rdgs <0.5)	Temperature (ºC) (±3%)	Turbidity (ntu) (±10% or <5ntu)	Flow (ml/min) (<500 ml/min)	Notes
7:50	15.30	--	--	--	--	--	--	< 500	
7:55	15.30	-73.2	6.59	118.5	0.75	7.2	41.7	< 500	
8:15	15.30	-80.8	6.37	121.9	0.29	7	11.65	< 500	
8:40	15.30	-85.2	6.35	120.8	0.22	7.1	7.99	< 500	
8:50	15.30	-86.7	6.34	122.7	0.22	7.1	7.86	< 500	
8:55	15.30	-86.9	6.35	122.5	0.22	7.1	7.73	< 500	

SAMPLE TESTING INFORMATION:

SAMPLE TIME: 8:55

Analysis	Method	No. Bottles	Bottle Type	Volume	Preservation	Handling
VOC	EPA Method 8260	3	VOA	40 mL	HCl	Ice
SVOC	EPA Method 8270	2	AG	1 L	NP	Ice
TPH	EPA Method 8100	1	AG	1L	NP	Ice
Pesticides	EPA Method 8081	1	AG	1L	NP	Ice
PCBs	EPA Method 8082	2	AG	1L	NP	Ice
15 Solid Waste Metals/Mercury	EPA Methods 6010/7470	1	Poly	250mL	HNO3	Ice

Sample observations:

Color: None Odor: None Clarity: Clear

Total Purge Volume:

Tubing Volume:

2" WELL = 0.163 GAL /FT = 0.617 LITERS/FT
1" WELL = 0.013 GAL /FT = 0.0492 LITERS/FT
3/8" TUBING - 0.0057 GAL/FT - 0.0217 LITERS/FT
1/4" TUBING - 0.0025 GAL/FT - 0.0096 LITERS/FT

Notes:

NM - Not Measured NP - No Product observed BGS - below ground surface FT - feet in - inches mL - milliliters GAL - gallons mvolts - millivolts s.u. - standard units
mS/cm - microsiemens per centimeter mg/L - milligrams per liter ºC - degrees Celcius ntu - Nephelometric Turbidity Unit mL/min - milliliters per minute

APPENDIX E

LABORATORY CERTIFICATES

CERTIFICATE OF ANALYSIS

Richard Carlone
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: Truk Away Landfill (03.0034648.01)
ESS Laboratory Work Order Number: 20L0566

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

REVIEWED
By ESS Laboratory at 12:10 pm, Dec 28, 2020

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

SAMPLE RECEIPT

The following samples were received on December 16, 2020 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
20L0566-01	MW-113	Ground Water	6010C, 6020A, 7010, 7470A, 8081B, 8082A, 8100M, 8260B, 8270D, 8270D SIM
20L0566-02	MW-114	Ground Water	6010C, 6020A, 7010, 7470A, 8081B, 8082A, 8100M, 8260B, 8270D, 8270D SIM
20L0566-03	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill ESS Laboratory Work Order: 20L0566

PROJECT NARRATIVE

8260B Volatile Organic Compounds

D0L0374-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Vinyl Acetate (42% @ 30%)

DL01834-BS1 **Blank Spike recovery is above upper control limit (B+).**
Vinyl Acetate (133% @ 70-130%)

DL01834-BS1 **Blank Spike recovery is below lower control limit (B-).**
Tetrachloroethene (66% @ 70-130%)

DL01834-BSD1 **Blank Spike recovery is below lower control limit (B-).**
Tetrachloroethene (65% @ 70-130%)

8270D Semi-Volatile Organic Compounds

D0L0438-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (79% @ 80-120%), 4,6-Dinitro-2-Methylphenol (81% @ 80-120%), Benzoic Acid (66% @ 80-120%), Di-n-octylphthalate (111% @ 80-120%)

D0L0438-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Aniline (27% @ 20%), Benzoic Acid (34% @ 20%), Hexachlorocyclopentadiene (30% @ 20%)

DL02115-BSD1 **Blank Spike recovery is below lower control limit (B-).**
Pyridine (37% @ 40-140%)

DL02115-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Pyridine (47% @ 20%)

8270D(SIM) Semi-Volatile Organic Compounds

D0L0437-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
2,4,6-Tribromophenol (27% @ 20%), Hexachlorobenzene (28% @ 20%)

D0L0439-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
2,4,6-Tribromophenol (27% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (0.001)		6020A		1	KJK	12/21/20 14:32	50	25	DL01835
Arsenic	**0.014** (0.002)		7010		1	KJK	12/22/20 20:05	50	25	DL01835
Barium	ND (0.025)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Beryllium	ND (0.0005)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Cadmium	ND (0.0025)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Chromium	ND (0.010)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Cobalt	ND (0.010)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Copper	ND (0.010)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Lead	ND (0.010)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Mercury	ND (0.00020)		7470A		1	MKS	12/18/20 14:10	20	40	DL01819
Nickel	ND (0.025)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Selenium	ND (0.025)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Silver	ND (0.005)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Thallium	ND (0.0005)		6020A		1	KJK	12/21/20 14:32	50	25	DL01835
Vanadium	ND (0.010)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835
Zinc	ND (0.025)		6010C		1	KJK	12/18/20 19:32	50	25	DL01835

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC
Prepared: 12/21/20 12:04

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
4,4′-DDE	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
4,4′-DDT	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Aldrin	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
alpha-BHC	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
alpha-Chlordane	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
beta-BHC	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Chlordane (Total)	ND (0.000467)		8081B		1	12/21/20 20:26	D0L0385	DL02112
delta-BHC	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Dieldrin	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endosulfan I	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endosulfan II	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endosulfan Sulfate	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endrin	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endrin Aldehyde	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Endrin Ketone	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
gamma-BHC (Lindane)	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
gamma-Chlordane	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Heptachlor	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Heptachlor Epoxide	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Hexachlorobenzene	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Methoxychlor	ND (0.000047)		8081B		1	12/21/20 20:26	D0L0385	DL02112
Toxaphene	ND (0.00121)		8081B		1	12/21/20 20:26	D0L0385	DL02112

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*65 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*67 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*82 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MJV
Prepared: 12/16/20 16:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1221	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1232	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1242	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1248	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1254	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1260	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1262	ND (0.09)		8082A		1	12/17/20 16:17		DL01643
Aroclor 1268	ND (0.09)		8082A		1	12/17/20 16:17		DL01643

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*65 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*75 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*62 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*79 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: AMF
Prepared: 12/16/20 16:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**0.20** (0.19)		8100M		1	12/17/20 9:02	D0L0338	DL01604

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*99 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,1-Dichloropropene	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2-Dibromoethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,3-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1,4-Dioxane - Screen	ND (0.500)		8260B		1	12/18/20 18:12	D0L0374	DL01834
1-Chlorohexane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
2,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
2-Butanone	ND (0.0100)		8260B		1	12/18/20 18:12	D0L0374	DL01834
2-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
2-Hexanone	ND (0.0100)		8260B		1	12/18/20 18:12	D0L0374	DL01834
4-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
4-Isopropyltoluene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Acetone	ND (0.0100)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Benzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Bromochloromethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Bromodichloromethane	ND (0.0006)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Bromoform	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Bromomethane	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Carbon Disulfide	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Carbon Tetrachloride	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Chlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Chloroethane	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Chloroform	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Chloromethane	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Dibromochloromethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Dibromomethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Dichlorodifluoromethane	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Diethyl Ether	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Di-isopropyl ether	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Ethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Hexachlorobutadiene	ND (0.0006)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Hexachloroethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Isopropylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Methylene Chloride	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Naphthalene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
n-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
n-Propylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
sec-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Styrene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
tert-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Tetrachloroethene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Tetrahydrofuran	ND (0.0050)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Toluene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Trichloroethene	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Trichlorofluoromethane	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Vinyl Acetate	ND (0.0050)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Vinyl Chloride	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Xylene O	ND (0.0010)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Xylene P,M	ND (0.0020)		8260B		1	12/18/20 18:12	D0L0374	DL01834
Xylenes (Total)	ND (0.00200)		8260B		1	12/18/20 18:12		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*105 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
1,2,4-Trichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
1,2-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
1,3-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
1,4-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,3,4,6-Tetrachlorophenol	ND (0.047)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4,5-Trichlorophenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4,6-Trichlorophenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4-Dichlorophenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4-Dimethylphenol	ND (0.047)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4-Dinitrophenol	ND (0.047)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,4-Dinitrotoluene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2,6-Dinitrotoluene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2-Chloronaphthalene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2-Chlorophenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2-Methylphenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
2-Nitrophenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
3,3′-Dichlorobenzidine	ND (0.019)		8270D		1	12/22/20 23:02	D0L0438	DL02115
3+4-Methylphenol	ND (0.019)		8270D		1	12/22/20 23:02	D0L0438	DL02115
3-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4,6-Dinitro-2-Methylphenol	ND (0.047)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Bromophenyl-phenylether	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Chloro-3-Methylphenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Chloroaniline	ND (0.019)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Chloro-phenyl-phenyl ether	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
4-Nitrophenol	ND (0.047)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Acetophenone	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Aniline	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Azobenzene	ND (0.019)		8270D		1	12/22/20 23:02	D0L0438	DL02115

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzoic Acid	ND (0.093)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Benzyl Alcohol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
bis(2-Chloroethoxy)methane	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
bis(2-Chloroethyl)ether	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
bis(2-chloroisopropyl)Ether	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
bis(2-Ethylhexyl)phthalate	ND (0.006)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Butylbenzylphthalate	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Carbazole	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Dibenzofuran	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Diethylphthalate	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Dimethylphthalate	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Di-n-butylphthalate	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Di-n-octylphthalate	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Hexachlorobutadiene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Hexachlorocyclopentadiene	ND (0.023)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Hexachloroethane	ND (0.005)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Isophorone	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Nitrobenzene	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
N-Nitrosodimethylamine	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
N-Nitroso-Di-n-Propylamine	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
N-nitrosodiphenylamine	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Phenol	ND (0.009)		8270D		1	12/22/20 23:02	D0L0438	DL02115
Pyridine	ND (0.093)		8270D		1	12/22/20 23:02	D0L0438	DL02115

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*69 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*76 %*		*15-110*
Surrogate: 2-Chlorophenol-d4	*63 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*69 %*		*30-130*
Surrogate: 2-Fluorophenol	*56 %*		*15-110*
Surrogate: Nitrobenzene-d5	*73 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: Phenol-d6		*66 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*57 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113
Date Sampled: 12/16/20 09:35
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: TAJ
Prepared: 12/21/20 12:45

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Acenaphthene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Acenaphthylene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Anthracene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Benzo(a)anthracene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Benzo(a)pyrene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Benzo(b)fluoranthene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Benzo(g,h,i)perylene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Benzo(k)fluoranthene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Chrysene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Dibenzo(a,h)Anthracene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Fluoranthene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Fluorene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Hexachlorobenzene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Indeno(1,2,3-cd)Pyrene	ND (0.00005)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Naphthalene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Pentachlorophenol	ND (0.00084)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Phenanthrene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115
Pyrene	ND (0.00019)		8270D SIM		1	12/23/20 23:06	D0L0439	DL02115

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (0.001)		6020A		1	KJK	12/21/20 15:00	50	25	DL01835
Arsenic	**0.009** (0.002)		7010		1	KJK	12/22/20 20:28	50	25	DL01835
Barium	ND (0.025)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Beryllium	ND (0.0005)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Cadmium	ND (0.0025)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Chromium	ND (0.010)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Cobalt	ND (0.010)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Copper	ND (0.010)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Lead	ND (0.010)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Mercury	ND (0.00020)		7470A		1	MKS	12/18/20 14:24	20	40	DL01819
Nickel	ND (0.025)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Selenium	ND (0.025)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Silver	ND (0.005)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Thallium	ND (0.0005)		6020A		1	KJK	12/21/20 15:00	50	25	DL01835
Vanadium	ND (0.010)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835
Zinc	ND (0.025)		6010C		1	KJK	12/18/20 19:42	50	25	DL01835

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: DMC
Prepared: 12/21/20 12:04

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
4,4′-DDE	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
4,4′-DDT	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Aldrin	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
alpha-BHC	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
alpha-Chlordane	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
beta-BHC	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Chlordane (Total)	ND (0.000467)		8081B		1	12/21/20 20:54	D0L0385	DL02112
delta-BHC	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Dieldrin	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endosulfan I	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endosulfan II	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endosulfan Sulfate	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endrin	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endrin Aldehyde	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Endrin Ketone	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
gamma-BHC (Lindane)	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
gamma-Chlordane [2C]	**0.000101** (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Heptachlor	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Heptachlor Epoxide	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Hexachlorobenzene	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Methoxychlor	ND (0.000047)		8081B		1	12/21/20 20:54	D0L0385	DL02112
Toxaphene	ND (0.00121)		8081B		1	12/21/20 20:54	D0L0385	DL02112

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*54 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*56 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*84 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: ug/L
Analyst: MJV
Prepared: 12/16/20 16:45

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1221	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1232	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1242	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1248	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1254	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1260	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1262	ND (0.09)		8082A		1	12/17/20 16:37		DL01643
Aroclor 1268	ND (0.09)		8082A		1	12/17/20 16:37		DL01643

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*58 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*68 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*63 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*81 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: AMF
Prepared: 12/16/20 16:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**0.44** (0.19)		8100M		1	12/17/20 9:35	D0L0338	DL01604

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*109 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,1-Dichloropropene	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2-Dibromoethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,3-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1,4-Dioxane - Screen	ND (0.500)		8260B		1	12/18/20 18:39	D0L0374	DL01834
1-Chlorohexane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
2,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
2-Butanone	ND (0.0100)		8260B		1	12/18/20 18:39	D0L0374	DL01834
2-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
2-Hexanone	ND (0.0100)		8260B		1	12/18/20 18:39	D0L0374	DL01834
4-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
4-Isopropyltoluene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Acetone	ND (0.0100)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Benzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Bromochloromethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Bromodichloromethane	ND (0.0006)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Bromoform	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Bromomethane	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Carbon Disulfide	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Carbon Tetrachloride	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Chlorobenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Chloroethane	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Chloroform	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Chloromethane	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Dibromochloromethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Dibromomethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Dichlorodifluoromethane	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Diethyl Ether	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Di-isopropyl ether	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Ethylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Hexachlorobutadiene	ND (0.0006)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Hexachloroethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Isopropylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Methylene Chloride	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Naphthalene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
n-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
n-Propylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
sec-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Styrene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
tert-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Tetrachloroethene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Tetrahydrofuran	ND (0.0050)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Toluene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Trichloroethene	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Trichlorofluoromethane	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Vinyl Acetate	ND (0.0050)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Vinyl Chloride	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Xylene O	ND (0.0010)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Xylene P,M	ND (0.0020)		8260B		1	12/18/20 18:39	D0L0374	DL01834
Xylenes (Total)	ND (0.00200)		8260B		1	12/18/20 18:39		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*110 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
1,2,4-Trichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
1,2-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
1,3-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
1,4-Dichlorobenzene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,3,4,6-Tetrachlorophenol	ND (0.047)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4,5-Trichlorophenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4,6-Trichlorophenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4-Dichlorophenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4-Dimethylphenol	ND (0.047)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4-Dinitrophenol	ND (0.047)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,4-Dinitrotoluene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2,6-Dinitrotoluene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2-Chloronaphthalene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2-Chlorophenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2-Methylphenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
2-Nitrophenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
3,3′-Dichlorobenzidine	ND (0.019)		8270D		1	12/22/20 23:28	D0L0438	DL02115
3+4-Methylphenol	ND (0.019)		8270D		1	12/22/20 23:28	D0L0438	DL02115
3-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4,6-Dinitro-2-Methylphenol	ND (0.047)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Bromophenyl-phenylether	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Chloro-3-Methylphenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Chloroaniline	ND (0.019)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Chloro-phenyl-phenyl ether	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Nitroaniline	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
4-Nitrophenol	ND (0.047)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Acetophenone	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Aniline	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Azobenzene	ND (0.019)		8270D		1	12/22/20 23:28	D0L0438	DL02115

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Benzoic Acid	ND (0.093)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Benzyl Alcohol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
bis(2-Chloroethoxy)methane	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
bis(2-Chloroethyl)ether	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
bis(2-chloroisopropyl)Ether	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
bis(2-Ethylhexyl)phthalate	**0.006** (0.006)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Butylbenzylphthalate	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Carbazole	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Dibenzofuran	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Diethylphthalate	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Dimethylphthalate	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Di-n-butylphthalate	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Di-n-octylphthalate	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Hexachlorobutadiene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Hexachlorocyclopentadiene	ND (0.023)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Hexachloroethane	ND (0.005)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Isophorone	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Nitrobenzene	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
N-Nitrosodimethylamine	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
N-Nitroso-Di-n-Propylamine	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
N-nitrosodiphenylamine	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Phenol	ND (0.009)		8270D		1	12/22/20 23:28	D0L0438	DL02115
Pyridine	ND (0.093)		8270D		1	12/22/20 23:28	D0L0438	DL02115

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*72 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*75 %*		*15-110*
Surrogate: 2-Chlorophenol-d4	*67 %*		*15-110*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*
Surrogate: 2-Fluorophenol	*68 %*		*15-110*
Surrogate: Nitrobenzene-d5	*70 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: TJ
Prepared: 12/21/20 12:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: Phenol-d6		*72 %*		*15-110*				
Surrogate: p-Terphenyl-d14		*50 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114
Date Sampled: 12/16/20 08:55
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 0.25
Extraction Method: 3520C

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: TAJ
Prepared: 12/21/20 12:45

8270D(SIM) Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Acenaphthene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Acenaphthylene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Anthracene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Benzo(a)anthracene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Benzo(a)pyrene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Benzo(b)fluoranthene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Benzo(g,h,i)perylene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Benzo(k)fluoranthene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Chrysene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Dibenzo(a,h)Anthracene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Fluoranthene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Fluorene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Hexachlorobenzene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Indeno(1,2,3-cd)Pyrene	ND (0.00005)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Naphthalene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Pentachlorophenol	ND (0.00084)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Phenanthrene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115
Pyrene	ND (0.00019)		8270D SIM		1	12/23/20 23:53	D0L0439	DL02115

%Recovery	Qualifier	Limits

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/16/20 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,1-Dichloropropene	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2-Dibromoethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2-Dichloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,3-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1,4-Dioxane - Screen	ND (0.500)		8260B		1	12/18/20 17:19	D0L0374	DL01834
1-Chlorohexane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
2,2-Dichloropropane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
2-Butanone	ND (0.0100)		8260B		1	12/18/20 17:19	D0L0374	DL01834
2-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
2-Hexanone	ND (0.0100)		8260B		1	12/18/20 17:19	D0L0374	DL01834
4-Chlorotoluene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
4-Isopropyltoluene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Acetone	ND (0.0100)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Benzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/16/20 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Bromochloromethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Bromodichloromethane	ND (0.0006)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Bromoform	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Bromomethane	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Carbon Disulfide	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Carbon Tetrachloride	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Chlorobenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Chloroethane	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Chloroform	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Chloromethane	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Dibromochloromethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Dibromomethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Dichlorodifluoromethane	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Diethyl Ether	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Di-isopropyl ether	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Ethylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Hexachlorobutadiene	ND (0.0006)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Hexachloroethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Isopropylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Methylene Chloride	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Naphthalene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
n-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
n-Propylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
sec-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Styrene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
tert-Butylbenzene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/16/20 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 20L0566
ESS Laboratory Sample ID: 20L0566-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Tetrachloroethene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Tetrahydrofuran	ND (0.0050)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Toluene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Trichloroethene	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Trichlorofluoromethane	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Vinyl Acetate	ND (0.0050)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Vinyl Chloride	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Xylene O	ND (0.0010)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Xylene P,M	ND (0.0020)		8260B		1	12/18/20 17:19	D0L0374	DL01834
Xylenes (Total)	ND (0.00200)		8260B		1	12/18/20 17:19		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*96 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL01819 - 245.1/7470A										
Blank										
Mercury	ND	0.00020	mg/L							
LCS										
Mercury	0.00654	0.00020	mg/L	0.006042		108	80-120			
LCS Dup										
Mercury	0.00580	0.00020	mg/L	0.006042		96	80-120	12	20	
Batch DL01835 - 3005A/200.7										
Blank										
Barium	ND	0.025	mg/L							
Beryllium	ND	0.0005	mg/L							
Cadmium	ND	0.0025	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Nickel	ND	0.025	mg/L							
Selenium	ND	0.025	mg/L							
Silver	ND	0.005	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.025	mg/L							
Blank										
Antimony	ND	0.001	mg/L							
Thallium	ND	0.0005	mg/L							
Blank										
Arsenic	ND	0.002	mg/L							
LCS										
Barium	0.263	0.025	mg/L	0.2500		105	80-120			
Beryllium	0.0261	0.0005	mg/L	0.02500		104	80-120			
Cadmium	0.127	0.0025	mg/L	0.1250		102	80-120			
Chromium	0.262	0.010	mg/L	0.2500		105	80-120			
Cobalt	0.265	0.010	mg/L	0.2500		106	80-120			
Copper	0.258	0.010	mg/L	0.2500		103	80-120			
Lead	0.269	0.010	mg/L	0.2500		108	80-120			
Nickel	0.266	0.025	mg/L	0.2500		106	80-120			
Selenium	0.520	0.025	mg/L	0.5000		104	80-120			
Silver	0.129	0.005	mg/L	0.1250		103	80-120			
Vanadium	0.262	0.010	mg/L	0.2500		105	80-120			
Zinc	0.261	0.025	mg/L	0.2500		105	80-120			
LCS										
Antimony	0.264	0.005	mg/L	0.2500		106	80-120			
Thallium	0.256	0.002	mg/L	0.2500		102	80-120			
LCS										

