2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

5 August 2020 Issued:

Prepared for: American Jewish University – Brandeis-Bardin Campus **1101 Peppertree Lane** Brandeis, CA 93064



ENVIRONMENTAL 155 Grand, Ste 704, Oakland, CA 94612 tel. 510.463.8484



5 August 2020

Adrian Breitfeld, MAJCS, MBA Vice President American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, CA 93064

RE: 2020 Monitoring Report American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Dear Mr. Breitfeld:

GSI Environmental Inc. (GSI) is submitting the enclosed 2020 Monitoring Report to document sampling activities conducted at the American Jewish University, Brandeis-Bardin Campus in Brandeis, California (the Site). The objectives of the work were to continue analyzing whether potential chemical and radiological impacts exist from the nearby Santa Susana Field Laboratory at selected areas at the Site and monitor upgradient locations near the Northern Buffer Zone (NBZ), which separates the Site from the Santa Susana Field Laboratory (SSFL).

Please contact the undersigned should you have any questions regarding the enclosed document.

Sincerely, GSI Environmental Inc.

Susan Gallardo

Susan Gallardo, PE Principal Engineer

Kalin Howell, GIT Staff Geologist

Enclosure: 2020 Monitoring Report



2020 MONITORING REPORT

AMERICAN JEWISH UNIVERSITY, BRANDEIS-BARDIN CAMPUS

1101 PEPPERTREE LANE

BRANDEIS, CALIFORNIA

Prepared for:

American Jewish University, Brandeis-Bardin Campus

1101 Peppertree Lane

Brandeis, CA 93064

Prepared by:

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GSI Job No. 5182 Issued: 5 August 2020



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This 2020 Monitoring Report was prepared by the staff of GSI Environmental Inc., under the supervision of the individuals whose signatures appear hereon.

The findings, recommendations, specifications, or professional opinions were prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

Susan Gallardo

Susan Gallardo, PE #C038154



TABLE OF CONTENTS

1	Introd	luction1	
2	2.1 Hig 2.2 Dr 2.3 Fr	ling Plan and Field Methods 2 igh-Use Areas 2 rainage Area Sampling 2 ruit Sampling 3 ampling Methods 4	2
3	Result	ts4	ŀ
		ata Validation	
	3.2	2.1 Soil and Sediment Screening Levels 5 2.2 Spring Water Screening Levels 6 2.3 Fruit Screening Levels 6	5
		igh-Use Area Sample Results7	
		 3.1 Metals and Perchlorate Results	
	3.4 Up	pgradient Drainage Areas Sample Results8	3
		4.1 Metals, Perchlorate and VOC Results	
	3.5 Fr	ruit Sample Results9	,
4	Conclu	usions9)
5	Refere	ences10)

Tables

Table 1	Sampling and Analysis Summary
Table 2	Soil and Sediment Analytical Results – Metals and Perchlorate
Table 3	Soil and Sediment Analytical Results – Radionuclides
Table 4	Spring and Surface Water Analytical Results – Metals and Perchlorate
Table 5	Spring and Surface Water Analytical Results - Radionuclides
Table 6	Fruit Analytical Results – Metals and Perchlorate
Table 7	Fruit Analytical Results - Radionuclides
<u>Figures</u>	
Figure 1	Site Location Map
Figure 2	Site Map and Features
Figure 3	Main Campus Area Map and Sampling Locations
Figure 4	Hidden Valley Camp Sampling Locations
Figure 5	Sampling Locations OS3-W, OS357-W and BP-SED-1
Figure 6	Sampling Location RRMDF-SED-1
Figure 7	Sampling Locations SRE-SED-1, SRE-SED-2 and SRE-W

- Figure 7 Figure 8 Sampling Locations OS1-W and OS1-SED-1
- Figure 9 Sampling Locations OS8-SED-1 and OS-8-W

GSI Job No. 5182 5 August 2020



- Figure 10 Sampling Location OW-SED-1
- Figure 11 Fruit Orchard Sampling Locations
- Figure 12 Avocado Grove Sampling Locations

Appendices

- Appendix A. Preliminary Remediation Goal Calculations Crop Samples
- Appendix B. Analytical Laboratory Reports High-Use Area Samples
- Appendix C. Analytical Laboratory Reports Drainage Areas Sediment Samples
- Appendix D. Analytical Laboratory Reports Drainage Areas Water Samples
- Appendix E. Analytical Laboratory Reports Fruit Samples



1 INTRODUCTION

GSI Environmental Inc. (GSI) has prepared this report to document the surface soil, sediment, spring water, and fruit sampling conducted on behalf of American Jewish University (AJU) at the Brandeis-Bardin Campus of the American Jewish University located at 1101 Peppertree Lane in Brandeis, California (the Site, Figures 1 and 2). The purpose of the sampling was to monitor Site media for potential chemical and radiological impacts from the nearby Santa Susana Field Laboratory (SSFL).

The Site consists of the 2,878-acre Brandeis-Bardin campus of AJU situated along the northern edge of the Simi Hills in Brandeis, California. The Site is accessed through the main valley that runs northwest southeast from the northern portion of the Site. Most development and activities occur within the Main Campus Area, a relatively small portion of the Site that is situated along the floor of this