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL01835 - 3005A/200.7										
Arsenic	0.259	0.062	mg/L	0.2500		104	80-120			
LCS Dup										
Barium	0.257	0.025	mg/L	0.2500		103	80-120	2	20	
Beryllium	0.0256	0.0005	mg/L	0.02500		102	80-120	2	20	
Cadmium	0.125	0.0025	mg/L	0.1250		100	80-120	2	20	
Chromium	0.257	0.010	mg/L	0.2500		103	80-120	2	20	
Cobalt	0.260	0.010	mg/L	0.2500		104	80-120	2	20	
Copper	0.252	0.010	mg/L	0.2500		101	80-120	2	20	
Lead	0.266	0.010	mg/L	0.2500		106	80-120	1	20	
Nickel	0.259	0.025	mg/L	0.2500		104	80-120	3	20	
Selenium	0.513	0.025	mg/L	0.5000		103	80-120	1	20	
Silver	0.125	0.005	mg/L	0.1250		100	80-120	3	20	
Vanadium	0.256	0.010	mg/L	0.2500		102	80-120	2	20	
Zinc	0.257	0.025	mg/L	0.2500		103	80-120	2	20	
LCS Dup										
Antimony	0.259	0.005	mg/L	0.2500		104	80-120	2	20	
Thallium	0.252	0.002	mg/L	0.2500		101	80-120	1	20	
LCS Dup										
Arsenic	0.255	0.062	mg/L	0.2500		102	80-120	2	20	
8081B Organochlorine Pesticides										
Batch DL02112 - 3510C										
Blank										
4,4´-DDD	ND	0.000050	mg/L							
4,4´-DDD [2C]	ND	0.000050	mg/L							
4,4´-DDE	ND	0.000050	mg/L							
4,4´-DDE [2C]	ND	0.000050	mg/L							
4,4´-DDT	ND	0.000050	mg/L							
4,4´-DDT [2C]	ND	0.000050	mg/L							
Aldrin	ND	0.000050	mg/L							
Aldrin [2C]	ND	0.000050	mg/L							
alpha-BHC	ND	0.000050	mg/L							
alpha-BHC [2C]	ND	0.000050	mg/L							
alpha-Chlordane	ND	0.000050	mg/L							
alpha-Chlordane [2C]	ND	0.000050	mg/L							
beta-BHC	ND	0.000050	mg/L							
beta-BHC [2C]	ND	0.000050	mg/L							
delta-BHC	ND	0.000050	mg/L							
delta-BHC [2C]	ND	0.000050	mg/L							
Dieldrin	ND	0.000050	mg/L							
Dieldrin [2C]	ND	0.000050	mg/L							
Endosulfan I	ND	0.000050	mg/L							
Endosulfan I [2C]	ND	0.000050	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL02112 - 3510C										
Endosulfan II	ND	0.000050	mg/L							
Endosulfan II [2C]	ND	0.000050	mg/L							
Endosulfan Sulfate	ND	0.000050	mg/L							
Endosulfan Sulfate [2C]	ND	0.000050	mg/L							
Endrin	ND	0.000050	mg/L							
Endrin [2C]	ND	0.000050	mg/L							
Endrin Aldehyde	ND	0.000050	mg/L							
Endrin Aldehyde [2C]	ND	0.000050	mg/L							
Endrin Ketone	ND	0.000050	mg/L							
Endrin Ketone [2C]	ND	0.000050	mg/L							
gamma-BHC (Lindane)	ND	0.000050	mg/L							
gamma-BHC (Lindane) [2C]	ND	0.000050	mg/L							
gamma-Chlordane	ND	0.000050	mg/L							
gamma-Chlordane [2C]	ND	0.000050	mg/L							
Heptachlor	ND	0.000050	mg/L							
Heptachlor [2C]	ND	0.000050	mg/L							
Heptachlor Epoxide	ND	0.000050	mg/L							
Heptachlor Epoxide [2C]	ND	0.000050	mg/L							
Hexachlorobenzene	ND	0.000050	mg/L							
Hexachlorobenzene [2C]	ND	0.000050	mg/L							
Methoxychlor	ND	0.000050	mg/L							
Methoxychlor [2C]	ND	0.000050	mg/L							
Surrogate: Decachlorobiphenyl	*0.000180*		mg/L	*0.0002500*		*72*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.000186*		mg/L	*0.0002500*		*75*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.000229*		mg/L	*0.0002500*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.000232*		mg/L	*0.0002500*		*93*	*30-150*			
LCS										
4,4´-DDD	0.000271	0.000050	mg/L	0.0002500		108	40-140			
4,4´-DDD [2C]	0.000272	0.000050	mg/L	0.0002500		109	40-140			
4,4´-DDE	0.000272	0.000050	mg/L	0.0002500		109	40-140			
4,4´-DDE [2C]	0.000260	0.000050	mg/L	0.0002500		104	40-140			
4,4´-DDT	0.000280	0.000050	mg/L	0.0002500		112	40-140			
4,4´-DDT [2C]	0.000277	0.000050	mg/L	0.0002500		111	40-140			
Aldrin	0.000240	0.000050	mg/L	0.0002500		96	40-140			
Aldrin [2C]	0.000237	0.000050	mg/L	0.0002500		95	40-140			
alpha-BHC	0.000253	0.000050	mg/L	0.0002500		101	40-140			
alpha-BHC [2C]	0.000227	0.000050	mg/L	0.0002500		91	40-140			
alpha-Chlordane	0.000236	0.000050	mg/L	0.0002500		94	40-140			
alpha-Chlordane [2C]	0.000236	0.000050	mg/L	0.0002500		95	40-140			
beta-BHC	0.000245	0.000050	mg/L	0.0002500		98	40-140			
beta-BHC [2C]	0.000252	0.000050	mg/L	0.0002500		101	40-140			
delta-BHC	0.000240	0.000050	mg/L	0.0002500		96	40-140			
delta-BHC [2C]	0.000227	0.000050	mg/L	0.0002500		91	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL02112 - 3510C										
Dieldrin	0.000265	0.000050	mg/L	0.0002500		106	40-140			
Dieldrin [2C]	0.000264	0.000050	mg/L	0.0002500		106	40-140			
Endosulfan I	0.000233	0.000050	mg/L	0.0002500		93	40-140			
Endosulfan I [2C]	0.000240	0.000050	mg/L	0.0002500		96	40-140			
Endosulfan II	0.000251	0.000050	mg/L	0.0002500		100	40-140			
Endosulfan II [2C]	0.000247	0.000050	mg/L	0.0002500		99	40-140			
Endosulfan Sulfate	0.000253	0.000050	mg/L	0.0002500		101	40-140			
Endosulfan Sulfate [2C]	0.000253	0.000050	mg/L	0.0002500		101	40-140			
Endrin	0.000255	0.000050	mg/L	0.0002500		102	40-140			
Endrin [2C]	0.000254	0.000050	mg/L	0.0002500		101	40-140			
Endrin Aldehyde	0.000212	0.000050	mg/L	0.0002500		85	40-140			
Endrin Aldehyde [2C]	0.000211	0.000050	mg/L	0.0002500		85	40-140			
Endrin Ketone	0.000260	0.000050	mg/L	0.0002500		104	40-140			
Endrin Ketone [2C]	0.000263	0.000050	mg/L	0.0002500		105	40-140			
gamma-BHC (Lindane)	0.000252	0.000050	mg/L	0.0002500		101	40-140			
gamma-BHC (Lindane) [2C]	0.000255	0.000050	mg/L	0.0002500		102	40-140			
gamma-Chlordane	0.000273	0.000050	mg/L	0.0002500		109	40-140			
gamma-Chlordane [2C]	0.000271	0.000050	mg/L	0.0002500		108	40-140			
Heptachlor	0.000243	0.000050	mg/L	0.0002500		97	40-140			
Heptachlor [2C]	0.000242	0.000050	mg/L	0.0002500		97	40-140			
Heptachlor Epoxide	0.000248	0.000050	mg/L	0.0002500		99	40-140			
Heptachlor Epoxide [2C]	0.000247	0.000050	mg/L	0.0002500		99	40-140			
Hexachlorobenzene	0.000245	0.000050	mg/L	0.0002500		98	40-140			
Hexachlorobenzene [2C]	0.000254	0.000050	mg/L	0.0002500		101	40-140			
Methoxychlor	0.000270	0.000050	mg/L	0.0002500		108	40-140			
Methoxychlor [2C]	0.000270	0.000050	mg/L	0.0002500		108	40-140			
Surrogate: Decachlorobiphenyl	*0.000203*		mg/L	*0.0002500*		*81*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.000208*		mg/L	*0.0002500*		*83*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.000237*		mg/L	*0.0002500*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.000241*		mg/L	*0.0002500*		*96*	*30-150*			
LCS Dup										
4,4´-DDD	0.000277	0.000050	mg/L	0.0002500		111	40-140	2	20	
4,4´-DDD [2C]	0.000275	0.000050	mg/L	0.0002500		110	40-140	1	20	
4,4´-DDE	0.000278	0.000050	mg/L	0.0002500		111	40-140	2	20	
4,4´-DDE [2C]	0.000263	0.000050	mg/L	0.0002500		105	40-140	1	20	
4,4´-DDT	0.000283	0.000050	mg/L	0.0002500		113	40-140	1	20	
4,4´-DDT [2C]	0.000279	0.000050	mg/L	0.0002500		112	40-140	0.9	20	
Aldrin	0.000248	0.000050	mg/L	0.0002500		99	40-140	3	20	
Aldrin [2C]	0.000244	0.000050	mg/L	0.0002500		98	40-140	3	20	
alpha-BHC	0.000262	0.000050	mg/L	0.0002500		105	40-140	3	20	
alpha-BHC [2C]	0.000232	0.000050	mg/L	0.0002500		93	40-140	2	20	
alpha-Chlordane	0.000241	0.000050	mg/L	0.0002500		96	40-140	2	20	
alpha-Chlordane [2C]	0.000242	0.000050	mg/L	0.0002500		97	40-140	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL02112 - 3510C										
beta-BHC	0.000251	0.000050	mg/L	0.0002500		100	40-140	2	20	
beta-BHC [2C]	0.000258	0.000050	mg/L	0.0002500		103	40-140	2	20	
delta-BHC	0.000246	0.000050	mg/L	0.0002500		98	40-140	2	20	
delta-BHC [2C]	0.000232	0.000050	mg/L	0.0002500		93	40-140	2	20	
Dieldrin	0.000272	0.000050	mg/L	0.0002500		109	40-140	3	20	
Dieldrin [2C]	0.000271	0.000050	mg/L	0.0002500		108	40-140	3	20	
Endosulfan I	0.000239	0.000050	mg/L	0.0002500		96	40-140	3	20	
Endosulfan I [2C]	0.000245	0.000050	mg/L	0.0002500		98	40-140	2	20	
Endosulfan II	0.000254	0.000050	mg/L	0.0002500		102	40-140	1	20	
Endosulfan II [2C]	0.000251	0.000050	mg/L	0.0002500		101	40-140	2	20	
Endosulfan Sulfate	0.000256	0.000050	mg/L	0.0002500		103	40-140	1	20	
Endosulfan Sulfate [2C]	0.000256	0.000050	mg/L	0.0002500		102	40-140	1	20	
Endrin	0.000262	0.000050	mg/L	0.0002500		105	40-140	3	20	
Endrin [2C]	0.000260	0.000050	mg/L	0.0002500		104	40-140	2	20	
Endrin Aldehyde	0.000222	0.000050	mg/L	0.0002500		89	40-140	5	20	
Endrin Aldehyde [2C]	0.000221	0.000050	mg/L	0.0002500		89	40-140	5	20	
Endrin Ketone	0.000267	0.000050	mg/L	0.0002500		107	40-140	3	20	
Endrin Ketone [2C]	0.000268	0.000050	mg/L	0.0002500		107	40-140	2	20	
gamma-BHC (Lindane)	0.000258	0.000050	mg/L	0.0002500		103	40-140	3	20	
gamma-BHC (Lindane) [2C]	0.000262	0.000050	mg/L	0.0002500		105	40-140	3	20	
gamma-Chlordane	0.000280	0.000050	mg/L	0.0002500		112	40-140	3	20	
gamma-Chlordane [2C]	0.000281	0.000050	mg/L	0.0002500		112	40-140	3	20	
Heptachlor	0.000250	0.000050	mg/L	0.0002500		100	40-140	3	20	
Heptachlor [2C]	0.000248	0.000050	mg/L	0.0002500		99	40-140	3	20	
Heptachlor Epoxide	0.000255	0.000050	mg/L	0.0002500		102	40-140	3	20	
Heptachlor Epoxide [2C]	0.000252	0.000050	mg/L	0.0002500		101	40-140	2	20	
Hexachlorobenzene	0.000255	0.000050	mg/L	0.0002500		102	40-140	4	20	
Hexachlorobenzene [2C]	0.000260	0.000050	mg/L	0.0002500		104	40-140	2	20	
Methoxychlor	0.000271	0.000050	mg/L	0.0002500		108	40-140	0.3	20	
Methoxychlor [2C]	0.000270	0.000050	mg/L	0.0002500		108	40-140	0.2	20	
Surrogate: Decachlorobiphenyl	*0.000195*		mg/L	*0.0002500*		*78*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.000201*		mg/L	*0.0002500*		*80*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.000240*		mg/L	*0.0002500*		*96*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.000244*		mg/L	*0.0002500*		*98*	*30-150*			
8082A Polychlorinated Biphenyls (PCB)										
Batch DL01643 - 3510C										
Blank										
Aroclor 1016	ND	0.05	ug/L							
Aroclor 1016 [2C]	ND	0.05	ug/L							
Aroclor 1221	ND	0.05	ug/L							
Aroclor 1221 [2C]	ND	0.05	ug/L							
Aroclor 1232	ND	0.05	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL01643 - 3510C										
Aroclor 1232 [2C]	ND	0.05	ug/L							
Aroclor 1242	ND	0.05	ug/L							
Aroclor 1242 [2C]	ND	0.05	ug/L							
Aroclor 1248	ND	0.05	ug/L							
Aroclor 1248 [2C]	ND	0.05	ug/L							
Aroclor 1254	ND	0.05	ug/L							
Aroclor 1254 [2C]	ND	0.05	ug/L							
Aroclor 1260	ND	0.05	ug/L							
Aroclor 1260 [2C]	ND	0.05	ug/L							
Aroclor 1262	ND	0.05	ug/L							
Aroclor 1262 [2C]	ND	0.05	ug/L							
Aroclor 1268	ND	0.05	ug/L							
Aroclor 1268 [2C]	ND	0.05	ug/L							
Surrogate: Decachlorobiphenyl	*0.0261*		ug/L	*0.05000*		*52*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0311*		ug/L	*0.05000*		*62*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0308*		ug/L	*0.05000*		*62*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0393*		ug/L	*0.05000*		*79*	*30-150*			
LCS										
Aroclor 1016	0.81	0.10	ug/L	1.000		81	40-140			
Aroclor 1016 [2C]	0.93	0.10	ug/L	1.000		93	40-140			
Aroclor 1260	0.79	0.10	ug/L	1.000		79	40-140			
Aroclor 1260 [2C]	0.90	0.10	ug/L	1.000		90	40-140			
Surrogate: Decachlorobiphenyl	*0.0361*		ug/L	*0.05000*		*72*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0421*		ug/L	*0.05000*		*84*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0368*		ug/L	*0.05000*		*74*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0431*		ug/L	*0.05000*		*86*	*30-150*			
LCS Dup										
Aroclor 1016	0.73	0.10	ug/L	1.000		73	40-140	9	20	
Aroclor 1016 [2C]	0.84	0.10	ug/L	1.000		84	40-140	10	20	
Aroclor 1260	0.75	0.10	ug/L	1.000		75	40-140	5	20	
Aroclor 1260 [2C]	0.86	0.10	ug/L	1.000		86	40-140	4	20	
Surrogate: Decachlorobiphenyl	*0.0330*		ug/L	*0.05000*		*66*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0385*		ug/L	*0.05000*		*77*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0276*		ug/L	*0.05000*		*55*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0314*		ug/L	*0.05000*		*63*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch DL01604 - 3510C										
Blank										
Decane (C10)	ND	0.005	mg/L							
Docosane (C22)	ND	0.005	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL01604 - 3510C										
Dodecane (C12)	ND	0.005	mg/L							
Eicosane (C20)	ND	0.005	mg/L							
Hexacosane (C26)	ND	0.005	mg/L							
Hexadecane (C16)	ND	0.005	mg/L							
Nonadecane (C19)	ND	0.005	mg/L							
Nonane (C9)	ND	0.005	mg/L							
Octacosane (C28)	ND	0.005	mg/L							
Octadecane (C18)	ND	0.005	mg/L							
Tetracosane (C24)	ND	0.005	mg/L							
Tetradecane (C14)	ND	0.005	mg/L							
Total Petroleum Hydrocarbons	ND	0.20	mg/L							
Triacontane (C30)	ND	0.005	mg/L							
Surrogate: O-Terphenyl	*0.103*		mg/L	*0.1000*		*103*	*40-140*			
LCS										
Decane (C10)	0.036	0.005	mg/L	0.05000		71	40-140			
Docosane (C22)	0.044	0.005	mg/L	0.05000		89	40-140			
Dodecane (C12)	0.040	0.005	mg/L	0.05000		81	40-140			
Eicosane (C20)	0.044	0.005	mg/L	0.05000		89	40-140			
Hexacosane (C26)	0.044	0.005	mg/L	0.05000		88	40-140			
Hexadecane (C16)	0.041	0.005	mg/L	0.05000		83	40-140			
Nonadecane (C19)	0.046	0.005	mg/L	0.05000		91	40-140			
Nonane (C9)	0.030	0.005	mg/L	0.05000		60	30-140			
Octacosane (C28)	0.044	0.005	mg/L	0.05000		89	40-140			
Octadecane (C18)	0.042	0.005	mg/L	0.05000		85	40-140			
Tetracosane (C24)	0.044	0.005	mg/L	0.05000		88	40-140			
Tetradecane (C14)	0.040	0.005	mg/L	0.05000		80	40-140			
Total Petroleum Hydrocarbons	0.592	0.20	mg/L	0.7000		85	40-140			
Triacontane (C30)	0.043	0.005	mg/L	0.05000		87	40-140			
Surrogate: O-Terphenyl	*0.0954*		mg/L	*0.1000*		*95*	*40-140*			
LCS Dup										
Decane (C10)	0.037	0.005	mg/L	0.05000		74	40-140	4	25	
Docosane (C22)	0.045	0.005	mg/L	0.05000		90	40-140	2	25	
Dodecane (C12)	0.043	0.005	mg/L	0.05000		86	40-140	6	25	
Eicosane (C20)	0.045	0.005	mg/L	0.05000		91	40-140	2	25	
Hexacosane (C26)	0.045	0.005	mg/L	0.05000		90	40-140	2	25	
Hexadecane (C16)	0.044	0.005	mg/L	0.05000		87	40-140	5	25	
Nonadecane (C19)	0.046	0.005	mg/L	0.05000		92	40-140	1	25	
Nonane (C9)	0.031	0.005	mg/L	0.05000		62	30-140	3	25	
Octacosane (C28)	0.045	0.005	mg/L	0.05000		91	40-140	2	25	
Octadecane (C18)	0.044	0.005	mg/L	0.05000		88	40-140	4	25	
Tetracosane (C24)	0.045	0.005	mg/L	0.05000		90	40-140	2	25	
Tetradecane (C14)	0.041	0.005	mg/L	0.05000		83	40-140	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL01604 - 3510C										
Total Petroleum Hydrocarbons	0.610	0.20	mg/L	0.7000		87	40-140	3	25	
Triacontane (C30)	0.044	0.005	mg/L	0.05000		89	40-140	2	25	
Surrogate: O-Terphenyl	*0.0954*		mg/L	*0.1000*		*95*	*40-140*			
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0274*		mg/L	*0.02500*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0266*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0095	0.0010	mg/L	0.01000		95	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
1,1,1-Trichloroethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,1,2,2-Tetrachloroethane	0.0112	0.0005	mg/L	0.01000		112	70-130			
1,1,2-Trichloroethane	0.0103	0.0010	mg/L	0.01000		103	70-130			
1,1-Dichloroethane	0.0108	0.0010	mg/L	0.01000		108	70-130			
1,1-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130			
1,1-Dichloropropene	0.0111	0.0020	mg/L	0.01000		111	70-130			
1,2,3-Trichlorobenzene	0.0108	0.0010	mg/L	0.01000		108	70-130			
1,2,3-Trichloropropane	0.0100	0.0010	mg/L	0.01000		100	70-130			
1,2,4-Trichlorobenzene	0.0103	0.0010	mg/L	0.01000		103	70-130			
1,2,4-Trimethylbenzene	0.0098	0.0010	mg/L	0.01000		98	70-130			
1,2-Dibromo-3-Chloropropane	0.0090	0.0050	mg/L	0.01000		90	70-130			
1,2-Dibromoethane	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,2-Dichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
1,2-Dichloroethane	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,2-Dichloropropane	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,3,5-Trimethylbenzene	0.0102	0.0010	mg/L	0.01000		102	70-130			
1,3-Dichlorobenzene	0.0093	0.0010	mg/L	0.01000		93	70-130			
1,3-Dichloropropane	0.0108	0.0010	mg/L	0.01000		108	70-130			
1,4-Dichlorobenzene	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,4-Dioxane - Screen	0.396	0.500	mg/L	0.2000		198	0-332			
1-Chlorohexane	0.0103	0.0010	mg/L	0.01000		103	70-130			
2,2-Dichloropropane	0.0102	0.0010	mg/L	0.01000		102	70-130			
2-Butanone	0.0553	0.0100	mg/L	0.05000		111	70-130			
2-Chlorotoluene	0.0102	0.0010	mg/L	0.01000		102	70-130			
2-Hexanone	0.0539	0.0100	mg/L	0.05000		108	70-130			
4-Chlorotoluene	0.0099	0.0010	mg/L	0.01000		99	70-130			
4-Isopropyltoluene	0.0102	0.0010	mg/L	0.01000		102	70-130			
4-Methyl-2-Pentanone	0.0564	0.0250	mg/L	0.05000		113	70-130			
Acetone	0.0551	0.0100	mg/L	0.05000		110	70-130			
Benzene	0.0112	0.0010	mg/L	0.01000		112	70-130			
Bromobenzene	0.0099	0.0020	mg/L	0.01000		99	70-130			
Bromochloromethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Bromodichloromethane	0.0092	0.0006	mg/L	0.01000		92	70-130			
Bromoform	0.0091	0.0010	mg/L	0.01000		91	70-130			
Bromomethane	0.0081	0.0020	mg/L	0.01000		81	70-130			
Carbon Disulfide	0.0096	0.0010	mg/L	0.01000		96	70-130			
Carbon Tetrachloride	0.0101	0.0010	mg/L	0.01000		101	70-130			
Chlorobenzene	0.0101	0.0010	mg/L	0.01000		101	70-130			
Chloroethane	0.0099	0.0020	mg/L	0.01000		99	70-130			
Chloroform	0.0102	0.0010	mg/L	0.01000		102	70-130			
Chloromethane	0.0096	0.0020	mg/L	0.01000		96	70-130			
cis-1,2-Dichloroethene	0.0106	0.0010	mg/L	0.01000		106	70-130			
cis-1,3-Dichloropropene	0.0109	0.0004	mg/L	0.01000		109	70-130			
Dibromochloromethane	0.0089	0.0010	mg/L	0.01000		89	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
Dibromomethane	0.0106	0.0010	mg/L	0.01000		106	70-130			
Dichlorodifluoromethane	0.0079	0.0020	mg/L	0.01000		79	70-130			
Diethyl Ether	0.0105	0.0010	mg/L	0.01000		105	70-130			
Di-isopropyl ether	0.0108	0.0010	mg/L	0.01000		108	70-130			
Ethyl tertiary-butyl ether	0.0102	0.0010	mg/L	0.01000		102	70-130			
Ethylbenzene	0.0106	0.0010	mg/L	0.01000		106	70-130			
Hexachlorobutadiene	0.0104	0.0006	mg/L	0.01000		104	70-130			
Hexachloroethane	0.0087	0.0010	mg/L	0.01000		87	70-130			
Isopropylbenzene	0.0096	0.0010	mg/L	0.01000		97	70-130			
Methyl tert-Butyl Ether	0.0112	0.0010	mg/L	0.01000		112	70-130			
Methylene Chloride	0.0102	0.0020	mg/L	0.01000		102	70-130			
Naphthalene	0.0112	0.0010	mg/L	0.01000		112	70-130			
n-Butylbenzene	0.0105	0.0010	mg/L	0.01000		105	70-130			
n-Propylbenzene	0.0099	0.0010	mg/L	0.01000		99	70-130			
sec-Butylbenzene	0.0096	0.0010	mg/L	0.01000		96	70-130			
Styrene	0.0102	0.0010	mg/L	0.01000		102	70-130			
tert-Butylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Tertiary-amyl methyl ether	0.0108	0.0010	mg/L	0.01000		108	70-130			
Tetrachloroethene	0.0066	0.0010	mg/L	0.01000		66	70-130			B-
Tetrahydrofuran	0.0104	0.0050	mg/L	0.01000		104	70-130			
Toluene	0.0110	0.0010	mg/L	0.01000		110	70-130			
trans-1,2-Dichloroethene	0.0104	0.0010	mg/L	0.01000		104	70-130			
trans-1,3-Dichloropropene	0.0099	0.0004	mg/L	0.01000		99	70-130			
Trichloroethene	0.0099	0.0010	mg/L	0.01000		99	70-130			
Trichlorofluoromethane	0.0104	0.0010	mg/L	0.01000		104	70-130			
Vinyl Acetate	0.0133	0.0050	mg/L	0.01000		133	70-130			B+
Vinyl Chloride	0.0105	0.0010	mg/L	0.01000		105	70-130			
Xylene O	0.0103	0.0010	mg/L	0.01000		103	70-130			
Xylene P,M	0.0212	0.0020	mg/L	0.02000		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0277*		mg/L	*0.02500*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0259*		mg/L	*0.02500*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0271*		mg/L	*0.02500*		*108*	*70-130*			
Surrogate: Toluene-d8	*0.0259*		mg/L	*0.02500*		*103*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
1,1,1-Trichloroethane	0.0095	0.0010	mg/L	0.01000		95	70-130	4	25	
1,1,2,2-Tetrachloroethane	0.0108	0.0005	mg/L	0.01000		108	70-130	3	25	
1,1,2-Trichloroethane	0.0099	0.0010	mg/L	0.01000		99	70-130	4	25	
1,1-Dichloroethane	0.0105	0.0010	mg/L	0.01000		105	70-130	3	25	
1,1-Dichloroethene	0.0097	0.0010	mg/L	0.01000		97	70-130	9	25	
1,1-Dichloropropene	0.0112	0.0020	mg/L	0.01000		112	70-130	0.5	25	
1,2,3-Trichlorobenzene	0.0107	0.0010	mg/L	0.01000		107	70-130	0.9	25	
1,2,3-Trichloropropane	0.0096	0.0010	mg/L	0.01000		96	70-130	4	25	
1,2,4-Trichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	7	25	

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
1,2,4-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	3	25	
1,2-Dibromo-3-Chloropropane	0.0088	0.0050	mg/L	0.01000		88	70-130	2	25	
1,2-Dibromoethane	0.0101	0.0010	mg/L	0.01000		101	70-130	2	25	
1,2-Dichlorobenzene	0.0098	0.0010	mg/L	0.01000		98	70-130	3	25	
1,2-Dichloroethane	0.0105	0.0010	mg/L	0.01000		105	70-130	1	25	
1,2-Dichloropropane	0.0104	0.0010	mg/L	0.01000		104	70-130	0.5	25	
1,3,5-Trimethylbenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	1	25	
1,3-Dichlorobenzene	0.0092	0.0010	mg/L	0.01000		92	70-130	1	25	
1,3-Dichloropropane	0.0106	0.0010	mg/L	0.01000		106	70-130	2	25	
1,4-Dichlorobenzene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.8	25	
1,4-Dioxane - Screen	0.291	0.500	mg/L	0.2000		145	0-332	31	200	
1-Chlorohexane	0.0102	0.0010	mg/L	0.01000		102	70-130	1	25	
2,2-Dichloropropane	0.0098	0.0010	mg/L	0.01000		98	70-130	4	25	
2-Butanone	0.0542	0.0100	mg/L	0.05000		108	70-130	2	25	
2-Chlorotoluene	0.0099	0.0010	mg/L	0.01000		99	70-130	3	25	
2-Hexanone	0.0547	0.0100	mg/L	0.05000		109	70-130	1	25	
4-Chlorotoluene	0.0102	0.0010	mg/L	0.01000		102	70-130	3	25	
4-Isopropyltoluene	0.0103	0.0010	mg/L	0.01000		103	70-130	0.5	25	
4-Methyl-2-Pentanone	0.0534	0.0250	mg/L	0.05000		107	70-130	6	25	
Acetone	0.0524	0.0100	mg/L	0.05000		105	70-130	5	25	
Benzene	0.0107	0.0010	mg/L	0.01000		107	70-130	4	25	
Bromobenzene	0.0099	0.0020	mg/L	0.01000		99	70-130	0.1	25	
Bromochloromethane	0.0101	0.0010	mg/L	0.01000		101	70-130	6	25	
Bromodichloromethane	0.0092	0.0006	mg/L	0.01000		92	70-130	0.7	25	
Bromoform	0.0088	0.0010	mg/L	0.01000		88	70-130	3	25	
Bromomethane	0.0072	0.0020	mg/L	0.01000		72	70-130	12	25	
Carbon Disulfide	0.0094	0.0010	mg/L	0.01000		94	70-130	1	25	
Carbon Tetrachloride	0.0094	0.0010	mg/L	0.01000		94	70-130	7	25	
Chlorobenzene	0.0100	0.0010	mg/L	0.01000		100	70-130	0.4	25	
Chloroethane	0.0100	0.0020	mg/L	0.01000		100	70-130	0.9	25	
Chloroform	0.0098	0.0010	mg/L	0.01000		98	70-130	4	25	
Chloromethane	0.0089	0.0020	mg/L	0.01000		89	70-130	8	25	
cis-1,2-Dichloroethene	0.0101	0.0010	mg/L	0.01000		101	70-130	4	25	
cis-1,3-Dichloropropene	0.0104	0.0004	mg/L	0.01000		104	70-130	4	25	
Dibromochloromethane	0.0087	0.0010	mg/L	0.01000		87	70-130	2	25	
Dibromomethane	0.0102	0.0010	mg/L	0.01000		102	70-130	4	25	
Dichlorodifluoromethane	0.0075	0.0020	mg/L	0.01000		75	70-130	4	25	
Diethyl Ether	0.0105	0.0010	mg/L	0.01000		105	70-130	0.1	25	
Di-isopropyl ether	0.0107	0.0010	mg/L	0.01000		107	70-130	0.7	25	
Ethyl tertiary-butyl ether	0.0100	0.0010	mg/L	0.01000		100	70-130	2	25	
Ethylbenzene	0.0106	0.0010	mg/L	0.01000		106	70-130	0.6	25	
Hexachlorobutadiene	0.0100	0.0006	mg/L	0.01000		100	70-130	4	25	
Hexachloroethane	0.0088	0.0010	mg/L	0.01000		88	70-130	2	25	
Isopropylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DL01834 - 5030B										
Methyl tert-Butyl Ether	0.0107	0.0010	mg/L	0.01000		107	70-130	5	25	
Methylene Chloride	0.0101	0.0020	mg/L	0.01000		101	70-130	0.1	25	
Naphthalene	0.0103	0.0010	mg/L	0.01000		103	70-130	8	25	
n-Butylbenzene	0.0104	0.0010	mg/L	0.01000		104	70-130	1	25	
n-Propylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
sec-Butylbenzene	0.0093	0.0010	mg/L	0.01000		93	70-130	3	25	
Styrene	0.0105	0.0010	mg/L	0.01000		105	70-130	3	25	
tert-Butylbenzene	0.0097	0.0010	mg/L	0.01000		97	70-130	2	25	
Tertiary-amyl methyl ether	0.0104	0.0010	mg/L	0.01000		104	70-130	4	25	
Tetrachloroethene	0.0065	0.0010	mg/L	0.01000		65	70-130	1	25	B-
Tetrahydrofuran	0.0097	0.0050	mg/L	0.01000		97	70-130	7	25	
Toluene	0.0103	0.0010	mg/L	0.01000		103	70-130	6	25	
trans-1,2-Dichloroethene	0.0099	0.0010	mg/L	0.01000		99	70-130	5	25	
trans-1,3-Dichloropropene	0.0095	0.0004	mg/L	0.01000		95	70-130	4	25	
Trichloroethene	0.0095	0.0010	mg/L	0.01000		95	70-130	4	25	
Trichlorofluoromethane	0.0104	0.0010	mg/L	0.01000		104	70-130	0.4	25	
Vinyl Acetate	0.0122	0.0050	mg/L	0.01000		122	70-130	8	25	
Vinyl Chloride	0.0101	0.0010	mg/L	0.01000		101	70-130	4	25	
Xylene O	0.0100	0.0010	mg/L	0.01000		100	70-130	3	25	
Xylene P,M	0.0214	0.0020	mg/L	0.02000		107	70-130	1	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0265*		mg/L	*0.02500*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0260*		mg/L	*0.02500*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0256*		mg/L	*0.02500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0263*		mg/L	*0.02500*		*105*	*70-130*			
8270D Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
Blank										
1,1-Biphenyl	ND	0.010	mg/L							
1,2,4-Trichlorobenzene	ND	0.010	mg/L							
1,2-Dichlorobenzene	ND	0.010	mg/L							
1,3-Dichlorobenzene	ND	0.010	mg/L							
1,4-Dichlorobenzene	ND	0.010	mg/L							
2,3,4,6-Tetrachlorophenol	ND	0.050	mg/L							
2,4,5-Trichlorophenol	ND	0.010	mg/L							
2,4,6-Trichlorophenol	ND	0.010	mg/L							
2,4-Dichlorophenol	ND	0.010	mg/L							
2,4-Dimethylphenol	ND	0.050	mg/L							
2,4-Dinitrophenol	ND	0.050	mg/L							
2,4-Dinitrotoluene	ND	0.010	mg/L							
2,6-Dinitrotoluene	ND	0.010	mg/L							
2-Chloronaphthalene	ND	0.010	mg/L							
2-Chlorophenol	ND	0.010	mg/L							
2-Methylphenol	ND	0.010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
2-Nitroaniline	ND	0.010	mg/L							
2-Nitrophenol	ND	0.010	mg/L							
3,3´-Dichlorobenzidine	ND	0.020	mg/L							
3+4-Methylphenol	ND	0.020	mg/L							
3-Nitroaniline	ND	0.010	mg/L							
4,6-Dinitro-2-Methylphenol	ND	0.050	mg/L							
4-Bromophenyl-phenylether	ND	0.010	mg/L							
4-Chloro-3-Methylphenol	ND	0.010	mg/L							
4-Chloroaniline	ND	0.020	mg/L							
4-Chloro-phenyl-phenyl ether	ND	0.010	mg/L							
4-Nitroaniline	ND	0.010	mg/L							
4-Nitrophenol	ND	0.050	mg/L							
Acetophenone	ND	0.010	mg/L							
Aniline	ND	0.010	mg/L							
Azobenzene	ND	0.020	mg/L							
Benzoic Acid	ND	0.100	mg/L							
Benzyl Alcohol	ND	0.010	mg/L							
bis(2-Chloroethoxy)methane	ND	0.010	mg/L							
bis(2-Chloroethyl)ether	ND	0.010	mg/L							
bis(2-chloroisopropyl)Ether	ND	0.010	mg/L							
bis(2-Ethylhexyl)phthalate	ND	0.006	mg/L							
Butylbenzylphthalate	ND	0.010	mg/L							
Carbazole	ND	0.010	mg/L							
Dibenzofuran	ND	0.010	mg/L							
Diethylphthalate	ND	0.010	mg/L							
Dimethylphthalate	ND	0.010	mg/L							
Di-n-butylphthalate	ND	0.010	mg/L							
Di-n-octylphthalate	ND	0.010	mg/L							
Hexachlorobutadiene	ND	0.010	mg/L							
Hexachlorocyclopentadiene	ND	0.025	mg/L							
Hexachloroethane	ND	0.005	mg/L							
Isophorone	ND	0.010	mg/L							
Nitrobenzene	ND	0.010	mg/L							
N-Nitrosodimethylamine	ND	0.010	mg/L							
N-Nitroso-Di-n-Propylamine	ND	0.010	mg/L							
N-nitrosodiphenylamine	ND	0.010	mg/L							
Phenol	ND	0.010	mg/L							
Pyridine	ND	0.100	mg/L							
Surrogate: 1,2-Dichlorobenzene-d4	*0.0645*		mg/L	*0.1000*		*65*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.0936*		mg/L	*0.1500*		*62*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*0.0944*		mg/L	*0.1500*		*63*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0585*		mg/L	*0.1000*		*59*	*30-130*			
Surrogate: 2-Fluorophenol	*0.0913*		mg/L	*0.1500*		*61*	*15-110*			
Surrogate: Nitrobenzene-d5	*0.0658*		mg/L	*0.1000*		*66*	*30-130*			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
Surrogate: Phenol-d6	*0.0973*		mg/L	*0.1500*		*65*	*15-110*			
Surrogate: p-Terphenyl-d14	*0.0712*		mg/L	*0.1000*		*71*	*30-130*			
LCS										
1,1-Biphenyl	0.076	0.010	mg/L	0.1000		76	40-140			
1,2,4-Trichlorobenzene	0.068	0.010	mg/L	0.1000		68	40-140			
1,2-Dichlorobenzene	0.063	0.010	mg/L	0.1000		63	40-140			
1,3-Dichlorobenzene	0.061	0.010	mg/L	0.1000		61	40-140			
1,4-Dichlorobenzene	0.065	0.010	mg/L	0.1000		65	40-140			
2,3,4,6-Tetrachlorophenol	0.070	0.050	mg/L	0.1000		70	40-140			
2,4,5-Trichlorophenol	0.083	0.010	mg/L	0.1000		83	30-130			
2,4,6-Trichlorophenol	0.079	0.010	mg/L	0.1000		79	30-130			
2,4-Dichlorophenol	0.079	0.010	mg/L	0.1000		79	30-130			
2,4-Dimethylphenol	0.073	0.050	mg/L	0.1000		73	30-130			
2,4-Dinitrophenol	0.065	0.050	mg/L	0.1000		65	30-130			
2,4-Dinitrotoluene	0.090	0.010	mg/L	0.1000		90	40-140			
2,6-Dinitrotoluene	0.086	0.010	mg/L	0.1000		86	40-140			
2-Chloronaphthalene	0.069	0.010	mg/L	0.1000		69	40-140			
2-Chlorophenol	0.071	0.010	mg/L	0.1000		71	30-130			
2-Methylphenol	0.076	0.010	mg/L	0.1000		76	30-130			
2-Nitroaniline	0.080	0.010	mg/L	0.1000		80	40-140			
2-Nitrophenol	0.069	0.010	mg/L	0.1000		69	30-130			
3,3´-Dichlorobenzidine	0.088	0.020	mg/L	0.1000		88	40-140			
3+4-Methylphenol	0.147	0.020	mg/L	0.2000		74	30-130			
3-Nitroaniline	0.075	0.010	mg/L	0.1000		75	40-140			
4,6-Dinitro-2-Methylphenol	0.074	0.050	mg/L	0.1000		74	30-130			
4-Bromophenyl-phenylether	0.081	0.010	mg/L	0.1000		81	40-140			
4-Chloro-3-Methylphenol	0.086	0.010	mg/L	0.1000		86	30-130			
4-Chloroaniline	0.064	0.020	mg/L	0.1000		64	40-140			
4-Chloro-phenyl-phenyl ether	0.082	0.010	mg/L	0.1000		82	40-140			
4-Nitroaniline	0.076	0.010	mg/L	0.1000		76	40-140			
4-Nitrophenol	0.075	0.050	mg/L	0.1000		75	30-130			
Acetophenone	0.076	0.010	mg/L	0.1000		76	40-140			
Aniline	0.049	0.010	mg/L	0.1000		49	40-140			
Azobenzene	0.085	0.020	mg/L	0.1000		85	40-140			
Benzoic Acid	0.056	0.100	mg/L	0.1000		56	40-140			
Benzyl Alcohol	0.068	0.010	mg/L	0.1000		68	40-140			
bis(2-Chloroethoxy)methane	0.071	0.010	mg/L	0.1000		71	40-140			
bis(2-Chloroethyl)ether	0.069	0.010	mg/L	0.1000		69	40-140			
bis(2-chloroisopropyl)Ether	0.066	0.010	mg/L	0.1000		66	40-140			
bis(2-Ethylhexyl)phthalate	0.080	0.006	mg/L	0.1000		80	40-140			
Butylbenzylphthalate	0.078	0.010	mg/L	0.1000		78	40-140			
Carbazole	0.087	0.010	mg/L	0.1000		87	40-140			
Dibenzofuran	0.079	0.010	mg/L	0.1000		79	40-140			

CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
Diethylphthalate	0.084	0.010	mg/L	0.1000		84	40-140			
Dimethylphthalate	0.080	0.010	mg/L	0.1000		80	40-140			
Di-n-butylphthalate	0.079	0.010	mg/L	0.1000		79	40-140			
Di-n-octylphthalate	0.080	0.010	mg/L	0.1000		80	40-140			
Hexachlorobutadiene	0.072	0.010	mg/L	0.1000		72	40-140			
Hexachlorocyclopentadiene	0.064	0.025	mg/L	0.1000		64	40-140			
Hexachloroethane	0.070	0.005	mg/L	0.1000		70	40-140			
Isophorone	0.070	0.010	mg/L	0.1000		70	40-140			
Nitrobenzene	0.071	0.010	mg/L	0.1000		71	40-140			
N-Nitrosodimethylamine	0.074	0.010	mg/L	0.1000		74	40-140			
N-Nitroso-Di-n-Propylamine	0.075	0.010	mg/L	0.1000		75	40-140			
N-nitrosodiphenylamine	0.086	0.010	mg/L	0.1000		86	40-140			
Phenol	0.068	0.010	mg/L	0.1000		68	30-130			
Pyridine	0.059	0.100	mg/L	0.1000		59	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*0.0762*		mg/L	*0.1000*		*76*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.153*		mg/L	*0.1500*		*102*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*0.115*		mg/L	*0.1500*		*77*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0799*		mg/L	*0.1000*		*80*	*30-130*			
Surrogate: 2-Fluorophenol	*0.107*		mg/L	*0.1500*		*71*	*15-110*			
Surrogate: Nitrobenzene-d5	*0.0834*		mg/L	*0.1000*		*83*	*30-130*			
Surrogate: Phenol-d6	*0.124*		mg/L	*0.1500*		*83*	*15-110*			
Surrogate: p-Terphenyl-d14	*0.0974*		mg/L	*0.1000*		*97*	*30-130*			
LCS Dup										
1,1-Biphenyl	0.075	0.010	mg/L	0.1000		75	40-140	1	20	
1,2,4-Trichlorobenzene	0.066	0.010	mg/L	0.1000		66	40-140	2	20	
1,2-Dichlorobenzene	0.065	0.010	mg/L	0.1000		65	40-140	3	20	
1,3-Dichlorobenzene	0.064	0.010	mg/L	0.1000		64	40-140	6	20	
1,4-Dichlorobenzene	0.067	0.010	mg/L	0.1000		67	40-140	3	20	
2,3,4,6-Tetrachlorophenol	0.072	0.050	mg/L	0.1000		72	40-140	2	20	
2,4,5-Trichlorophenol	0.083	0.010	mg/L	0.1000		83	30-130	0.7	20	
2,4,6-Trichlorophenol	0.083	0.010	mg/L	0.1000		83	30-130	5	20	
2,4-Dichlorophenol	0.080	0.010	mg/L	0.1000		80	30-130	2	20	
2,4-Dimethylphenol	0.073	0.050	mg/L	0.1000		73	30-130	0.6	20	
2,4-Dinitrophenol	0.068	0.050	mg/L	0.1000		68	30-130	5	20	
2,4-Dinitrotoluene	0.091	0.010	mg/L	0.1000		91	40-140	1	20	
2,6-Dinitrotoluene	0.085	0.010	mg/L	0.1000		85	40-140	0.6	20	
2-Chloronaphthalene	0.070	0.010	mg/L	0.1000		70	40-140	1	20	
2-Chlorophenol	0.076	0.010	mg/L	0.1000		76	30-130	7	20	
2-Methylphenol	0.080	0.010	mg/L	0.1000		80	30-130	5	20	
2-Nitroaniline	0.079	0.010	mg/L	0.1000		79	40-140	1	20	
2-Nitrophenol	0.073	0.010	mg/L	0.1000		73	30-130	6	20	
3,3´-Dichlorobenzidine	0.079	0.020	mg/L	0.1000		79	40-140	11	20	
3+4-Methylphenol	0.155	0.020	mg/L	0.2000		78	30-130	5	20	
3-Nitroaniline	0.074	0.010	mg/L	0.1000		74	40-140	1	20	

CERTIFICATE OF ANALYSIS

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
4,6-Dinitro-2-Methylphenol	0.073	0.050	mg/L	0.1000		73	30-130	2	20	
4-Bromophenyl-phenylether	0.083	0.010	mg/L	0.1000		83	40-140	3	20	
4-Chloro-3-Methylphenol	0.082	0.010	mg/L	0.1000		82	30-130	5	20	
4-Chloroaniline	0.061	0.020	mg/L	0.1000		61	40-140	4	20	
4-Chloro-phenyl-phenyl ether	0.081	0.010	mg/L	0.1000		81	40-140	0.7	20	
4-Nitroaniline	0.082	0.010	mg/L	0.1000		82	40-140	8	20	
4-Nitrophenol	0.073	0.050	mg/L	0.1000		73	30-130	2	20	
Acetophenone	0.077	0.010	mg/L	0.1000		77	40-140	1	20	
Aniline	0.047	0.010	mg/L	0.1000		47	40-140	4	20	
Azobenzene	0.086	0.020	mg/L	0.1000		86	40-140	0.8	20	
Benzoic Acid	0.061	0.100	mg/L	0.1000		61	40-140	9	20	
Benzyl Alcohol	0.074	0.010	mg/L	0.1000		74	40-140	8	20	
bis(2-Chloroethoxy)methane	0.072	0.010	mg/L	0.1000		72	40-140	1	20	
bis(2-Chloroethyl)ether	0.067	0.010	mg/L	0.1000		67	40-140	3	20	
bis(2-chloroisopropyl)Ether	0.072	0.010	mg/L	0.1000		72	40-140	9	20	
bis(2-Ethylhexyl)phthalate	0.079	0.006	mg/L	0.1000		79	40-140	1	20	
Butylbenzylphthalate	0.078	0.010	mg/L	0.1000		78	40-140	0.3	20	
Carbazole	0.086	0.010	mg/L	0.1000		86	40-140	0.9	20	
Dibenzofuran	0.077	0.010	mg/L	0.1000		77	40-140	3	20	
Diethylphthalate	0.084	0.010	mg/L	0.1000		84	40-140	0.2	20	
Dimethylphthalate	0.079	0.010	mg/L	0.1000		79	40-140	1	20	
Di-n-butylphthalate	0.081	0.010	mg/L	0.1000		81	40-140	2	20	
Di-n-octylphthalate	0.084	0.010	mg/L	0.1000		84	40-140	5	20	
Hexachlorobutadiene	0.072	0.010	mg/L	0.1000		72	40-140	0.1	20	
Hexachlorocyclopentadiene	0.068	0.025	mg/L	0.1000		68	40-140	7	20	
Hexachloroethane	0.068	0.005	mg/L	0.1000		68	40-140	2	20	
Isophorone	0.071	0.010	mg/L	0.1000		71	40-140	1	20	
Nitrobenzene	0.072	0.010	mg/L	0.1000		72	40-140	2	20	
N-Nitrosodimethylamine	0.069	0.010	mg/L	0.1000		69	40-140	7	20	
N-Nitroso-Di-n-Propylamine	0.083	0.010	mg/L	0.1000		83	40-140	10	20	
N-nitrosodiphenylamine	0.084	0.010	mg/L	0.1000		84	40-140	2	20	
Phenol	0.071	0.010	mg/L	0.1000		71	30-130	4	20	
Pyridine	0.037	0.100	mg/L	0.1000		37	40-140	47	20	B-, D+
Surrogate: 1,2-Dichlorobenzene-d4	*0.0796*		mg/L	*0.1000*		*80*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.149*		mg/L	*0.1500*		*99*	*15-110*			
Surrogate: 2-Chlorophenol-d4	*0.120*		mg/L	*0.1500*		*80*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0798*		mg/L	*0.1000*		*80*	*30-130*			
Surrogate: 2-Fluorophenol	*0.112*		mg/L	*0.1500*		*75*	*15-110*			
Surrogate: Nitrobenzene-d5	*0.0829*		mg/L	*0.1000*		*83*	*30-130*			
Surrogate: Phenol-d6	*0.126*		mg/L	*0.1500*		*84*	*15-110*			
Surrogate: p-Terphenyl-d14	*0.0974*		mg/L	*0.1000*		*97*	*30-130*			
8270D(SIM) Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
Blank										
2-Methylnaphthalene	ND	0.00020	mg/L							
Acenaphthene	ND	0.00020	mg/L							
Acenaphthylene	ND	0.00020	mg/L							
Anthracene	ND	0.00020	mg/L							
Benzo(a)anthracene	ND	0.00005	mg/L							
Benzo(a)pyrene	ND	0.00005	mg/L							
Benzo(b)fluoranthene	ND	0.00005	mg/L							
Benzo(g,h,i)perylene	ND	0.00020	mg/L							
Benzo(k)fluoranthene	ND	0.00005	mg/L							
Chrysene	ND	0.00005	mg/L							
Dibenzo(a,h)Anthracene	ND	0.00005	mg/L							
Fluoranthene	ND	0.00020	mg/L							
Fluorene	ND	0.00020	mg/L							
Hexachlorobenzene	ND	0.00020	mg/L							
Indeno(1,2,3-cd)Pyrene	ND	0.00005	mg/L							
Naphthalene	ND	0.00020	mg/L							
Pentachlorophenol	ND	0.00090	mg/L							
Phenanthrene	ND	0.00020	mg/L							
Pyrene	ND	0.00020	mg/L							
Surrogate: 1,2-Dichlorobenzene-d4	*0.0619*		mg/L	*0.1000*		*62*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.0486*		mg/L	*0.1500*		*32*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0529*		mg/L	*0.1000*		*53*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.0758*		mg/L	*0.1000*		*76*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.0605*		mg/L	*0.1000*		*60*	*30-130*			
LCS										
2-Methylnaphthalene	0.0625	0.00400	mg/L	0.1000		63	40-140			
Acenaphthene	0.0679	0.00400	mg/L	0.1000		68	40-140			
Acenaphthylene	0.0718	0.00400	mg/L	0.1000		72	40-140			
Anthracene	0.0739	0.00400	mg/L	0.1000		74	40-140			
Benzo(a)anthracene	0.0761	0.00100	mg/L	0.1000		76	40-140			
Benzo(a)pyrene	0.0765	0.00100	mg/L	0.1000		77	40-140			
Benzo(b)fluoranthene	0.0761	0.00100	mg/L	0.1000		76	40-140			
Benzo(g,h,i)perylene	0.0720	0.00400	mg/L	0.1000		72	40-140			
Benzo(k)fluoranthene	0.0754	0.00100	mg/L	0.1000		75	40-140			
Chrysene	0.0716	0.00100	mg/L	0.1000		72	40-140			
Dibenzo(a,h)Anthracene	0.0741	0.00100	mg/L	0.1000		74	40-140			
Fluoranthene	0.0744	0.00400	mg/L	0.1000		74	40-140			
Fluorene	0.0675	0.00400	mg/L	0.1000		67	40-140			
Hexachlorobenzene	0.0691	0.00400	mg/L	0.1000		69	40-140			
Indeno(1,2,3-cd)Pyrene	0.0754	0.00100	mg/L	0.1000		75	40-140			
Naphthalene	0.0545	0.00400	mg/L	0.1000		54	40-140			
Pentachlorophenol	0.0730	0.0180	mg/L	0.1000		73	30-130			
Phenanthrene	0.0728	0.00400	mg/L	0.1000		73	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D(SIM) Semi-Volatile Organic Compounds										
Batch DL02115 - 3520C										
Pyrene	0.0756	0.00400	mg/L	0.1000		76	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*0.0722*		mg/L	*0.1000*		*72*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.0951*		mg/L	*0.1500*		*63*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0710*		mg/L	*0.1000*		*71*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.0791*		mg/L	*0.1000*		*79*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.0865*		mg/L	*0.1000*		*86*	*30-130*			
LCS Dup										
2-Methylnaphthalene	0.0668	0.00400	mg/L	0.1000		67	40-140	7	20	
Acenaphthene	0.0680	0.00400	mg/L	0.1000		68	40-140	0.03	20	
Acenaphthylene	0.0727	0.00400	mg/L	0.1000		73	40-140	1	20	
Anthracene	0.0737	0.00400	mg/L	0.1000		74	40-140	0.3	20	
Benzo(a)anthracene	0.0777	0.00100	mg/L	0.1000		78	40-140	2	20	
Benzo(a)pyrene	0.0795	0.00100	mg/L	0.1000		80	40-140	4	20	
Benzo(b)fluoranthene	0.0841	0.00100	mg/L	0.1000		84	40-140	10	20	
Benzo(g,h,i)perylene	0.0722	0.00400	mg/L	0.1000		72	40-140	0.2	20	
Benzo(k)fluoranthene	0.0715	0.00100	mg/L	0.1000		72	40-140	5	20	
Chrysene	0.0741	0.00100	mg/L	0.1000		74	40-140	4	20	
Dibenzo(a,h)Anthracene	0.0750	0.00100	mg/L	0.1000		75	40-140	1	20	
Fluoranthene	0.0742	0.00400	mg/L	0.1000		74	40-140	0.2	20	
Fluorene	0.0670	0.00400	mg/L	0.1000		67	40-140	0.7	20	
Hexachlorobenzene	0.0711	0.00400	mg/L	0.1000		71	40-140	3	20	
Indeno(1,2,3-cd)Pyrene	0.0757	0.00100	mg/L	0.1000		76	40-140	0.4	20	
Naphthalene	0.0593	0.00400	mg/L	0.1000		59	40-140	8	20	
Pentachlorophenol	0.0748	0.0180	mg/L	0.1000		75	30-130	3	20	
Phenanthrene	0.0719	0.00400	mg/L	0.1000		72	40-140	1	20	
Pyrene	0.0772	0.00400	mg/L	0.1000		77	40-140	2	20	
Surrogate: 1,2-Dichlorobenzene-d4	*0.0763*		mg/L	*0.1000*		*76*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*0.101*		mg/L	*0.1500*		*67*	*15-110*			
Surrogate: 2-Fluorobiphenyl	*0.0728*		mg/L	*0.1000*		*73*	*30-130*			
Surrogate: Nitrobenzene-d5	*0.0762*		mg/L	*0.1000*		*76*	*30-130*			
Surrogate: p-Terphenyl-d14	*0.0864*		mg/L	*0.1000*		*86*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill ESS Laboratory Work Order: 20L0566

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0566

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

Shipped/Delivered Via: Client

ESS Project ID: 20L0566
Date Received: 12/16/2020
Project Due Date: 12/23/2020
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.8 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	120003	Yes	N/A	Yes	VOA Vial	HCl	
1	120004	Yes	N/A	Yes	VOA Vial	HCl	
1	120005	Yes	N/A	Yes	VOA Vial	HCl	
1	120012	Yes	N/A	Yes	1L Amber	NP	
1	120013	Yes	N/A	Yes	1L Amber	NP	
1	120014	Yes	N/A	Yes	1L Amber	NP	
1	120015	Yes	N/A	Yes	1L Amber	NP	
1	120016	Yes	N/A	Yes	1L Amber	NP	
1	120017	Yes	N/A	Yes	1L Amber	NP	
1	120024	Yes	N/A	Yes	250 mL Poly	HNO3	
2	120006	Yes	N/A	Yes	VOA Vial	HCl	
2	120007	Yes	N/A	Yes	VOA Vial	HCl	
2	120008	Yes	N/A	Yes	VOA Vial	HCl	
2	120018	Yes	N/A	Yes	1L Amber	NP	
2	120019	Yes	N/A	Yes	1L Amber	NP	
2	120020	Yes	N/A	Yes	1L Amber	NP	
2	120021	Yes	N/A	Yes	1L Amber	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

ESS Project ID: 20L0566
Date Received: 12/16/2020

2	120022	Yes	N/A	Yes	1L Amber	NP
2	120023	Yes	N/A	Yes	1L Amber	NP
2	120025	Yes	N/A	Yes	250 mL Poly	HNO3
3	120009	Yes	N/A	Yes	VOA Vial	HCl

2nd Review

Were all containers scanned into storage/lab? Initials TD Yes / No

Are barcode labels on correct containers? Yes / No / NA

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 13:13 12/16/20

Reviewed By: [signature] Date & Time: 12/16/20 1335

Delivered By: [signature] 12/16/20 1335

CHAIN OF CUSTODY

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 20605606 | Page 1 of 1

Turn Time: ☐ > 5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: RI **Criteria:**
Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☒ Other (Specify) → PDF

CLIENT INFORMATION

Client: GZA
Address: 100 Valley St Suite 300 Providence RI 02909
Phone: 4014214140
Email Distribution List: richard.carlone@gza.com
rowan.hamer@gza.com

PROJECT INFORMATION

Project Name: TMC - Away Landfill
Project Location: Warwick, RI
Project Number: 34646.07
Project Manager: Richard Carlone
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOCs	SVOCs	TPH	Pesticides	PCBs	T. Metals *	Total Number of Bottles
1	12/16/20	0935	Grab	GW	MW-113	X	X	X	X	X	X	10
2	12/16/20	0955	Grab	GW	MW-114	X	X	X	X	X	X	10
3	12/16/20	0900		Aqeous	TRIP Blank	X						1

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
V ← AG → 7 B
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
7 ← 10 → 3
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*
2 ← 1 → 4

Sampled by: Rowan Hamer

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 0.8 ice

Comments: * Please specify "Other" preservative and containers types in this space
* T. Metals: 15 Solid Waste / Mercury

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	12/16/20	1215	Taylor Davis 12/16/20 1215				
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)

CERTIFICATE OF ANALYSIS

Richard Carlone
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: Truk Away Landfill (0034648.01)
ESS Laboratory Work Order Number: 20L0288

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

REVIEWED
By ESS Laboratory at 1:38 pm, Dec 23, 2020

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

SAMPLE RECEIPT

The following samples were received on December 08, 2020 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
20L0288-01	VIC S-1B	Soil	6010C, 6020A, 7471B, 8081B, 8082A, 8100M, 8260B, 8270D
20L0288-02	VIC S-2	Soil	6010C, 7471B, 8081B, 8082A, 8100M, 8260B, 8270D
20L0288-03	MW-114 S-1B	Soil	6010C, 7471B, 8081B, 8082A, 8100M, 8260B, 8270D
20L0288-04	MW-113 S-1A	Soil	6010C, 6020A, 7471B, 8081B, 8082A, 8100M, 8260B, 8270D, 9014
20L0288-05	Trip Blank	Solid	8260B

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Methanol

20L0288-02	**Present in Method Blank (B).**
	Carbon Disulfide
20L0288-03	**Present in Method Blank (B).**
	Carbon Disulfide
20L0288-05	**Present in Method Blank (B).**
	Carbon Disulfide
D0L0214-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	1,4-Dioxane - Screen (50% @ 30%), 4-Methyl-2-Pentanone (31% @ 30%), Vinyl Acetate (42% @ 30%)
DL01032-BS1	**Blank Spike recovery is above upper control limit (B+).**
	4-Methyl-2-Pentanone (133% @ 70-130%)

8081B Organochlorine Pesticides

D0L0242-CCV4	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	Decachlorobiphenyl (22% @ 20%)

8270D Semi-Volatile Organic Compounds

20L0288-02	**Elevated Method Reporting Limits due to sample matrix (EL).**
20L0288-04	**Elevated Method Reporting Limits due to sample matrix (EL).**
D0L0230-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (68% @ 80-120%), 4,6-Dinitro-2-Methylphenol (82% @ 80-120%), Benzoic Acid (75% @ 80-120%), Pentachlorophenol (104% @ 80-120%)
D0L0230-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	2,4-Dinitrophenol (32% @ 20%), Aniline (28% @ 20%), Benzoic Acid (25% @ 20%), Hexachlorocyclopentadiene (23% @ 20%)
D0L0230-CCV1	**Initial Calibration Verification recovery is below lower control limit (ICV-).**
	Hexachlorocyclopentadiene
D0L0230-TUN1	**Pentachlorophenol tailing factor > 2.**
D0L0236-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (57% @ 80-120%), 4,6-Dinitro-2-Methylphenol (73% @ 80-120%), Benzoic Acid (70% @ 80-120%), Pentachlorophenol (101% @ 80-120%)
D0L0236-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	2,4-Dinitrophenol (43% @ 20%), 4,6-Dinitro-2-Methylphenol (27% @ 20%), Aniline (26% @ 20%), Benzoic Acid (30% @ 20%), Hexachlorocyclopentadiene (28% @ 20%)
D0L0236-CCV1	**Initial Calibration Verification recovery is below lower control limit (ICV-).**
	Hexachlorocyclopentadiene
D0L0236-TUN1	**Pentachlorophenol tailing factor > 2.**
D0L0260-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (96% @ 80-120%), 4,6-Dinitro-2-Methylphenol (96% @ 80-120%), Benzoic Acid (82% @ 80-120%), Pentachlorophenol (99% @ 80-120%)

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill ESS Laboratory Work Order: 20L0288

D0L0260-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Aniline (31% @ 20%), Hexachlorocyclopentadiene (30% @ 20%)

D0L0260-CCV1 **Initial Calibration Verification recovery is below lower control limit (ICV-).**
Hexachlorocyclopentadiene

D0L0260-TUN1 **Pentachlorophenol tailing factor > 2.**

Total Metals

DL01623-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Antimony (58% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (8.54)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Arsenic	**4.82** (4.27)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Barium	**13.6** (4.27)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Beryllium	**0.24** (0.19)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Cadmium	ND (0.85)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Chromium	**10.4** (1.71)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Cobalt	**6.07** (1.71)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Copper	**17.9** (4.27)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Lead	**11.8** (8.54)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Mercury	ND (0.032)		7471B		1	MKS	12/15/20 11:57	0.67	40	DL01457
Nickel	**12.2** (4.27)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Selenium	ND (8.54)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Silver	ND (0.85)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Thallium	ND (0.43)		6020A		1	NAR	12/18/20 17:21	2.5	100	DL01456
Vanadium	**9.93** (1.71)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456
Zinc	**42.0** (4.27)		6010C		2	KJK	12/16/20 18:10	2.5	100	DL01456

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1,1-Trichloroethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1,2,2-Tetrachloroethane	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1,2-Trichloroethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1-Dichloroethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1-Dichloroethene	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,1-Dichloropropene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2,3-Trichlorobenzene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2,3-Trichloropropane	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2,4-Trichlorobenzene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2,4-Trimethylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2-Dibromo-3-Chloropropane	ND (0.906)	0.181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2-Dibromoethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2-Dichlorobenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2-Dichloroethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,2-Dichloropropane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,3,5-Trimethylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,3-Dichlorobenzene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,3-Dichloropropane	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,4-Dichlorobenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
1,4-Dioxane - Screen	ND (36.3)	34.4	8260B		1	12/10/20 17:16	D0L0214	DL01032
1-Chlorohexane	ND (0.181)	0.0725	8260B		1	12/10/20 17:16	D0L0214	DL01032
2,2-Dichloropropane	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
2-Butanone	ND (0.906)	0.616	8260B		1	12/10/20 17:16	D0L0214	DL01032
2-Chlorotoluene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
2-Hexanone	ND (0.906)	0.272	8260B		1	12/10/20 17:16	D0L0214	DL01032
4-Chlorotoluene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
4-Isopropyltoluene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
4-Methyl-2-Pentanone	ND (0.906)	0.290	8260B		1	12/10/20 17:16	D0L0214	DL01032
Acetone	ND (0.906)	0.489	8260B		1	12/10/20 17:16	D0L0214	DL01032
Benzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Bromochloromethane	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Bromodichloromethane	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Bromoform	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Bromomethane	ND (0.181)	0.0725	8260B		1	12/10/20 17:16	D0L0214	DL01032
Carbon Disulfide	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Carbon Tetrachloride	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Chlorobenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Chloroethane	ND (0.181)	0.0725	8260B		1	12/10/20 17:16	D0L0214	DL01032
Chloroform	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Chloromethane	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
cis-1,2-Dichloroethene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
cis-1,3-Dichloropropene	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Dibromochloromethane	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Dibromomethane	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Dichlorodifluoromethane	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Diethyl Ether	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Di-isopropyl ether	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Ethyl tertiary-butyl ether	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Ethylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Hexachlorobutadiene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Isopropylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Methyl tert-Butyl Ether	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
Methylene Chloride	ND (0.363)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Naphthalene	**J 0.0381** (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
n-Butylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
n-Propylbenzene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
sec-Butylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Styrene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
tert-Butylbenzene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Tertiary-amyl methyl ether	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 19.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Tetrahydrofuran	ND (0.906)	0.290	8260B		1	12/10/20 17:16	D0L0214	DL01032
Toluene	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
trans-1,2-Dichloroethene	ND (0.181)	0.0544	8260B		1	12/10/20 17:16	D0L0214	DL01032
trans-1,3-Dichloropropene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Trichloroethene	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Trichlorofluoromethane	ND (0.181)	0.0725	8260B		1	12/10/20 17:16	D0L0214	DL01032
Vinyl Acetate	ND (0.181)	0.0906	8260B		1	12/10/20 17:16	D0L0214	DL01032
Vinyl Chloride	ND (0.181)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Xylene O	ND (0.181)	0.0181	8260B		1	12/10/20 17:16	D0L0214	DL01032
Xylene P,M	ND (0.363)	0.0363	8260B		1	12/10/20 17:16	D0L0214	DL01032
Xylenes (Total)	ND (0.363)		8260B		1	12/10/20 17:16		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*103 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 20.9
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/9/20 20:00

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
4,4′-DDE	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
4,4′-DDT	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Aldrin	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
alpha-BHC	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
alpha-Chlordane [2C]	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
beta-BHC	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Chlordane (Total) [2C]	ND (0.0307)		8081B		1	12/11/20 12:52	D0L0242	DL00906
delta-BHC	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Dieldrin	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endosulfan I	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endosulfan II	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endosulfan Sulfate	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endrin	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endrin Aldehyde	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Endrin Ketone	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
gamma-BHC (Lindane)	ND (0.0015)		8081B		1	12/11/20 12:52	D0L0242	DL00906
gamma-Chlordane [2C]	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Heptachlor	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Heptachlor Epoxide	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Hexachlorobenzene	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Methoxychlor	ND (0.0026)		8081B		1	12/11/20 12:52	D0L0242	DL00906
Toxaphene	ND (0.128)		8081B		1	12/11/20 12:52	D0L0242	DL00906

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*58 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*53 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*64 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 12/9/20 14:00

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1221	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1232	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1242	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1248	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1254	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1260 [2C]	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1262	ND (0.06)		8082A		1	12/10/20 16:36		DL00902
Aroclor 1268	ND (0.06)		8082A		1	12/10/20 16:36		DL00902

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*64 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*59 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: AMF
Prepared: 12/8/20 20:00

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**390** (39.8)		8100M		1	12/09/20 19:51	D0L0189	DL00834

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*79 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
1,2,4-Trichlorobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
1,2-Dichlorobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
1,3-Dichlorobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
1,4-Dichlorobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,3,4,6-Tetrachlorophenol	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4,5-Trichlorophenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4,6-Trichlorophenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4-Dichlorophenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4-Dimethylphenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4-Dinitrophenol	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,4-Dinitrotoluene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2,6-Dinitrotoluene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Chloronaphthalene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Chlorophenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Methylnaphthalene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Methylphenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Nitroaniline	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
2-Nitrophenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
3,3′-Dichlorobenzidine	ND (0.747)		8270D		1	12/15/20 0:27	D0L0260	DL00931
3+4-Methylphenol	ND (0.747)		8270D		1	12/15/20 0:27	D0L0260	DL00931
3-Nitroaniline	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4,6-Dinitro-2-Methylphenol	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Bromophenyl-phenylether	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Chloro-3-Methylphenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Chloroaniline	ND (0.747)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Chloro-phenyl-phenyl ether	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Nitroaniline	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
4-Nitrophenol	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Acenaphthene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Acenaphthylene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acetophenone	ND (0.747)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Aniline	ND (0.747)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Anthracene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Azobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzo(a)anthracene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzo(a)pyrene	ND (0.187)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzo(b)fluoranthene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzo(g,h,i)perylene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzo(k)fluoranthene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzoic Acid	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Benzyl Alcohol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
bis(2-Chloroethoxy)methane	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
bis(2-Chloroethyl)ether	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
bis(2-chloroisopropyl)Ether	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
bis(2-Ethylhexyl)phthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Butylbenzylphthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Carbazole	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Chrysene	ND (0.187)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Dibenzo(a,h)Anthracene	ND (0.187)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Dibenzofuran	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Diethylphthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Dimethylphthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Di-n-butylphthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Di-n-octylphthalate	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Fluoranthene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Fluorene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Hexachlorobenzene	ND (0.187)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Hexachlorobutadiene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Hexachlorocyclopentadiene	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Hexachloroethane	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Indeno(1,2,3-cd)Pyrene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-1B
Date Sampled: 12/08/20 10:05
Percent Solids: 94
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Isophorone	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Naphthalene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Nitrobenzene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
N-Nitrosodimethylamine	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
N-Nitroso-Di-n-Propylamine	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
N-nitrosodiphenylamine	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Pentachlorophenol	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Phenanthrene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Phenol	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Pyrene	ND (0.373)		8270D		1	12/15/20 0:27	D0L0260	DL00931
Pyridine	ND (1.87)		8270D		1	12/15/20 0:27	D0L0260	DL00931

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*66 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*88 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*73 %*		*30-130*
Surrogate: 2-Fluorophenol	*65 %*		*30-130*
Surrogate: Nitrobenzene-d5	*71 %*		*30-130*
Surrogate: Phenol-d6	*69 %*		*30-130*
Surrogate: p-Terphenyl-d14	*92 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (4.70)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Arsenic	ND (2.35)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Barium	**16.5** (2.35)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Beryllium	**0.42** (0.10)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Cadmium	**0.49** (0.47)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Chromium	**8.10** (0.94)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Cobalt	**3.83** (0.94)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Copper	**11.2** (2.35)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Lead	**18.0** (4.70)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Mercury	ND (0.028)		7471B		1	MKS	12/21/20 11:13	0.72	40	DL01624
Nickel	**7.79** (2.35)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Selenium	ND (4.70)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Silver	**0.52** (0.47)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Thallium	ND (4.70)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Vanadium	**8.08** (0.94)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623
Zinc	**57.7** (2.35)		6010C		1	KJK	12/22/20 14:56	2.15	100	DL01623

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 21.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1,1-Trichloroethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1,2,2-Tetrachloroethane	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1,2-Trichloroethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1-Dichloroethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1-Dichloroethene	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,1-Dichloropropene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2,3-Trichlorobenzene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2,3-Trichloropropane	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2,4-Trichlorobenzene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2,4-Trimethylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2-Dibromo-3-Chloropropane	ND (0.714)	0.143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2-Dibromoethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2-Dichlorobenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2-Dichloroethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,2-Dichloropropane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,3,5-Trimethylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,3-Dichlorobenzene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,3-Dichloropropane	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,4-Dichlorobenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
1,4-Dioxane - Screen	ND (28.6)	27.1	8260B		1	12/10/20 17:42	D0L0214	DL01032
1-Chlorohexane	ND (0.143)	0.0571	8260B		1	12/10/20 17:42	D0L0214	DL01032
2,2-Dichloropropane	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
2-Butanone	ND (0.714)	0.485	8260B		1	12/10/20 17:42	D0L0214	DL01032
2-Chlorotoluene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
2-Hexanone	ND (0.714)	0.214	8260B		1	12/10/20 17:42	D0L0214	DL01032
4-Chlorotoluene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
4-Isopropyltoluene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
4-Methyl-2-Pentanone	ND (0.714)	0.228	8260B		1	12/10/20 17:42	D0L0214	DL01032
Acetone	ND (0.714)	0.386	8260B		1	12/10/20 17:42	D0L0214	DL01032
Benzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 21.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Bromochloromethane	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Bromodichloromethane	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Bromoform	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Bromomethane	ND (0.143)	0.0571	8260B		1	12/10/20 17:42	D0L0214	DL01032
Carbon Disulfide	**B, J 0.0300** (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Carbon Tetrachloride	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Chlorobenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Chloroethane	ND (0.143)	0.0571	8260B		1	12/10/20 17:42	D0L0214	DL01032
Chloroform	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Chloromethane	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
cis-1,2-Dichloroethene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
cis-1,3-Dichloropropene	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Dibromochloromethane	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Dibromomethane	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Dichlorodifluoromethane	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Diethyl Ether	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Di-isopropyl ether	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Ethyl tertiary-butyl ether	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Ethylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Hexachlorobutadiene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Isopropylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Methyl tert-Butyl Ether	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
Methylene Chloride	ND (0.286)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Naphthalene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
n-Butylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
n-Propylbenzene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
sec-Butylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Styrene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
tert-Butylbenzene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Tertiary-amyl methyl ether	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 21.5
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Tetrahydrofuran	ND (0.714)	0.228	8260B		1	12/10/20 17:42	D0L0214	DL01032
Toluene	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
trans-1,2-Dichloroethene	ND (0.143)	0.0428	8260B		1	12/10/20 17:42	D0L0214	DL01032
trans-1,3-Dichloropropene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Trichloroethene	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Trichlorofluoromethane	ND (0.143)	0.0571	8260B		1	12/10/20 17:42	D0L0214	DL01032
Vinyl Acetate	ND (0.143)	0.0714	8260B		1	12/10/20 17:42	D0L0214	DL01032
Vinyl Chloride	ND (0.143)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Xylene O	ND (0.143)	0.0143	8260B		1	12/10/20 17:42	D0L0214	DL01032
Xylene P,M	ND (0.286)	0.0286	8260B		1	12/10/20 17:42	D0L0214	DL01032
Xylenes (Total)	ND (0.286)		8260B		1	12/10/20 17:42		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*103 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 20
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/9/20 20:00

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
4,4′-DDE	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
4,4′-DDT	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Aldrin	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
alpha-BHC	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
alpha-Chlordane	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
beta-BHC	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Chlordane (Total)	ND (0.0303)		8081B		1	12/11/20 13:19	D0L0242	DL00906
delta-BHC	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Dieldrin	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endosulfan I	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endosulfan II	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endosulfan Sulfate	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endrin	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endrin Aldehyde	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Endrin Ketone	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
gamma-BHC (Lindane)	ND (0.0015)		8081B		1	12/11/20 13:19	D0L0242	DL00906
gamma-Chlordane	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Heptachlor	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Heptachlor Epoxide	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Hexachlorobenzene	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Methoxychlor	ND (0.0025)		8081B		1	12/11/20 13:19	D0L0242	DL00906
Toxaphene	ND (0.126)		8081B		1	12/11/20 13:19	D0L0242	DL00906

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*60 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*63 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*62 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*67 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 19
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 12/9/20 14:00

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1221	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1232	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1242	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1248	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1254	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1260 [2C]	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1262	ND (0.05)		8082A		1	12/10/20 16:56		DL00902
Aroclor 1268	ND (0.05)		8082A		1	12/10/20 16:56		DL00902

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*69 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*89 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 20.2
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: AMF
Prepared: 12/8/20 20:00

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (37.5)		8100M		1	12/09/20 18:45	D0L0189	DL00834

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*79 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 9.54
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
1,2,4-Trichlorobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
1,2-Dichlorobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
1,3-Dichlorobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
1,4-Dichlorobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,3,4,6-Tetrachlorophenol	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4,5-Trichlorophenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4,6-Trichlorophenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4-Dichlorophenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4-Dimethylphenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4-Dinitrophenol	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,4-Dinitrotoluene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2,6-Dinitrotoluene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Chloronaphthalene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Chlorophenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Methylnaphthalene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Methylphenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Nitroaniline	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
2-Nitrophenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
3,3′-Dichlorobenzidine	ND (1.06)		8270D		1	12/12/20 1:54	D0L0236	DL00931
3+4-Methylphenol	ND (1.06)		8270D		1	12/12/20 1:54	D0L0236	DL00931
3-Nitroaniline	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4,6-Dinitro-2-Methylphenol	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Bromophenyl-phenylether	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Chloro-3-Methylphenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Chloroaniline	ND (1.06)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Chloro-phenyl-phenyl ether	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Nitroaniline	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
4-Nitrophenol	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Acenaphthene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Acenaphthylene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 9.54
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acetophenone	ND (1.06)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Aniline	ND (1.06)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Anthracene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Azobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzo(a)anthracene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzo(a)pyrene	ND (0.265)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzo(b)fluoranthene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzo(g,h,i)perylene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzo(k)fluoranthene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzoic Acid	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Benzyl Alcohol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
bis(2-Chloroethoxy)methane	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
bis(2-Chloroethyl)ether	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
bis(2-chloroisopropyl)Ether	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
bis(2-Ethylhexyl)phthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Butylbenzylphthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Carbazole	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Chrysene	ND (0.265)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Dibenzo(a,h)Anthracene	ND (0.265)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Dibenzofuran	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Diethylphthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Dimethylphthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Di-n-butylphthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Di-n-octylphthalate	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Fluoranthene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Fluorene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Hexachlorobenzene	ND (0.265)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Hexachlorobutadiene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Hexachlorocyclopentadiene	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Hexachloroethane	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Indeno(1,2,3-cd)Pyrene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: VIC S-2
Date Sampled: 12/08/20 10:40
Percent Solids: 99
Initial Volume: 9.54
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Isophorone	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Naphthalene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Nitrobenzene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
N-Nitrosodimethylamine	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
N-Nitroso-Di-n-Propylamine	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
N-nitrosodiphenylamine	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Pentachlorophenol	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Phenanthrene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Phenol	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Pyrene	ND (0.529)		8270D		1	12/12/20 1:54	D0L0236	DL00931
Pyridine	ND (2.65)		8270D		1	12/12/20 1:54	D0L0236	DL00931

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*68 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*84 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*70 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*71 %*		*30-130*
Surrogate: 2-Fluorophenol	*66 %*		*30-130*
Surrogate: Nitrobenzene-d5	*71 %*		*30-130*
Surrogate: Phenol-d6	*71 %*		*30-130*
Surrogate: p-Terphenyl-d14	*102 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.39)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Arsenic	**2.84** (2.69)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Barium	**9.42** (2.69)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Beryllium	**0.64** (0.12)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Cadmium	ND (0.54)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Chromium	**7.18** (1.08)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Cobalt	**3.94** (1.08)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Copper	**8.00** (2.69)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Lead	ND (5.39)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Mercury	ND (0.035)		7471B		1	MKS	12/15/20 12:07	0.63	40	DL01457
Nickel	**7.26** (2.69)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Selenium	ND (5.39)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Silver	ND (0.54)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Thallium	ND (5.39)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Vanadium	**9.87** (1.08)		6010C		1	KJK	12/16/20 5:21	2.08	100	DL01456
Zinc	**35.1** (2.69)		6010C		1	KJK	12/16/20 15:53	2.08	100	DL01456

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 15.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1,1-Trichloroethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1,2,2-Tetrachloroethane	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1,2-Trichloroethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1-Dichloroethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1-Dichloroethene	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,1-Dichloropropene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2,3-Trichlorobenzene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2,3-Trichloropropane	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2,4-Trichlorobenzene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2,4-Trimethylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2-Dibromo-3-Chloropropane	ND (1.19)	0.237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2-Dibromoethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2-Dichlorobenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2-Dichloroethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,2-Dichloropropane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,3,5-Trimethylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,3-Dichlorobenzene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,3-Dichloropropane	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,4-Dichlorobenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
1,4-Dioxane - Screen	ND (47.4)	45.0	8260B		1	12/10/20 18:09	D0L0214	DL01032
1-Chlorohexane	ND (0.237)	0.0948	8260B		1	12/10/20 18:09	D0L0214	DL01032
2,2-Dichloropropane	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
2-Butanone	ND (1.19)	0.806	8260B		1	12/10/20 18:09	D0L0214	DL01032
2-Chlorotoluene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
2-Hexanone	ND (1.19)	0.356	8260B		1	12/10/20 18:09	D0L0214	DL01032
4-Chlorotoluene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
4-Isopropyltoluene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
4-Methyl-2-Pentanone	ND (1.19)	0.379	8260B		1	12/10/20 18:09	D0L0214	DL01032
Acetone	ND (1.19)	0.640	8260B		1	12/10/20 18:09	D0L0214	DL01032
Benzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 15.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Bromochloromethane	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Bromodichloromethane	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Bromoform	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Bromomethane	ND (0.237)	0.0948	8260B		1	12/10/20 18:09	D0L0214	DL01032
Carbon Disulfide	**B, J 0.0521** (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Carbon Tetrachloride	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Chlorobenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Chloroethane	ND (0.237)	0.0948	8260B		1	12/10/20 18:09	D0L0214	DL01032
Chloroform	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Chloromethane	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
cis-1,2-Dichloroethene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
cis-1,3-Dichloropropene	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Dibromochloromethane	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Dibromomethane	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Dichlorodifluoromethane	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Diethyl Ether	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Di-isopropyl ether	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Ethyl tertiary-butyl ether	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Ethylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Hexachlorobutadiene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Isopropylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Methyl tert-Butyl Ether	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
Methylene Chloride	ND (0.474)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Naphthalene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
n-Butylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
n-Propylbenzene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
sec-Butylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Styrene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
tert-Butylbenzene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Tertiary-amyl methyl ether	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 15.8
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Tetrahydrofuran	ND (1.19)	0.379	8260B		1	12/10/20 18:09	D0L0214	DL01032
Toluene	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
trans-1,2-Dichloroethene	ND (0.237)	0.0711	8260B		1	12/10/20 18:09	D0L0214	DL01032
trans-1,3-Dichloropropene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Trichloroethene	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Trichlorofluoromethane	ND (0.237)	0.0948	8260B		1	12/10/20 18:09	D0L0214	DL01032
Vinyl Acetate	ND (0.237)	0.119	8260B		1	12/10/20 18:09	D0L0214	DL01032
Vinyl Chloride	ND (0.237)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Xylene O	ND (0.237)	0.0237	8260B		1	12/10/20 18:09	D0L0214	DL01032
Xylene P,M	ND (0.474)	0.0474	8260B		1	12/10/20 18:09	D0L0214	DL01032
Xylenes (Total)	ND (0.474)		8260B		1	12/10/20 18:09		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*110 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*112 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 19.3
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/9/20 20:00

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
4,4′-DDE	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
4,4′-DDT	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Aldrin	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
alpha-BHC	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
alpha-Chlordane	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
beta-BHC	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Chlordane (Total)	ND (0.0348)		8081B		1	12/11/20 13:47	D0L0242	DL00906
delta-BHC	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Dieldrin	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endosulfan I	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endosulfan II	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endosulfan Sulfate	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endrin	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endrin Aldehyde	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Endrin Ketone	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
gamma-BHC (Lindane)	ND (0.0017)		8081B		1	12/11/20 13:47	D0L0242	DL00906
gamma-Chlordane	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Heptachlor	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Heptachlor Epoxide	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Hexachlorobenzene	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Methoxychlor	ND (0.0029)		8081B		1	12/11/20 13:47	D0L0242	DL00906
Toxaphene	ND (0.145)		8081B		1	12/11/20 13:47	D0L0242	DL00906

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*65 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*70 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*72 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*74 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 12/9/20 14:00

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1221	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1232	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1242	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1248	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1254	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1260	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1262	ND (0.06)		8082A		1	12/10/20 17:15		DL00902
Aroclor 1268	ND (0.06)		8082A		1	12/10/20 17:15		DL00902

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*78 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*95 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*67 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*90 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 19.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: AMF
Prepared: 12/8/20 20:00

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (42.2)		8100M		1	12/09/20 17:39	D0L0189	DL00834

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*79 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
1,2,4-Trichlorobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
1,2-Dichlorobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
1,3-Dichlorobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
1,4-Dichlorobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,3,4,6-Tetrachlorophenol	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4,5-Trichlorophenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4,6-Trichlorophenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4-Dichlorophenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4-Dimethylphenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4-Dinitrophenol	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,4-Dinitrotoluene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2,6-Dinitrotoluene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Chloronaphthalene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Chlorophenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Methylnaphthalene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Methylphenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Nitroaniline	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
2-Nitrophenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
3,3′-Dichlorobenzidine	ND (0.768)		8270D		1	12/15/20 0:56	D0L0260	DL00931
3+4-Methylphenol	ND (0.768)		8270D		1	12/15/20 0:56	D0L0260	DL00931
3-Nitroaniline	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4,6-Dinitro-2-Methylphenol	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Bromophenyl-phenylether	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Chloro-3-Methylphenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Chloroaniline	ND (0.768)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Chloro-phenyl-phenyl ether	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Nitroaniline	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
4-Nitrophenol	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Acenaphthene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Acenaphthylene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acetophenone	ND (0.768)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Aniline	ND (0.768)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Anthracene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Azobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzo(a)anthracene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzo(a)pyrene	ND (0.192)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzo(b)fluoranthene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzo(g,h,i)perylene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzo(k)fluoranthene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzoic Acid	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Benzyl Alcohol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
bis(2-Chloroethoxy)methane	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
bis(2-Chloroethyl)ether	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
bis(2-chloroisopropyl)Ether	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
bis(2-Ethylhexyl)phthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Butylbenzylphthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Carbazole	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Chrysene	ND (0.192)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Dibenzo(a,h)Anthracene	ND (0.192)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Dibenzofuran	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Diethylphthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Dimethylphthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Di-n-butylphthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Di-n-octylphthalate	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Fluoranthene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Fluorene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Hexachlorobenzene	ND (0.192)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Hexachlorobutadiene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Hexachlorocyclopentadiene	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Hexachloroethane	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Indeno(1,2,3-cd)Pyrene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-114 S-1B
Date Sampled: 12/08/20 11:20
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Isophorone	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Naphthalene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Nitrobenzene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
N-Nitrosodimethylamine	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
N-Nitroso-Di-n-Propylamine	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
N-nitrosodiphenylamine	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Pentachlorophenol	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Phenanthrene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Phenol	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Pyrene	ND (0.383)		8270D		1	12/15/20 0:56	D0L0260	DL00931
Pyridine	ND (1.92)		8270D		1	12/15/20 0:56	D0L0260	DL00931

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*66 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*81 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*67 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*69 %*		*30-130*
Surrogate: 2-Fluorophenol	*64 %*		*30-130*
Surrogate: Nitrobenzene-d5	*69 %*		*30-130*
Surrogate: Phenol-d6	*67 %*		*30-130*
Surrogate: p-Terphenyl-d14	*97 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (9.79)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Arsenic	ND (4.89)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Barium	**26.7** (4.89)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Beryllium	**0.22** (0.22)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Cadmium	**2.26** (0.98)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Chromium	**26.2** (1.96)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Cobalt	**4.59** (1.96)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Copper	**68.5** (4.89)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Lead	**148** (9.79)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Mercury	**0.070** (0.033)		7471B		1	MKS	12/15/20 12:09	0.66	40	DL01457
Nickel	**23.3** (4.89)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Selenium	ND (9.79)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Silver	ND (0.98)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Thallium	ND (0.49)		6020A		1	NAR	12/18/20 17:27	2.23	100	DL01456
Vanadium	**11.4** (1.96)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456
Zinc	**277** (4.89)		6010C		2	KJK	12/16/20 18:11	2.23	100	DL01456

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1,1-Trichloroethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1,2,2-Tetrachloroethane	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1,2-Trichloroethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1-Dichloroethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1-Dichloroethene	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,1-Dichloropropene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2,3-Trichlorobenzene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2,3-Trichloropropane	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2,4-Trichlorobenzene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2,4-Trimethylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2-Dibromo-3-Chloropropane	ND (1.24)	0.247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2-Dibromoethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2-Dichlorobenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2-Dichloroethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,2-Dichloropropane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,3,5-Trimethylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,3-Dichlorobenzene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,3-Dichloropropane	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,4-Dichlorobenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
1,4-Dioxane - Screen	ND (49.4)	47.0	8260B		1	12/10/20 18:36	D0L0214	DL01032
1-Chlorohexane	ND (0.247)	0.0989	8260B		1	12/10/20 18:36	D0L0214	DL01032
2,2-Dichloropropane	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
2-Butanone	ND (1.24)	0.841	8260B		1	12/10/20 18:36	D0L0214	DL01032
2-Chlorotoluene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
2-Hexanone	ND (1.24)	0.371	8260B		1	12/10/20 18:36	D0L0214	DL01032
4-Chlorotoluene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
4-Isopropyltoluene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
4-Methyl-2-Pentanone	ND (1.24)	0.396	8260B		1	12/10/20 18:36	D0L0214	DL01032
Acetone	ND (1.24)	0.667	8260B		1	12/10/20 18:36	D0L0214	DL01032
Benzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Bromochloromethane	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Bromodichloromethane	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Bromoform	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Bromomethane	ND (0.247)	0.0989	8260B		1	12/10/20 18:36	D0L0214	DL01032
Carbon Disulfide	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Carbon Tetrachloride	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Chlorobenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Chloroethane	ND (0.247)	0.0989	8260B		1	12/10/20 18:36	D0L0214	DL01032
Chloroform	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Chloromethane	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
cis-1,2-Dichloroethene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
cis-1,3-Dichloropropene	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Dibromochloromethane	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Dibromomethane	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Dichlorodifluoromethane	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Diethyl Ether	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Di-isopropyl ether	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Ethyl tertiary-butyl ether	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Ethylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Hexachlorobutadiene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Isopropylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Methyl tert-Butyl Ether	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
Methylene Chloride	ND (0.494)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Naphthalene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
n-Butylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
n-Propylbenzene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
sec-Butylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Styrene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
tert-Butylbenzene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Tertiary-amyl methyl ether	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Tetrahydrofuran	ND (1.24)	0.396	8260B		1	12/10/20 18:36	D0L0214	DL01032
Toluene	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
trans-1,2-Dichloroethene	ND (0.247)	0.0742	8260B		1	12/10/20 18:36	D0L0214	DL01032
trans-1,3-Dichloropropene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Trichloroethene	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Trichlorofluoromethane	ND (0.247)	0.0989	8260B		1	12/10/20 18:36	D0L0214	DL01032
Vinyl Acetate	ND (0.247)	0.124	8260B		1	12/10/20 18:36	D0L0214	DL01032
Vinyl Chloride	ND (0.247)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Xylene O	ND (0.247)	0.0247	8260B		1	12/10/20 18:36	D0L0214	DL01032
Xylene P,M	ND (0.494)	0.0494	8260B		1	12/10/20 18:36	D0L0214	DL01032
Xylenes (Total)	ND (0.494)		8260B		1	12/10/20 18:36		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*124 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*123 %*		*70-130*
Surrogate: Dibromofluoromethane	*125 %*		*70-130*
Surrogate: Toluene-d8	*123 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 19.5
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/9/20 20:00

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4′-DDD [2C]	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
4,4′-DDE	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
4,4′-DDT	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Aldrin	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
alpha-BHC	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
alpha-Chlordane	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
beta-BHC	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Chlordane (Total) [2C]	ND (0.0336)		8081B		1	12/11/20 14:15	D0L0242	DL00906
delta-BHC	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Dieldrin	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endosulfan I	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endosulfan II	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endosulfan Sulfate	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endrin	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endrin Aldehyde	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Endrin Ketone	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
gamma-BHC (Lindane)	ND (0.0017)		8081B		1	12/11/20 14:15	D0L0242	DL00906
gamma-Chlordane	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Heptachlor	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Heptachlor Epoxide	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Hexachlorobenzene	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Methoxychlor	ND (0.0028)		8081B		1	12/11/20 14:15	D0L0242	DL00906
Toxaphene	ND (0.140)		8081B		1	12/11/20 14:15	D0L0242	DL00906

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*56 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*56 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*60 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*61 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 20.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 12/9/20 14:00

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1221	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1232	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1242	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1248	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1254 [2C]	**0.7** (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1260 [2C]	**0.5** (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1262	ND (0.05)		8082A		1	12/10/20 17:35		DL00902
Aroclor 1268	ND (0.05)		8082A		1	12/10/20 17:35		DL00902

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*63 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*90 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*82 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 20.4
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: AMF
Prepared: 12/8/20 20:00

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**282** (201)		8100M		5	12/09/20 20:24	D0L0191	DL00834

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*84 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
1,2,4-Trichlorobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
1,2-Dichlorobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
1,3-Dichlorobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
1,4-Dichlorobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,3,4,6-Tetrachlorophenol	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4,5-Trichlorophenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4,6-Trichlorophenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4-Dichlorophenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4-Dimethylphenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4-Dinitrophenol	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,4-Dinitrotoluene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2,6-Dinitrotoluene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Chloronaphthalene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Chlorophenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Methylnaphthalene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Methylphenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Nitroaniline	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
2-Nitrophenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
3,3′-Dichlorobenzidine	ND (1.49)		8270D		2	12/15/20 1:25	D0L0260	DL00931
3+4-Methylphenol	ND (1.49)		8270D		2	12/15/20 1:25	D0L0260	DL00931
3-Nitroaniline	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4,6-Dinitro-2-Methylphenol	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Bromophenyl-phenylether	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Chloro-3-Methylphenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Chloroaniline	ND (1.49)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Chloro-phenyl-phenyl ether	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Nitroaniline	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
4-Nitrophenol	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Acenaphthene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Acenaphthylene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Acetophenone	ND (1.49)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Aniline	ND (1.49)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Anthracene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Azobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzo(a)anthracene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzo(a)pyrene	ND (0.372)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzo(b)fluoranthene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzo(g,h,i)perylene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzo(k)fluoranthene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzoic Acid	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Benzyl Alcohol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
bis(2-Chloroethoxy)methane	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
bis(2-Chloroethyl)ether	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
bis(2-chloroisopropyl)Ether	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
bis(2-Ethylhexyl)phthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Butylbenzylphthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Carbazole	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Chrysene	ND (0.372)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Dibenzo(a,h)Anthracene	ND (0.372)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Dibenzofuran	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Diethylphthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Dimethylphthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Di-n-butylphthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Di-n-octylphthalate	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Fluoranthene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Fluorene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Hexachlorobenzene	ND (0.372)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Hexachlorobutadiene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Hexachlorocyclopentadiene	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Hexachloroethane	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Indeno(1,2,3-cd)Pyrene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/9/20 20:45

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Isophorone	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Naphthalene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Nitrobenzene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
N-Nitrosodimethylamine	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
N-Nitroso-Di-n-Propylamine	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
N-nitrosodiphenylamine	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Pentachlorophenol	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Phenanthrene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Phenol	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Pyrene	ND (0.742)		8270D		2	12/15/20 1:25	D0L0260	DL00931
Pyridine	ND (3.72)		8270D		2	12/15/20 1:25	D0L0260	DL00931

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*49 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*84 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*63 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*74 %*		*30-130*
Surrogate: 2-Fluorophenol	*55 %*		*30-130*
Surrogate: Nitrobenzene-d5	*59 %*		*30-130*
Surrogate: Phenol-d6	*65 %*		*30-130*
Surrogate: p-Terphenyl-d14	*96 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-113 S-1A
Date Sampled: 12/08/20 12:20
Percent Solids: 92

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-04
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	**5.54** (1.01)		9014		1	EEM	12/11/20 12:55	mg/kg dry	DL01119

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/08/20 09:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1,1-Trichloroethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1,2,2-Tetrachloroethane	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1,2-Trichloroethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1-Dichloroethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1-Dichloroethene	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,1-Dichloropropene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2,3-Trichlorobenzene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2,3-Trichloropropane	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2,4-Trichlorobenzene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2,4-Trimethylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2-Dibromo-3-Chloropropane	ND (1.00)	0.200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2-Dibromoethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2-Dichlorobenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2-Dichloroethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,2-Dichloropropane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,3,5-Trimethylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,3-Dichlorobenzene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,3-Dichloropropane	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,4-Dichlorobenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
1,4-Dioxane - Screen	ND (40.0)	38.0	8260B		1	12/10/20 16:49	D0L0214	DL01032
1-Chlorohexane	ND (0.200)	0.0800	8260B		1	12/10/20 16:49	D0L0214	DL01032
2,2-Dichloropropane	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
2-Butanone	ND (1.00)	0.680	8260B		1	12/10/20 16:49	D0L0214	DL01032
2-Chlorotoluene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
2-Hexanone	ND (1.00)	0.300	8260B		1	12/10/20 16:49	D0L0214	DL01032
4-Chlorotoluene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
4-Isopropyltoluene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
4-Methyl-2-Pentanone	ND (1.00)	0.320	8260B		1	12/10/20 16:49	D0L0214	DL01032
Acetone	ND (1.00)	0.540	8260B		1	12/10/20 16:49	D0L0214	DL01032
Benzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/08/20 09:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Bromochloromethane	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Bromodichloromethane	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Bromoform	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Bromomethane	ND (0.200)	0.0800	8260B		1	12/10/20 16:49	D0L0214	DL01032
Carbon Disulfide	**B, J 0.0420** (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Carbon Tetrachloride	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Chlorobenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Chloroethane	ND (0.200)	0.0800	8260B		1	12/10/20 16:49	D0L0214	DL01032
Chloroform	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Chloromethane	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
cis-1,2-Dichloroethene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
cis-1,3-Dichloropropene	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Dibromochloromethane	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Dibromomethane	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Dichlorodifluoromethane	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Diethyl Ether	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Di-isopropyl ether	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Ethyl tertiary-butyl ether	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Ethylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Hexachlorobutadiene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Isopropylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Methyl tert-Butyl Ether	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
Methylene Chloride	ND (0.400)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Naphthalene	**J 0.0500** (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
n-Butylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
n-Propylbenzene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
sec-Butylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Styrene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
tert-Butylbenzene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Tertiary-amyl methyl ether	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: Trip Blank
Date Sampled: 12/08/20 09:00
Percent Solids: N/A
Initial Volume: 15
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 20L0288
ESS Laboratory Sample ID: 20L0288-05
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Tetrahydrofuran	ND (1.00)	0.320	8260B		1	12/10/20 16:49	D0L0214	DL01032
Toluene	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
trans-1,2-Dichloroethene	ND (0.200)	0.0600	8260B		1	12/10/20 16:49	D0L0214	DL01032
trans-1,3-Dichloropropene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Trichloroethene	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Trichlorofluoromethane	ND (0.200)	0.0800	8260B		1	12/10/20 16:49	D0L0214	DL01032
Vinyl Acetate	ND (0.200)	0.100	8260B		1	12/10/20 16:49	D0L0214	DL01032
Vinyl Chloride	ND (0.200)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Xylene O	ND (0.200)	0.0200	8260B		1	12/10/20 16:49	D0L0214	DL01032
Xylene P,M	ND (0.400)	0.0400	8260B		1	12/10/20 16:49	D0L0214	DL01032
Xylenes (Total)	ND (0.400)		8260B		1	12/10/20 16:49		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*110 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL01456 - 3050B										
Blank										
Antimony	ND	5.00	mg/kg wet							
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Beryllium	ND	0.11	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Cobalt	ND	1.00	mg/kg wet							
Copper	ND	2.50	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Nickel	ND	2.50	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
Thallium	ND	5.00	mg/kg wet							
Vanadium	ND	1.00	mg/kg wet							
Vanadium	ND	1.00	mg/kg wet							
Zinc	ND	2.50	mg/kg wet							
Blank										
Thallium	ND	0.50	mg/kg wet							
LCS										
Antimony	36.6	16.7	mg/kg wet	42.00		87	80-120			
Arsenic	35.7	8.33	mg/kg wet	43.10		83	80-120			
Barium	508	8.33	mg/kg wet	597.0		85	80-120			
Beryllium	103	0.37	mg/kg wet	117.0		88	80-120			
Cadmium	101	1.67	mg/kg wet	118.0		86	80-120			
Chromium	258	3.33	mg/kg wet	299.0		86	80-120			
Cobalt	104	3.33	mg/kg wet	114.0		91	80-120			
Copper	287	8.33	mg/kg wet	330.0		87	80-120			
Lead	131	16.7	mg/kg wet	144.0		91	80-120			
Nickel	151	8.33	mg/kg wet	171.0		88	80-120			
Selenium	129	16.7	mg/kg wet	154.0		84	80-120			
Silver	62.9	1.67	mg/kg wet	73.50		86	80-120			
Thallium	45.1	16.7	mg/kg wet				80-120			
Vanadium	230	3.33	mg/kg wet	259.0		89	80-120			
Vanadium	230	3.33	mg/kg wet	259.0		89	80-120			
Zinc	818	8.33	mg/kg wet	874.0		94	80-120			
LCS										
Thallium	83.1	15.4	mg/kg wet	97.40		85	80-120			
LCS										
Thallium	91.7	7.69	mg/kg wet	97.40		94	80-120			
LCS Dup										
Antimony	39.5	16.7	mg/kg wet	42.00		94	80-120	8	20	
Arsenic	36.7	8.33	mg/kg wet	43.10		85	80-120	3	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
				Total Metals						
Batch DL01456 - 3050B										
Barium	531	8.33	mg/kg wet	597.0		89	80-120	5	20	
Beryllium	105	0.37	mg/kg wet	117.0		90	80-120	2	20	
Cadmium	103	1.67	mg/kg wet	118.0		87	80-120	1	20	
Chromium	261	3.33	mg/kg wet	299.0		87	80-120	1	20	
Cobalt	106	3.33	mg/kg wet	114.0		93	80-120	2	20	
Copper	296	8.33	mg/kg wet	330.0		90	80-120	3	20	
Lead	133	16.7	mg/kg wet	144.0		93	80-120	1	20	
Nickel	153	8.33	mg/kg wet	171.0		90	80-120	2	20	
Selenium	130	16.7	mg/kg wet	154.0		85	80-120	1	20	
Silver	64.1	1.67	mg/kg wet	73.50		87	80-120	2	20	
Thallium	44.8	16.7	mg/kg wet				80-120	0.6	20	
Vanadium	234	3.33	mg/kg wet	259.0		90	80-120	2	20	
Vanadium	234	3.33	mg/kg wet	259.0		90	80-120	2	20	
Zinc	826	8.33	mg/kg wet	874.0		95	80-120	1	20	
LCS Dup										
Thallium	80.9	15.4	mg/kg wet	97.40		83	80-120	3	20	
LCS Dup										
Thallium	90.2	7.69	mg/kg wet	97.40		93	80-120	2	30	
Batch DL01457 - 3050B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	33.1	3.00	mg/kg wet	27.90		119	80-120			
LCS Dup										
Mercury	32.9	3.00	mg/kg wet	27.90		118	80-120	0.6	20	
Batch DL01623 - 3050B										
Blank										
Antimony	ND	5.00	mg/kg wet							
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Beryllium	ND	0.11	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Cobalt	ND	1.00	mg/kg wet							
Copper	ND	2.50	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Nickel	ND	2.50	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
Thallium	ND	5.00	mg/kg wet							
Vanadium	ND	1.00	mg/kg wet							
Vanadium	ND	1.00	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL01623 - 3050B										
Zinc	ND	2.50	mg/kg wet							
LCS										
Antimony	47.5	16.1	mg/kg wet	42.00		113	40-160			
Arsenic	34.8	8.06	mg/kg wet	43.10		81	80-120			
Barium	542	8.06	mg/kg wet	597.0		91	80-120			
Beryllium	113	0.35	mg/kg wet	117.0		97	80-120			
Cadmium	106	1.61	mg/kg wet	118.0		90	80-120			
Chromium	273	3.23	mg/kg wet	299.0		91	80-120			
Cobalt	109	3.23	mg/kg wet	114.0		95	80-120			
Copper	317	8.06	mg/kg wet	330.0		96	80-120			
Lead	134	16.1	mg/kg wet	144.0		93	80-120			
Nickel	161	8.06	mg/kg wet	171.0		94	80-120			
Selenium	133	16.1	mg/kg wet	154.0		87	80-120			
Silver	69.5	1.61	mg/kg wet	73.50		95	80-120			
Vanadium	242	3.23	mg/kg wet	259.0		93	80-120			
Vanadium	242	3.23	mg/kg wet	259.0		93	80-120			
Zinc	777	8.06	mg/kg wet	874.0		89	80-120			
LCS										
Thallium	81.1	14.5	mg/kg wet	97.40		83	80-120			
LCS Dup										
Antimony	26.3	11.4	mg/kg wet	42.00		63	40-160	58	20	D+
Arsenic	34.6	5.68	mg/kg wet	43.10		80	80-120	0.4	20	
Barium	521	5.68	mg/kg wet	597.0		87	80-120	4	20	
Beryllium	108	0.25	mg/kg wet	117.0		92	80-120	5	20	
Cadmium	103	1.14	mg/kg wet	118.0		88	80-120	3	20	
Chromium	269	2.27	mg/kg wet	299.0		90	80-120	2	20	
Cobalt	104	2.27	mg/kg wet	114.0		92	80-120	4	20	
Copper	305	5.68	mg/kg wet	330.0		92	80-120	4	20	
Lead	130	11.4	mg/kg wet	144.0		90	80-120	3	20	
Nickel	156	5.68	mg/kg wet	171.0		91	80-120	3	20	
Selenium	132	11.4	mg/kg wet	154.0		85	80-120	1	20	
Silver	67.5	1.14	mg/kg wet	73.50		92	80-120	3	20	
Vanadium	236	2.27	mg/kg wet	259.0		91	80-120	2	20	
Vanadium	236	2.27	mg/kg wet	259.0		91	80-120	2	20	
Zinc	744	5.68	mg/kg wet	874.0		85	80-120	4	20	
LCS Dup										
Thallium	80.5	13.0	mg/kg wet	97.40		83	80-120	0.8	20	
Batch DL01624 - 3050B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	30.2	3.05	mg/kg wet	27.90		108	80-120			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL01624 - 3050B										
LCS Dup										
Mercury	29.4	2.71	mg/kg wet	27.90		105	80-120	3	20	
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,1-Trichloroethane	ND	0.200	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,2-Trichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethene	ND	0.200	mg/kg wet							
1,1-Dichloropropene	ND	0.200	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,3-Trichloropropane	ND	0.200	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.200	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	1.00	mg/kg wet							
1,2-Dibromoethane	ND	0.200	mg/kg wet							
1,2-Dichlorobenzene	ND	0.200	mg/kg wet							
1,2-Dichloroethane	ND	0.200	mg/kg wet							
1,2-Dichloropropane	ND	0.200	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.200	mg/kg wet							
1,3-Dichlorobenzene	ND	0.200	mg/kg wet							
1,3-Dichloropropane	ND	0.200	mg/kg wet							
1,4-Dichlorobenzene	ND	0.200	mg/kg wet							
1,4-Dioxane - Screen	ND	40.0	mg/kg wet							
1-Chlorohexane	ND	0.200	mg/kg wet							
2,2-Dichloropropane	ND	0.200	mg/kg wet							
2-Butanone	ND	1.00	mg/kg wet							
2-Chlorotoluene	ND	0.200	mg/kg wet							
2-Hexanone	ND	1.00	mg/kg wet							
4-Chlorotoluene	ND	0.200	mg/kg wet							
4-Isopropyltoluene	ND	0.200	mg/kg wet							
4-Methyl-2-Pentanone	ND	1.00	mg/kg wet							
Acetone	ND	1.00	mg/kg wet							
Benzene	ND	0.200	mg/kg wet							
Bromobenzene	ND	0.200	mg/kg wet							
Bromochloromethane	ND	0.200	mg/kg wet							
Bromodichloromethane	ND	0.200	mg/kg wet							
Bromoform	ND	0.200	mg/kg wet							
Bromomethane	ND	0.200	mg/kg wet							
Carbon Disulfide	0.0420	0.200	mg/kg wet							J

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
Carbon Tetrachloride	ND	0.200	mg/kg wet							
Chlorobenzene	ND	0.200	mg/kg wet							
Chloroethane	ND	0.200	mg/kg wet							
Chloroform	ND	0.200	mg/kg wet							
Chloromethane	ND	0.200	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.200	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Dibromochloromethane	ND	0.200	mg/kg wet							
Dibromomethane	ND	0.200	mg/kg wet							
Dichlorodifluoromethane	ND	0.200	mg/kg wet							
Diethyl Ether	ND	0.200	mg/kg wet							
Di-isopropyl ether	ND	0.200	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.200	mg/kg wet							
Ethylbenzene	ND	0.200	mg/kg wet							
Hexachlorobutadiene	ND	0.200	mg/kg wet							
Isopropylbenzene	ND	0.200	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.200	mg/kg wet							
Methylene Chloride	ND	0.400	mg/kg wet							
Naphthalene	ND	0.200	mg/kg wet							
n-Butylbenzene	ND	0.200	mg/kg wet							
n-Propylbenzene	ND	0.200	mg/kg wet							
sec-Butylbenzene	ND	0.200	mg/kg wet							
Styrene	ND	0.200	mg/kg wet							
tert-Butylbenzene	ND	0.200	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.200	mg/kg wet							
Tetrachloroethene	ND	0.200	mg/kg wet							
Tetrahydrofuran	ND	1.00	mg/kg wet							
Toluene	ND	0.200	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.200	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Trichloroethene	ND	0.200	mg/kg wet							
Trichlorofluoromethane	ND	0.200	mg/kg wet							
Vinyl Acetate	ND	0.200	mg/kg wet							
Vinyl Chloride	ND	0.200	mg/kg wet							
Xylene O	ND	0.200	mg/kg wet							
Xylene P,M	ND	0.400	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*4.88*		mg/kg wet	*5.000*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.06*		mg/kg wet	*5.000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*4.98*		mg/kg wet	*5.000*		*100*	*70-130*			
Surrogate: Toluene-d8	*5.03*		mg/kg wet	*5.000*		*101*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	2.09	0.200	mg/kg wet	2.000		105	70-130			
1,1,1-Trichloroethane	2.00	0.200	mg/kg wet	2.000		100	70-130			
1,1,2,2-Tetrachloroethane	2.10	0.200	mg/kg wet	2.000		105	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
1,1,2-Trichloroethane	2.18	0.200	mg/kg wet	2.000		109	70-130			
1,1-Dichloroethane	2.16	0.200	mg/kg wet	2.000		108	70-130			
1,1-Dichloroethene	2.19	0.200	mg/kg wet	2.000		109	70-130			
1,1-Dichloropropene	2.30	0.200	mg/kg wet	2.000		115	70-130			
1,2,3-Trichlorobenzene	1.96	0.200	mg/kg wet	2.000		98	70-130			
1,2,3-Trichloropropane	2.14	0.200	mg/kg wet	2.000		107	70-130			
1,2,4-Trichlorobenzene	1.89	0.200	mg/kg wet	2.000		94	70-130			
1,2,4-Trimethylbenzene	1.96	0.200	mg/kg wet	2.000		98	70-130			
1,2-Dibromo-3-Chloropropane	1.98	1.00	mg/kg wet	2.000		99	70-130			
1,2-Dibromoethane	2.14	0.200	mg/kg wet	2.000		107	70-130			
1,2-Dichlorobenzene	1.88	0.200	mg/kg wet	2.000		94	70-130			
1,2-Dichloroethane	2.24	0.200	mg/kg wet	2.000		112	70-130			
1,2-Dichloropropane	2.08	0.200	mg/kg wet	2.000		104	70-130			
1,3,5-Trimethylbenzene	2.02	0.200	mg/kg wet	2.000		101	70-130			
1,3-Dichlorobenzene	1.83	0.200	mg/kg wet	2.000		91	70-130			
1,3-Dichloropropane	2.22	0.200	mg/kg wet	2.000		111	70-130			
1,4-Dichlorobenzene	1.98	0.200	mg/kg wet	2.000		99	70-130			
1,4-Dioxane - Screen	67.1	40.0	mg/kg wet	40.00		168	44-241			
1-Chlorohexane	2.06	0.200	mg/kg wet	2.000		103	70-130			
2,2-Dichloropropane	2.26	0.200	mg/kg wet	2.000		113	70-130			
2-Butanone	12.3	1.00	mg/kg wet	10.00		123	70-130			
2-Chlorotoluene	1.98	0.200	mg/kg wet	2.000		99	70-130			
2-Hexanone	10.9	1.00	mg/kg wet	10.00		109	70-130			
4-Chlorotoluene	1.93	0.200	mg/kg wet	2.000		97	70-130			
4-Isopropyltoluene	1.97	0.200	mg/kg wet	2.000		98	70-130			
4-Methyl-2-Pentanone	13.3	1.00	mg/kg wet	10.00		133	70-130			B+
Acetone	12.8	1.00	mg/kg wet	10.00		128	70-130			
Benzene	2.33	0.200	mg/kg wet	2.000		116	70-130			
Bromobenzene	1.98	0.200	mg/kg wet	2.000		99	70-130			
Bromochloromethane	2.06	0.200	mg/kg wet	2.000		103	70-130			
Bromodichloromethane	2.03	0.200	mg/kg wet	2.000		101	70-130			
Bromoform	1.95	0.200	mg/kg wet	2.000		98	70-130			
Bromomethane	1.98	0.200	mg/kg wet	2.000		99	70-130			
Carbon Disulfide	2.33	0.200	mg/kg wet	2.000		116	70-130			
Carbon Tetrachloride	2.14	0.200	mg/kg wet	2.000		107	70-130			
Chlorobenzene	2.00	0.200	mg/kg wet	2.000		100	70-130			
Chloroethane	2.06	0.200	mg/kg wet	2.000		103	70-130			
Chloroform	2.15	0.200	mg/kg wet	2.000		107	70-130			
Chloromethane	2.04	0.200	mg/kg wet	2.000		102	70-130			
cis-1,2-Dichloroethene	2.12	0.200	mg/kg wet	2.000		106	70-130			
cis-1,3-Dichloropropene	2.38	0.200	mg/kg wet	2.000		119	70-130			
Dibromochloromethane	1.90	0.200	mg/kg wet	2.000		95	70-130			
Dibromomethane	2.19	0.200	mg/kg wet	2.000		110	70-130			
Dichlorodifluoromethane	1.63	0.200	mg/kg wet	2.000		82	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
Diethyl Ether	2.18	0.200	mg/kg wet	2.000		109	70-130			
Di-isopropyl ether	2.34	0.200	mg/kg wet	2.000		117	70-130			
Ethyl tertiary-butyl ether	2.15	0.200	mg/kg wet	2.000		108	70-130			
Ethylbenzene	2.11	0.200	mg/kg wet	2.000		105	70-130			
Hexachlorobutadiene	1.90	0.200	mg/kg wet	2.000		95	70-130			
Isopropylbenzene	1.95	0.200	mg/kg wet	2.000		97	70-130			
Methyl tert-Butyl Ether	2.34	0.200	mg/kg wet	2.000		117	70-130			
Methylene Chloride	2.00	0.400	mg/kg wet	2.000		100	70-130			
Naphthalene	2.03	0.200	mg/kg wet	2.000		102	70-130			
n-Butylbenzene	2.05	0.200	mg/kg wet	2.000		103	70-130			
n-Propylbenzene	2.09	0.200	mg/kg wet	2.000		104	70-130			
sec-Butylbenzene	1.94	0.200	mg/kg wet	2.000		97	70-130			
Styrene	1.99	0.200	mg/kg wet	2.000		100	70-130			
tert-Butylbenzene	1.93	0.200	mg/kg wet	2.000		97	70-130			
Tertiary-amyl methyl ether	2.36	0.200	mg/kg wet	2.000		118	70-130			
Tetrachloroethene	1.53	0.200	mg/kg wet	2.000		76	70-130			
Tetrahydrofuran	2.00	1.00	mg/kg wet	2.000		100	70-130			
Toluene	2.24	0.200	mg/kg wet	2.000		112	70-130			
trans-1,2-Dichloroethene	2.05	0.200	mg/kg wet	2.000		103	70-130			
trans-1,3-Dichloropropene	2.00	0.200	mg/kg wet	2.000		100	70-130			
Trichloroethene	2.12	0.200	mg/kg wet	2.000		106	70-130			
Trichlorofluoromethane	2.17	0.200	mg/kg wet	2.000		109	70-130			
Vinyl Acetate	2.51	0.200	mg/kg wet	2.000		126	70-130			
Vinyl Chloride	2.07	0.200	mg/kg wet	2.000		103	70-130			
Xylene O	1.98	0.200	mg/kg wet	2.000		99	70-130			
Xylene P,M	4.14	0.400	mg/kg wet	4.000		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	*5.43*		mg/kg wet	*5.000*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.19*		mg/kg wet	*5.000*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*5.18*		mg/kg wet	*5.000*		*104*	*70-130*			
Surrogate: Toluene-d8	*4.84*		mg/kg wet	*5.000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	2.01	0.200	mg/kg wet	2.000		101	70-130	4	25	
1,1,1-Trichloroethane	2.10	0.200	mg/kg wet	2.000		105	70-130	5	25	
1,1,2,2-Tetrachloroethane	2.14	0.200	mg/kg wet	2.000		107	70-130	2	25	
1,1,2-Trichloroethane	2.11	0.200	mg/kg wet	2.000		106	70-130	3	25	
1,1-Dichloroethane	2.37	0.200	mg/kg wet	2.000		119	70-130	10	25	
1,1-Dichloroethene	2.22	0.200	mg/kg wet	2.000		111	70-130	2	25	
1,1-Dichloropropene	2.31	0.200	mg/kg wet	2.000		115	70-130	0.4	25	
1,2,3-Trichlorobenzene	1.80	0.200	mg/kg wet	2.000		90	70-130	9	25	
1,2,3-Trichloropropane	2.21	0.200	mg/kg wet	2.000		110	70-130	3	25	
1,2,4-Trichlorobenzene	1.89	0.200	mg/kg wet	2.000		94	70-130	0	25	
1,2,4-Trimethylbenzene	1.98	0.200	mg/kg wet	2.000		99	70-130	1	25	
1,2-Dibromo-3-Chloropropane	2.04	1.00	mg/kg wet	2.000		102	70-130	3	25	
1,2-Dibromoethane	2.08	0.200	mg/kg wet	2.000		104	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
1,2-Dichlorobenzene	1.88	0.200	mg/kg wet	2.000		94	70-130	0.2	25	
1,2-Dichloroethane	2.31	0.200	mg/kg wet	2.000		116	70-130	3	25	
1,2-Dichloropropane	2.25	0.200	mg/kg wet	2.000		112	70-130	8	25	
1,3,5-Trimethylbenzene	2.12	0.200	mg/kg wet	2.000		106	70-130	5	25	
1,3-Dichlorobenzene	1.86	0.200	mg/kg wet	2.000		93	70-130	2	25	
1,3-Dichloropropane	2.28	0.200	mg/kg wet	2.000		114	70-130	3	25	
1,4-Dichlorobenzene	2.01	0.200	mg/kg wet	2.000		100	70-130	1	25	
1,4-Dioxane - Screen	62.4	40.0	mg/kg wet	40.00		156	44-241	7	200	
1-Chlorohexane	2.03	0.200	mg/kg wet	2.000		102	70-130	1	25	
2,2-Dichloropropane	2.27	0.200	mg/kg wet	2.000		114	70-130	0.5	25	
2-Butanone	11.9	1.00	mg/kg wet	10.00		119	70-130	3	25	
2-Chlorotoluene	2.02	0.200	mg/kg wet	2.000		101	70-130	2	25	
2-Hexanone	10.6	1.00	mg/kg wet	10.00		106	70-130	3	25	
4-Chlorotoluene	2.00	0.200	mg/kg wet	2.000		100	70-130	3	25	
4-Isopropyltoluene	2.06	0.200	mg/kg wet	2.000		103	70-130	5	25	
4-Methyl-2-Pentanone	12.8	1.00	mg/kg wet	10.00		128	70-130	4	25	
Acetone	11.4	1.00	mg/kg wet	10.00		114	70-130	12	25	
Benzene	2.45	0.200	mg/kg wet	2.000		123	70-130	5	25	
Bromobenzene	1.96	0.200	mg/kg wet	2.000		98	70-130	1	25	
Bromochloromethane	2.20	0.200	mg/kg wet	2.000		110	70-130	7	25	
Bromodichloromethane	2.14	0.200	mg/kg wet	2.000		107	70-130	5	25	
Bromoform	1.97	0.200	mg/kg wet	2.000		98	70-130	1	25	
Bromomethane	2.05	0.200	mg/kg wet	2.000		102	70-130	3	25	
Carbon Disulfide	2.40	0.200	mg/kg wet	2.000		120	70-130	3	25	
Carbon Tetrachloride	2.26	0.200	mg/kg wet	2.000		113	70-130	5	25	
Chlorobenzene	2.05	0.200	mg/kg wet	2.000		103	70-130	3	25	
Chloroethane	2.31	0.200	mg/kg wet	2.000		115	70-130	11	25	
Chloroform	2.25	0.200	mg/kg wet	2.000		112	70-130	5	25	
Chloromethane	2.25	0.200	mg/kg wet	2.000		113	70-130	10	25	
cis-1,2-Dichloroethene	2.33	0.200	mg/kg wet	2.000		116	70-130	9	25	
cis-1,3-Dichloropropene	2.46	0.200	mg/kg wet	2.000		123	70-130	3	25	
Dibromochloromethane	1.88	0.200	mg/kg wet	2.000		94	70-130	1	25	
Dibromomethane	2.28	0.200	mg/kg wet	2.000		114	70-130	4	25	
Dichlorodifluoromethane	1.68	0.200	mg/kg wet	2.000		84	70-130	3	25	
Diethyl Ether	2.28	0.200	mg/kg wet	2.000		114	70-130	5	25	
Di-isopropyl ether	2.39	0.200	mg/kg wet	2.000		120	70-130	2	25	
Ethyl tertiary-butyl ether	2.30	0.200	mg/kg wet	2.000		115	70-130	7	25	
Ethylbenzene	2.18	0.200	mg/kg wet	2.000		109	70-130	4	25	
Hexachlorobutadiene	1.84	0.200	mg/kg wet	2.000		92	70-130	3	25	
Isopropylbenzene	1.98	0.200	mg/kg wet	2.000		99	70-130	2	25	
Methyl tert-Butyl Ether	2.52	0.200	mg/kg wet	2.000		126	70-130	7	25	
Methylene Chloride	2.13	0.400	mg/kg wet	2.000		106	70-130	6	25	
Naphthalene	1.99	0.200	mg/kg wet	2.000		100	70-130	2	25	
n-Butylbenzene	2.07	0.200	mg/kg wet	2.000		104	70-130	0.9	25	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL01032 - 5035										
n-Propylbenzene	2.08	0.200	mg/kg wet	2.000		104	70-130	0.4	25	
sec-Butylbenzene	1.89	0.200	mg/kg wet	2.000		94	70-130	3	25	
Styrene	2.06	0.200	mg/kg wet	2.000		103	70-130	3	25	
tert-Butylbenzene	1.96	0.200	mg/kg wet	2.000		98	70-130	1	25	
Tertiary-amyl methyl ether	2.48	0.200	mg/kg wet	2.000		124	70-130	5	25	
Tetrachloroethene	1.59	0.200	mg/kg wet	2.000		80	70-130	4	25	
Tetrahydrofuran	2.23	1.00	mg/kg wet	2.000		111	70-130	10	25	
Toluene	2.30	0.200	mg/kg wet	2.000		115	70-130	2	25	
trans-1,2-Dichloroethene	2.15	0.200	mg/kg wet	2.000		108	70-130	5	25	
trans-1,3-Dichloropropene	2.12	0.200	mg/kg wet	2.000		106	70-130	6	25	
Trichloroethene	2.28	0.200	mg/kg wet	2.000		114	70-130	7	25	
Trichlorofluoromethane	2.20	0.200	mg/kg wet	2.000		110	70-130	1	25	
Vinyl Acetate	2.50	0.200	mg/kg wet	2.000		125	70-130	0.4	25	
Vinyl Chloride	2.22	0.200	mg/kg wet	2.000		111	70-130	7	25	
Xylene O	2.04	0.200	mg/kg wet	2.000		102	70-130	3	25	
Xylene P,M	4.21	0.400	mg/kg wet	4.000		105	70-130	2	25	
Surrogate: 1,2-Dichloroethane-d4	*5.32*		mg/kg wet	*5.000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.42*		mg/kg wet	*5.000*		*108*	*70-130*			
Surrogate: Dibromofluoromethane	*5.31*		mg/kg wet	*5.000*		*106*	*70-130*			
Surrogate: Toluene-d8	*4.82*		mg/kg wet	*5.000*		*96*	*70-130*			
8081B Organochlorine Pesticides										
Batch DL00906 - 3546										
Blank										
4,4´-DDD	ND	0.0025	mg/kg wet							
4,4´-DDD [2C]	ND	0.0025	mg/kg wet							
4,4´-DDE	ND	0.0025	mg/kg wet							
4,4´-DDE [2C]	ND	0.0025	mg/kg wet							
4,4´-DDT	ND	0.0025	mg/kg wet							
4,4´-DDT [2C]	ND	0.0025	mg/kg wet							
Aldrin	ND	0.0025	mg/kg wet							
Aldrin [2C]	ND	0.0025	mg/kg wet							
alpha-BHC	ND	0.0025	mg/kg wet							
alpha-BHC [2C]	ND	0.0025	mg/kg wet							
alpha-Chlordane	ND	0.0025	mg/kg wet							
alpha-Chlordane [2C]	ND	0.0025	mg/kg wet							
beta-BHC	ND	0.0025	mg/kg wet							
beta-BHC [2C]	ND	0.0025	mg/kg wet							
delta-BHC	ND	0.0025	mg/kg wet							
delta-BHC [2C]	ND	0.0025	mg/kg wet							
Dieldrin	ND	0.0025	mg/kg wet							
Dieldrin [2C]	ND	0.0025	mg/kg wet							
Endosulfan I	ND	0.0025	mg/kg wet							
Endosulfan I [2C]	ND	0.0025	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL00906 - 3546										
Endosulfan II	ND	0.0025	mg/kg wet							
Endosulfan II [2C]	ND	0.0025	mg/kg wet							
Endosulfan Sulfate	ND	0.0025	mg/kg wet							
Endosulfan Sulfate [2C]	ND	0.0025	mg/kg wet							
Endrin	ND	0.0025	mg/kg wet							
Endrin [2C]	ND	0.0025	mg/kg wet							
Endrin Aldehyde	ND	0.0025	mg/kg wet							
Endrin Aldehyde [2C]	ND	0.0025	mg/kg wet							
Endrin Ketone	ND	0.0025	mg/kg wet							
Endrin Ketone [2C]	ND	0.0025	mg/kg wet							
gamma-BHC (Lindane)	ND	0.0015	mg/kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0015	mg/kg wet							
gamma-Chlordane	ND	0.0025	mg/kg wet							
gamma-Chlordane [2C]	ND	0.0025	mg/kg wet							
Heptachlor	ND	0.0025	mg/kg wet							
Heptachlor [2C]	ND	0.0025	mg/kg wet							
Heptachlor Epoxide	ND	0.0025	mg/kg wet							
Heptachlor Epoxide [2C]	ND	0.0025	mg/kg wet							
Hexachlorobenzene	ND	0.0025	mg/kg wet							
Hexachlorobenzene [2C]	ND	0.0025	mg/kg wet							
Methoxychlor	ND	0.0025	mg/kg wet							
Methoxychlor [2C]	ND	0.0025	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0110*		mg/kg wet	*0.01250*		*88*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0113*		mg/kg wet	*0.01250*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0113*		mg/kg wet	*0.01250*		*91*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0117*		mg/kg wet	*0.01250*		*93*	*30-150*			
LCS										
4,4´-DDD	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
4,4´-DDD [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
4,4´-DDE	0.0131	0.0025	mg/kg wet	0.01250		105	40-140			
4,4´-DDE [2C]	0.0128	0.0025	mg/kg wet	0.01250		103	40-140			
4,4´-DDT	0.0138	0.0025	mg/kg wet	0.01250		110	40-140			
4,4´-DDT [2C]	0.0137	0.0025	mg/kg wet	0.01250		110	40-140			
Aldrin	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
Aldrin [2C]	0.0123	0.0025	mg/kg wet	0.01250		99	40-140			
alpha-BHC	0.0123	0.0025	mg/kg wet	0.01250		98	40-140			
alpha-BHC [2C]	0.0111	0.0025	mg/kg wet	0.01250		89	40-140			
alpha-Chlordane	0.0118	0.0025	mg/kg wet	0.01250		94	40-140			
alpha-Chlordane [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
beta-BHC	0.0123	0.0025	mg/kg wet	0.01250		99	40-140			
beta-BHC [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
delta-BHC	0.0118	0.0025	mg/kg wet	0.01250		95	40-140			
delta-BHC [2C]	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL00906 - 3546										
Dieldrin	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
Dieldrin [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			
Endosulfan I	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Endosulfan I [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Endosulfan II	0.0122	0.0025	mg/kg wet	0.01250		97	40-140			
Endosulfan II [2C]	0.0123	0.0025	mg/kg wet	0.01250		98	40-140			
Endosulfan Sulfate	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Endosulfan Sulfate [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Endrin	0.0126	0.0025	mg/kg wet	0.01250		101	40-140			
Endrin [2C]	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Endrin Aldehyde	0.0090	0.0025	mg/kg wet	0.01250		72	40-140			
Endrin Aldehyde [2C]	0.0092	0.0025	mg/kg wet	0.01250		73	40-140			
Endrin Ketone	0.0127	0.0025	mg/kg wet	0.01250		101	40-140			
Endrin Ketone [2C]	0.0131	0.0025	mg/kg wet	0.01250		105	40-140			
gamma-BHC (Lindane)	0.0122	0.0015	mg/kg wet	0.01250		98	40-140			
gamma-BHC (Lindane) [2C]	0.0127	0.0015	mg/kg wet	0.01250		102	40-140			
gamma-Chlordane	0.0136	0.0025	mg/kg wet	0.01250		109	40-140			
gamma-Chlordane [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140			
Heptachlor	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
Heptachlor [2C]	0.0123	0.0025	mg/kg wet	0.01250		99	40-140			
Heptachlor Epoxide	0.0122	0.0025	mg/kg wet	0.01250		98	40-140			
Heptachlor Epoxide [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Hexachlorobenzene	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
Hexachlorobenzene [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
Methoxychlor	0.0129	0.0025	mg/kg wet	0.01250		103	40-140			
Methoxychlor [2C]	0.0131	0.0025	mg/kg wet	0.01250		105	40-140			
Surrogate: Decachlorobiphenyl	*0.0113*		mg/kg wet	*0.01250*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0113*		mg/kg wet	*0.01250*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0117*		mg/kg wet	*0.01250*		*94*	*30-150*			
LCS Dup										
4,4´-DDD	0.0134	0.0025	mg/kg wet	0.01250		107	40-140	3	30	
4,4´-DDD [2C]	0.0135	0.0025	mg/kg wet	0.01250		108	40-140	2	30	
4,4´-DDE	0.0135	0.0025	mg/kg wet	0.01250		108	40-140	3	30	
4,4´-DDE [2C]	0.0133	0.0025	mg/kg wet	0.01250		107	40-140	4	30	
4,4´-DDT	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	1	30	
4,4´-DDT [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	2	30	
Aldrin	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	5	30	
Aldrin [2C]	0.0129	0.0025	mg/kg wet	0.01250		104	40-140	5	30	
alpha-BHC	0.0128	0.0025	mg/kg wet	0.01250		103	40-140	4	30	
alpha-BHC [2C]	0.0118	0.0025	mg/kg wet	0.01250		94	40-140	5	30	
alpha-Chlordane	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	4	30	
alpha-Chlordane [2C]	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	4	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL00906 - 3546										
beta-BHC	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	4	30	
beta-BHC [2C]	0.0129	0.0025	mg/kg wet	0.01250		103	40-140	3	30	
delta-BHC	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	3	30	
delta-BHC [2C]	0.0120	0.0025	mg/kg wet	0.01250		96	40-140	3	30	
Dieldrin	0.0137	0.0025	mg/kg wet	0.01250		110	40-140	4	30	
Dieldrin [2C]	0.0139	0.0025	mg/kg wet	0.01250		111	40-140	4	30	
Endosulfan I	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	4	30	
Endosulfan I [2C]	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	4	30	
Endosulfan II	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	4	30	
Endosulfan II [2C]	0.0127	0.0025	mg/kg wet	0.01250		101	40-140	3	30	
Endosulfan Sulfate	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	3	30	
Endosulfan Sulfate [2C]	0.0127	0.0025	mg/kg wet	0.01250		102	40-140	2	30	
Endrin	0.0131	0.0025	mg/kg wet	0.01250		104	40-140	4	30	
Endrin [2C]	0.0132	0.0025	mg/kg wet	0.01250		105	40-140	3	30	
Endrin Aldehyde	0.0090	0.0025	mg/kg wet	0.01250		72	40-140	0.4	30	
Endrin Aldehyde [2C]	0.0092	0.0025	mg/kg wet	0.01250		73	40-140	0.08	30	
Endrin Ketone	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
Endrin Ketone [2C]	0.0135	0.0025	mg/kg wet	0.01250		108	40-140	2	30	
gamma-BHC (Lindane)	0.0127	0.0015	mg/kg wet	0.01250		102	40-140	4	30	
gamma-BHC (Lindane) [2C]	0.0133	0.0015	mg/kg wet	0.01250		106	40-140	4	30	
gamma-Chlordane	0.0142	0.0025	mg/kg wet	0.01250		113	40-140	4	30	
gamma-Chlordane [2C]	0.0146	0.0025	mg/kg wet	0.01250		117	40-140	4	30	
Heptachlor	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	4	30	
Heptachlor [2C]	0.0129	0.0025	mg/kg wet	0.01250		103	40-140	4	30	
Heptachlor Epoxide	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	4	30	
Heptachlor Epoxide [2C]	0.0131	0.0025	mg/kg wet	0.01250		105	40-140	5	30	
Hexachlorobenzene	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	4	30	
Hexachlorobenzene [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	5	30	
Methoxychlor	0.0131	0.0025	mg/kg wet	0.01250		105	40-140	2	30	
Methoxychlor [2C]	0.0134	0.0025	mg/kg wet	0.01250		108	40-140	3	30	
Surrogate: Decachlorobiphenyl	*0.0111*		mg/kg wet	*0.01250*		*89*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0115*		mg/kg wet	*0.01250*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0115*		mg/kg wet	*0.01250*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0119*		mg/kg wet	*0.01250*		*96*	*30-150*			
8082A Polychlorinated Biphenyls (PCB)										
Batch DL00902 - 3540C										
Blank										
Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							

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Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL00902 - 3540C										
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0115*		mg/kg wet	*0.02500*		*46*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0143*		mg/kg wet	*0.02500*		*57*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.00962*		mg/kg wet	*0.02500*		*38*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0124*		mg/kg wet	*0.02500*		*50*	*30-150*			
LCS										
Aroclor 1016	0.4	0.02	mg/kg wet	0.5000		71	40-140			
Aroclor 1016 [2C]	0.4	0.02	mg/kg wet	0.5000		82	40-140			
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		75	40-140			
Aroclor 1260 [2C]	0.4	0.02	mg/kg wet	0.5000		85	40-140			
Surrogate: Decachlorobiphenyl	*0.0190*		mg/kg wet	*0.02500*		*76*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0217*		mg/kg wet	*0.02500*		*87*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0160*		mg/kg wet	*0.02500*		*64*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0193*		mg/kg wet	*0.02500*		*77*	*30-150*			
LCS Dup										
Aroclor 1016	0.4	0.02	mg/kg wet	0.5000		80	40-140	12	30	
Aroclor 1016 [2C]	0.5	0.02	mg/kg wet	0.5000		93	40-140	12	30	
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		85	40-140	12	30	
Aroclor 1260 [2C]	0.5	0.02	mg/kg wet	0.5000		95	40-140	11	30	
Surrogate: Decachlorobiphenyl	*0.0212*		mg/kg wet	*0.02500*		*85*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0246*		mg/kg wet	*0.02500*		*99*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0178*		mg/kg wet	*0.02500*		*71*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0216*		mg/kg wet	*0.02500*		*86*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch DL00834 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
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ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL00834 - 3546										
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	18.8	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.61*		mg/kg wet	*5.000*		*92*	*40-140*			
LCS										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500		82	40-140			
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		90	40-140			
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Nonane (C9)	1.7	0.2	mg/kg wet	2.500		70	30-140			
Octacosane (C28)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		86	40-140			
Tetracosane (C24)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Tetradecane (C14)	2.1	0.2	mg/kg wet	2.500		84	40-140			
Total Petroleum Hydrocarbons	28.1	18.8	mg/kg wet	35.00		80	40-140			
Triacontane (C30)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Surrogate: O-Terphenyl	*4.68*		mg/kg wet	*5.000*		*94*	*40-140*			
LCS Dup										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		78	40-140	2	25	
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		94	40-140	2	25	
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500		84	40-140	2	25	
Eicosane (C20)	2.3	0.2	mg/kg wet	2.500		92	40-140	3	25	
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500		93	40-140	2	25	
Hexadecane (C16)	2.3	0.2	mg/kg wet	2.500		91	40-140	4	25	
Nonadecane (C19)	2.3	0.2	mg/kg wet	2.500		90	40-140	3	25	
Nonane (C9)	1.8	0.2	mg/kg wet	2.500		70	30-140	0.7	25	
Octacosane (C28)	2.3	0.2	mg/kg wet	2.500		94	40-140	2	25	
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		90	40-140	4	25	
Tetracosane (C24)	2.3	0.2	mg/kg wet	2.500		93	40-140	2	25	
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		88	40-140	4	25	

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Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL00834 - 3546										
Total Petroleum Hydrocarbons	28.6	18.8	mg/kg wet	35.00		82	40-140	2	25	
Triacontane (C30)	2.3	0.2	mg/kg wet	2.500		93	40-140	2	25	
Surrogate: O-Terphenyl	*4.69*		mg/kg wet	*5.000*		*94*	*40-140*			
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
Blank										
1,1-Biphenyl	ND	0.333	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.333	mg/kg wet							
2,3,4,6-Tetrachlorophenol	ND	1.67	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.333	mg/kg wet							
2,4-Dichlorophenol	ND	0.333	mg/kg wet							
2,4-Dimethylphenol	ND	0.333	mg/kg wet							
2,4-Dinitrophenol	ND	1.67	mg/kg wet							
2,4-Dinitrotoluene	ND	0.333	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.333	mg/kg wet							
2-Methylnaphthalene	ND	0.333	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitroaniline	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.667	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
3-Nitroaniline	ND	0.333	mg/kg wet							
4,6-Dinitro-2-Methylphenol	ND	1.67	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloro-3-Methylphenol	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.667	mg/kg wet							
4-Chloro-phenyl-phenyl ether	ND	0.333	mg/kg wet							
4-Nitroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	0.667	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Benzoic Acid	ND	1.67	mg/kg wet							
Benzyl Alcohol	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.333	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.333	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Carbazole	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachlorocyclopentadiene	ND	1.67	mg/kg wet							
Hexachloroethane	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
N-Nitroso-Di-n-Propylamine	ND	0.333	mg/kg wet							
N-nitrosodiphenylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	1.67	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Pyridine	ND	1.67	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.72*		mg/kg wet	*3.333*		*82*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.32*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.14*		mg/kg wet	*5.000*		*83*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.82*		mg/kg wet	*3.333*		*85*	*30-130*			
Surrogate: 2-Fluorophenol	*4.10*		mg/kg wet	*5.000*		*82*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.82*		mg/kg wet	*3.333*		*85*	*30-130*			
Surrogate: Phenol-d6	*4.14*		mg/kg wet	*5.000*		*83*	*30-130*			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
Surrogate: p-Terphenyl-d14	*3.01*		mg/kg wet	*3.333*		*90*	*30-130*			
LCS										
1,1-Biphenyl	2.45	0.333	mg/kg wet	3.333		74	40-140			
1,2,4-Trichlorobenzene	2.35	0.333	mg/kg wet	3.333		71	40-140			
1,2-Dichlorobenzene	2.10	0.333	mg/kg wet	3.333		63	40-140			
1,3-Dichlorobenzene	2.01	0.333	mg/kg wet	3.333		60	40-140			
1,4-Dichlorobenzene	2.07	0.333	mg/kg wet	3.333		62	40-140			
2,3,4,6-Tetrachlorophenol	2.68	1.67	mg/kg wet	3.333		80	30-130			
2,4,5-Trichlorophenol	3.05	0.333	mg/kg wet	3.333		91	30-130			
2,4,6-Trichlorophenol	2.88	0.333	mg/kg wet	3.333		87	30-130			
2,4-Dichlorophenol	2.87	0.333	mg/kg wet	3.333		86	30-130			
2,4-Dimethylphenol	2.72	0.333	mg/kg wet	3.333		82	30-130			
2,4-Dinitrophenol	1.70	1.67	mg/kg wet	3.333		51	30-130			
2,4-Dinitrotoluene	3.21	0.333	mg/kg wet	3.333		96	40-140			
2,6-Dinitrotoluene	3.03	0.333	mg/kg wet	3.333		91	40-140			
2-Chloronaphthalene	2.51	0.333	mg/kg wet	3.333		75	40-140			
2-Chlorophenol	2.28	0.333	mg/kg wet	3.333		68	30-130			
2-Methylnaphthalene	2.51	0.333	mg/kg wet	3.333		75	40-140			
2-Methylphenol	2.44	0.333	mg/kg wet	3.333		73	30-130			
2-Nitroaniline	3.05	0.333	mg/kg wet	3.333		92	40-140			
2-Nitrophenol	2.42	0.333	mg/kg wet	3.333		73	30-130			
3,3´-Dichlorobenzidine	2.49	0.667	mg/kg wet	3.333		75	40-140			
3+4-Methylphenol	4.50	0.667	mg/kg wet	6.667		67	30-130			
3-Nitroaniline	2.66	0.333	mg/kg wet	3.333		80	40-140			
4,6-Dinitro-2-Methylphenol	2.39	1.67	mg/kg wet	3.333		72	30-130			
4-Bromophenyl-phenylether	3.25	0.333	mg/kg wet	3.333		97	40-140			
4-Chloro-3-Methylphenol	3.20	0.333	mg/kg wet	3.333		96	30-130			
4-Chloroaniline	1.37	0.667	mg/kg wet	3.333		41	40-140			
4-Chloro-phenyl-phenyl ether	3.11	0.333	mg/kg wet	3.333		93	40-140			
4-Nitroaniline	2.64	0.333	mg/kg wet	3.333		79	40-140			
4-Nitrophenol	3.00	1.67	mg/kg wet	3.333		90	30-130			
Acenaphthene	2.59	0.333	mg/kg wet	3.333		78	40-140			
Acenaphthylene	2.36	0.333	mg/kg wet	3.333		71	40-140			
Acetophenone	1.97	0.667	mg/kg wet	3.333		59	40-140			
Aniline	1.35	0.667	mg/kg wet	3.333		41	40-140			
Anthracene	2.97	0.333	mg/kg wet	3.333		89	40-140			
Azobenzene	2.85	0.333	mg/kg wet	3.333		85	40-140			
Benzo(a)anthracene	3.20	0.333	mg/kg wet	3.333		96	40-140			
Benzo(a)pyrene	3.10	0.167	mg/kg wet	3.333		93	40-140			
Benzo(b)fluoranthene	3.40	0.333	mg/kg wet	3.333		102	40-140			
Benzo(g,h,i)perylene	2.90	0.333	mg/kg wet	3.333		87	40-140			
Benzo(k)fluoranthene	3.00	0.333	mg/kg wet	3.333		90	40-140			
Benzoic Acid	1.90	1.67	mg/kg wet	3.333		57	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
Benzyl Alcohol	1.89	0.333	mg/kg wet	3.333		57	40-140			
bis(2-Chloroethoxy)methane	2.46	0.333	mg/kg wet	3.333		74	40-140			
bis(2-Chloroethyl)ether	2.14	0.333	mg/kg wet	3.333		64	40-140			
bis(2-chloroisopropyl)Ether	2.08	0.333	mg/kg wet	3.333		62	40-140			
bis(2-Ethylhexyl)phthalate	3.10	0.333	mg/kg wet	3.333		93	40-140			
Butylbenzylphthalate	3.04	0.333	mg/kg wet	3.333		91	40-140			
Carbazole	3.00	0.333	mg/kg wet	3.333		90	40-140			
Chrysene	3.03	0.167	mg/kg wet	3.333		91	40-140			
Dibenzo(a,h)Anthracene	2.88	0.167	mg/kg wet	3.333		86	40-140			
Dibenzofuran	2.84	0.333	mg/kg wet	3.333		85	40-140			
Diethylphthalate	3.16	0.333	mg/kg wet	3.333		95	40-140			
Dimethylphthalate	3.12	0.333	mg/kg wet	3.333		94	40-140			
Di-n-butylphthalate	3.21	0.333	mg/kg wet	3.333		96	40-140			
Di-n-octylphthalate	3.11	0.333	mg/kg wet	3.333		93	40-140			
Fluoranthene	3.09	0.333	mg/kg wet	3.333		93	40-140			
Fluorene	3.02	0.333	mg/kg wet	3.333		91	40-140			
Hexachlorobenzene	3.21	0.167	mg/kg wet	3.333		96	40-140			
Hexachlorobutadiene	2.35	0.333	mg/kg wet	3.333		70	40-140			
Hexachlorocyclopentadiene	1.79	1.67	mg/kg wet	3.333		54	40-140			
Hexachloroethane	2.01	0.333	mg/kg wet	3.333		60	40-140			
Indeno(1,2,3-cd)Pyrene	2.85	0.333	mg/kg wet	3.333		85	40-140			
Isophorone	2.19	0.333	mg/kg wet	3.333		66	40-140			
Naphthalene	2.33	0.333	mg/kg wet	3.333		70	40-140			
Nitrobenzene	2.35	0.333	mg/kg wet	3.333		71	40-140			
N-Nitrosodimethylamine	1.77	0.333	mg/kg wet	3.333		53	40-140			
N-Nitroso-Di-n-Propylamine	2.43	0.333	mg/kg wet	3.333		73	40-140			
N-nitrosodiphenylamine	2.81	0.333	mg/kg wet	3.333		84	40-140			
Pentachlorophenol	2.71	1.67	mg/kg wet	3.333		81	30-130			
Phenanthrene	2.86	0.333	mg/kg wet	3.333		86	40-140			
Phenol	2.30	0.333	mg/kg wet	3.333		69	30-130			
Pyrene	3.15	0.333	mg/kg wet	3.333		94	40-140			
Pyridine	1.50	1.67	mg/kg wet	3.333		45	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.15*		mg/kg wet	*3.333*		*65*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*5.12*		mg/kg wet	*5.000*		*102*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.62*		mg/kg wet	*5.000*		*72*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.82*		mg/kg wet	*3.333*		*84*	*30-130*			
Surrogate: 2-Fluorophenol	*3.50*		mg/kg wet	*5.000*		*70*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.52*		mg/kg wet	*3.333*		*75*	*30-130*			
Surrogate: Phenol-d6	*3.80*		mg/kg wet	*5.000*		*76*	*30-130*			
Surrogate: p-Terphenyl-d14	*3.48*		mg/kg wet	*3.333*		*104*	*30-130*			
LCS Dup										
1,1-Biphenyl	2.41	0.333	mg/kg wet	3.333		72	40-140	2	30	
1,2,4-Trichlorobenzene	2.31	0.333	mg/kg wet	3.333		69	40-140	2	30	
1,2-Dichlorobenzene	2.10	0.333	mg/kg wet	3.333		63	40-140	0.2	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
1,3-Dichlorobenzene	2.01	0.333	mg/kg wet	3.333		60	40-140	0.05	30	
1,4-Dichlorobenzene	2.06	0.333	mg/kg wet	3.333		62	40-140	0.2	30	
2,3,4,6-Tetrachlorophenol	2.66	1.67	mg/kg wet	3.333		80	30-130	0.8	30	
2,4,5-Trichlorophenol	2.98	0.333	mg/kg wet	3.333		89	30-130	2	30	
2,4,6-Trichlorophenol	2.80	0.333	mg/kg wet	3.333		84	30-130	3	30	
2,4-Dichlorophenol	2.78	0.333	mg/kg wet	3.333		83	30-130	3	30	
2,4-Dimethylphenol	2.65	0.333	mg/kg wet	3.333		80	30-130	3	30	
2,4-Dinitrophenol	1.71	1.67	mg/kg wet	3.333		51	30-130	0.4	30	
2,4-Dinitrotoluene	3.15	0.333	mg/kg wet	3.333		95	40-140	2	30	
2,6-Dinitrotoluene	2.96	0.333	mg/kg wet	3.333		89	40-140	2	30	
2-Chloronaphthalene	2.46	0.333	mg/kg wet	3.333		74	40-140	2	30	
2-Chlorophenol	2.24	0.333	mg/kg wet	3.333		67	30-130	2	30	
2-Methylnaphthalene	2.45	0.333	mg/kg wet	3.333		74	40-140	2	30	
2-Methylphenol	2.39	0.333	mg/kg wet	3.333		72	30-130	2	30	
2-Nitroaniline	2.98	0.333	mg/kg wet	3.333		90	40-140	2	30	
2-Nitrophenol	2.36	0.333	mg/kg wet	3.333		71	30-130	3	30	
3,3´-Dichlorobenzidine	2.54	0.667	mg/kg wet	3.333		76	40-140	2	30	
3+4-Methylphenol	4.47	0.667	mg/kg wet	6.667		67	30-130	0.7	30	
3-Nitroaniline	2.67	0.333	mg/kg wet	3.333		80	40-140	0.1	30	
4,6-Dinitro-2-Methylphenol	2.40	1.67	mg/kg wet	3.333		72	30-130	0.4	30	
4-Bromophenyl-phenylether	3.10	0.333	mg/kg wet	3.333		93	40-140	5	30	
4-Chloro-3-Methylphenol	3.10	0.333	mg/kg wet	3.333		93	30-130	3	30	
4-Chloroaniline	1.55	0.667	mg/kg wet	3.333		46	40-140	12	30	
4-Chloro-phenyl-phenyl ether	3.03	0.333	mg/kg wet	3.333		91	40-140	3	30	
4-Nitroaniline	2.57	0.333	mg/kg wet	3.333		77	40-140	3	30	
4-Nitrophenol	2.73	1.67	mg/kg wet	3.333		82	30-130	10	30	
Acenaphthene	2.50	0.333	mg/kg wet	3.333		75	40-140	4	30	
Acenaphthylene	2.33	0.333	mg/kg wet	3.333		70	40-140	1	30	
Acetophenone	1.98	0.667	mg/kg wet	3.333		59	40-140	0.3	30	
Aniline	1.37	0.667	mg/kg wet	3.333		41	40-140	1	30	
Anthracene	2.86	0.333	mg/kg wet	3.333		86	40-140	3	30	
Azobenzene	2.72	0.333	mg/kg wet	3.333		82	40-140	4	30	
Benzo(a)anthracene	3.06	0.333	mg/kg wet	3.333		92	40-140	5	30	
Benzo(a)pyrene	3.02	0.167	mg/kg wet	3.333		91	40-140	3	30	
Benzo(b)fluoranthene	2.97	0.333	mg/kg wet	3.333		89	40-140	13	30	
Benzo(g,h,i)perylene	2.83	0.333	mg/kg wet	3.333		85	40-140	2	30	
Benzo(k)fluoranthene	3.03	0.333	mg/kg wet	3.333		91	40-140	0.8	30	
Benzoic Acid	1.97	1.67	mg/kg wet	3.333		59	40-140	3	30	
Benzyl Alcohol	1.94	0.333	mg/kg wet	3.333		58	40-140	2	30	
bis(2-Chloroethoxy)methane	2.42	0.333	mg/kg wet	3.333		72	40-140	2	30	
bis(2-Chloroethyl)ether	2.13	0.333	mg/kg wet	3.333		64	40-140	0.7	30	
bis(2-chloroisopropyl)Ether	2.05	0.333	mg/kg wet	3.333		62	40-140	1	30	
bis(2-Ethylhexyl)phthalate	2.94	0.333	mg/kg wet	3.333		88	40-140	5	30	
Butylbenzylphthalate	2.89	0.333	mg/kg wet	3.333		87	40-140	5	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL00931 - 3546										
Carbazole	2.94	0.333	mg/kg wet	3.333		88	40-140	2	30	
Chrysene	2.89	0.167	mg/kg wet	3.333		87	40-140	4	30	
Dibenzo(a,h)Anthracene	2.85	0.167	mg/kg wet	3.333		86	40-140	1	30	
Dibenzofuran	2.78	0.333	mg/kg wet	3.333		83	40-140	2	30	
Diethylphthalate	3.12	0.333	mg/kg wet	3.333		93	40-140	1	30	
Dimethylphthalate	3.07	0.333	mg/kg wet	3.333		92	40-140	2	30	
Di-n-butylphthalate	3.17	0.333	mg/kg wet	3.333		95	40-140	1	30	
Di-n-octylphthalate	2.83	0.333	mg/kg wet	3.333		85	40-140	10	30	
Fluoranthene	3.02	0.333	mg/kg wet	3.333		91	40-140	2	30	
Fluorene	2.97	0.333	mg/kg wet	3.333		89	40-140	2	30	
Hexachlorobenzene	3.07	0.167	mg/kg wet	3.333		92	40-140	4	30	
Hexachlorobutadiene	2.31	0.333	mg/kg wet	3.333		69	40-140	2	30	
Hexachlorocyclopentadiene	1.76	1.67	mg/kg wet	3.333		53	40-140	2	30	
Hexachloroethane	2.00	0.333	mg/kg wet	3.333		60	40-140	0.5	30	
Indeno(1,2,3-cd)Pyrene	2.80	0.333	mg/kg wet	3.333		84	40-140	2	30	
Isophorone	2.13	0.333	mg/kg wet	3.333		64	40-140	3	30	
Naphthalene	2.27	0.333	mg/kg wet	3.333		68	40-140	3	30	
Nitrobenzene	2.29	0.333	mg/kg wet	3.333		69	40-140	3	30	
N-Nitrosodimethylamine	1.77	0.333	mg/kg wet	3.333		53	40-140	0.2	30	
N-Nitroso-Di-n-Propylamine	2.40	0.333	mg/kg wet	3.333		72	40-140	2	30	
N-nitrosodiphenylamine	2.67	0.333	mg/kg wet	3.333		80	40-140	5	30	
Pentachlorophenol	2.69	1.67	mg/kg wet	3.333		81	30-130	0.5	30	
Phenanthrene	2.78	0.333	mg/kg wet	3.333		83	40-140	3	30	
Phenol	2.26	0.333	mg/kg wet	3.333		68	30-130	2	30	
Pyrene	2.95	0.333	mg/kg wet	3.333		89	40-140	7	30	
Pyridine	1.49	1.67	mg/kg wet	3.333		45	40-140	0.9	30	
Surrogate: 1,2-Dichlorobenzene-d4	*2.12*		mg/kg wet	*3.333*		*64*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*4.85*		mg/kg wet	*5.000*		*97*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.49*		mg/kg wet	*5.000*		*70*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.69*		mg/kg wet	*3.333*		*81*	*30-130*			
Surrogate: 2-Fluorophenol	*3.35*		mg/kg wet	*5.000*		*67*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.39*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: Phenol-d6	*3.68*		mg/kg wet	*5.000*		*74*	*30-130*			
Surrogate: p-Terphenyl-d14	*3.22*		mg/kg wet	*3.333*		*97*	*30-130*			
Classical Chemistry										
Batch DL01119 - TCN Prep										
Blank										
Total Cyanide	ND	1.00	mg/kg wet							
LCS										
Total Cyanide	5.03	1.00	mg/kg wet	5.015		100	90-110			
Reference										
Total Cyanide	143	9.66	mg/kg wet	157.0		91	24-110			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DL01119 - TCN Prep										
Reference										
Total Cyanide	142	9.77	mg/kg wet	157.0		91	24-110			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill ESS Laboratory Work Order: 20L0288

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	Calibration required quadratic regression (Q).
PT	Pentachlorophenol tailing factor > 2.
J	Reported between MDL and MRL
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B	Present in Method Blank (B).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0288

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

Shipped/Delivered Via: Client

ESS Project ID: 20L0288
Date Received: 12/8/2020
Project Due Date: 12/15/2020
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	117392	Yes	N/A	Yes	8 oz jar	NP	
1	117393	Yes	N/A	Yes	8 oz jar	NP	
1	117400	Yes	N/A	Yes	VOA Vial	MeOH	
2	117394	Yes	N/A	Yes	8 oz jar	NP	
2	117401	Yes	N/A	Yes	VOA Vial	MeOH	
3	117396	Yes	N/A	Yes	8 oz jar	NP	
3	117397	Yes	N/A	Yes	8 oz jar	NP	
3	117402	Yes	N/A	Yes	VOA Vial	MeOH	
4	117398	Yes	N/A	Yes	8 oz jar	NP	
4	117399	Yes	N/A	Yes	8 oz jar	NP	
4	117403	Yes	N/A	Yes	VOA Vial	MeOH	
5	117404	Yes	N/A	Yes	VOA Vial	MeOH	

2nd Review
Were all containers scanned into storage/lab? Initials AG
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

ESS Project ID: 20L0288

Date Received: 12/8/2020

Are all QC stickers attached? Yes / No (NA)

Are VOA stickers attached if bubbles noted? Yes / No (NA)

Completed By: [signature] Date & Time: 12/8/20 17:16

Reviewed By: [signature] Date & Time: 12/8/20 1740

Delivered By: [signature] 12/8/20 1740

CHAIN OF CUSTODY

ESS Laboratory
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 20L0288

Turn Time ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI Criteria:

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☒ Other (Specify) → PDF

CLIENT INFORMATION

Client: GZA
Address: 188 Valley St, Suite 300, Providence, RI 02909
Phone: 4014214140
Email Distribution List: richard.carlone@gza.com, rowan.hayes@gza.com

PROJECT INFORMATION

Project Name: Take-Away Landfill
Project Location: Warwick, RI
Project Number: 34648.01
Project Manager: Richard Carlone
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC High	TPH	PCBs	SVOCs	Pesticides	T. Metals*	% Solid	Cyanide	Total Number of Bottles
1	12/8/20	1005	Grab	Soil	UIC/S-1B	X	X	X	X	X	X	X		3
2	12/8/20	1040	Grab	Soil	UIC/S-2*	X	X	X	X	X	X	X		2
3	12/8/20	1120	Grab	Soil	MW-114/S-1B	X	X	X	X	X	X	X		3
4	12/8/20	1220	Grab	Soil	MW-113/S-1A	X	X	X	X	X	X	X	X	3
5	12/8/20	0900		Aqueous	Trip Blank	X								1
Container Type						V	AG →							
Container Volume						7	10 →							
Preservation Code						6	1 →							

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Chain needs to be filled out neatly and completely for on time delivery.

Sampled by: Rowan Hayes

* Please specify "Other" preservative and containers types in this space

Comments: *Total Metals: 15 solid waste + mercury
*Not enough soil recovered to only fill 1 AG. Test for metals + SVOCs first. Test for other parameters if enough soil.

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration ☐ Lab Filter

Laboratory Use Only
Cooler Temperature (°C): 0.9
Ice UIC/S-2*

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	12/8/20	1605	[signature]				

CERTIFICATE OF ANALYSIS

Richard Carlone
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: Truk Away Landfill (03.0034648.01)
ESS Laboratory Work Order Number: 20L0565

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

REVIEWED
By ESS Laboratory at 1:47 pm, Dec 23, 2020

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0565

SAMPLE RECEIPT

The following samples were received on December 16, 2020 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
20L0565-01	MW-EA-01	Oil	8082A
20L0565-02	MW-3	Oil	8082A

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0565

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

20L0565-01 **Lower value is used due to matrix interferences (LC).**
Aroclor 1242

20L0565-01 **Percent difference between primary and confirmation results exceeds 40% (P).**
Aroclor 1242

20L0565-02 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
Tetrachloro-m-xylene (496% @ 30-150%), Tetrachloro-m-xylene [2C] (592% @ 30-150%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0565

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-EA-01
Date Sampled: 12/16/20 11:00
Percent Solids: N/A
Initial Volume: 1.01
Final Volume: 10
Extraction Method: 3580A

ESS Laboratory Work Order: 20L0565
ESS Laboratory Sample ID: 20L0565-01
Sample Matrix: Oil
Units: mg/kg
Analyst: MJV
Prepared: 12/16/20 19:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1221	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1232	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1242	**P, LC 66.9** (4.95)		8082A		10	12/22/20 11:10		DL01601
Aroclor 1248	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1254	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1260 [2C]	**68.4** (4.95)		8082A		10	12/22/20 11:10		DL01601
Aroclor 1262	ND (0.50)		8082A		1	12/21/20 14:08		DL01601
Aroclor 1268	ND (0.50)		8082A		1	12/21/20 14:08		DL01601

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*31 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*31 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*58 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*57 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill
Client Sample ID: MW-3
Date Sampled: 12/16/20 11:30
Percent Solids: N/A
Initial Volume: 1.02
Final Volume: 10
Extraction Method: 3580A

ESS Laboratory Work Order: 20L0565
ESS Laboratory Sample ID: 20L0565-02
Sample Matrix: Oil
Units: mg/kg
Analyst: MJV
Prepared: 12/16/20 19:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1221	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1232	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1242	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1248	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1254	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1260	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1262	ND (0.49)		8082A		1	12/21/20 14:27		DL01601
Aroclor 1268	ND (0.49)		8082A		1	12/21/20 14:27		DL01601

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*31 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*31 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*496 %*	*SM*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*592 %*	*SM*	*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0565

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL01601 - 3580A										
Blank										
Aroclor 1016	ND	0.50	mg/kg							
Aroclor 1016 [2C]	ND	0.50	mg/kg							
Aroclor 1221	ND	0.50	mg/kg							
Aroclor 1221 [2C]	ND	0.50	mg/kg							
Aroclor 1232	ND	0.50	mg/kg							
Aroclor 1232 [2C]	ND	0.50	mg/kg							
Aroclor 1242	ND	0.50	mg/kg							
Aroclor 1242 [2C]	ND	0.50	mg/kg							
Aroclor 1248	ND	0.50	mg/kg							
Aroclor 1248 [2C]	ND	0.50	mg/kg							
Aroclor 1254	ND	0.50	mg/kg							
Aroclor 1254 [2C]	ND	0.50	mg/kg							
Aroclor 1260	ND	0.50	mg/kg							
Aroclor 1260 [2C]	ND	0.50	mg/kg							
Aroclor 1262	ND	0.50	mg/kg							
Aroclor 1262 [2C]	ND	0.50	mg/kg							
Aroclor 1268	ND	0.50	mg/kg							
Aroclor 1268 [2C]	ND	0.50	mg/kg							
Surrogate: Decachlorobiphenyl	*0.437*		mg/kg	*0.5000*		*87*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.522*		mg/kg	*0.5000*		*104*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.426*		mg/kg	*0.5000*		*85*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.556*		mg/kg	*0.5000*		*111*	*30-150*			
LCS										
Aroclor 1016	8.59	0.50	mg/kg	10.00		86	40-140			
Aroclor 1016 [2C]	10.6	0.50	mg/kg	10.00		106	40-140			
Aroclor 1260	8.33	0.50	mg/kg	10.00		83	40-140			
Aroclor 1260 [2C]	9.85	0.50	mg/kg	10.00		99	40-140			
Surrogate: Decachlorobiphenyl	*0.480*		mg/kg	*0.5000*		*96*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.553*		mg/kg	*0.5000*		*111*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.466*		mg/kg	*0.5000*		*93*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.574*		mg/kg	*0.5000*		*115*	*30-150*			
LCS Dup										
Aroclor 1016	8.70	0.50	mg/kg	10.00		87	40-140	1	30	
Aroclor 1016 [2C]	11.0	0.50	mg/kg	10.00		110	40-140	4	30	
Aroclor 1260	8.38	0.50	mg/kg	10.00		84	40-140	0.6	30	
Aroclor 1260 [2C]	10.1	0.50	mg/kg	10.00		101	40-140	2	30	
Surrogate: Decachlorobiphenyl	*0.472*		mg/kg	*0.5000*		*94*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.548*		mg/kg	*0.5000*		*110*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.458*		mg/kg	*0.5000*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.582*		mg/kg	*0.5000*		*116*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill ESS Laboratory Work Order: 20L0565

Notes and Definitions

U	Analyte included in the analysis, but not detected
SM	Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).
P	Percent difference between primary and confirmation results exceeds 40% (P).
LC	Lower value is used due to matrix interferences (LC).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Truk Away Landfill

ESS Laboratory Work Order: 20L0565

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/KPB

Shipped/Delivered Via: Client

ESS Project ID: 20L0565
Date Received: 12/16/2020
Project Due Date: 12/23/2020
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	120001	Yes	N/A	Yes	VOA Vial	NP	
2	120002	Yes	N/A	Yes	VOA Vial	NP	

2nd Review
Were all containers scanned into storage/lab? Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Davis Date & Time: 13:03 12/16/20
Reviewed By: Date & Time: 12/16/20 1337
Delivered By: 12/16/20 1337

185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 20L0565 | Page 1 of 1

Turn Time: ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: RI Criteria:
Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☒ Other (Specify) → PDF

CLIENT INFORMATION

Client: GZA
Address: 100 Valley St Suite 300 Providence, RI 02909
Phone: 4014214140
Email Distribution List: richard.carlone@gza.com
rowan.hamer@gza.com

PROJECT INFORMATION

Project Name: TMC - Away Landfill
Project Location: Warwick, RI
Project Number: 34648.07
Project Manager: Richard Carlone
Bill to:
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	PCBs	Total Number of Bottles
1	12/16/20	1100	Grab	~~Water~~ Oil	MW-EA-01	X	1
2	12/16/20	1130	Grab	Oil	MW-3	X	1

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — V
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 1
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

Sampled by: Rowan Hamer

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 3.1 ice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration: ☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	12/16/20	1215	[signature] 12/16				
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)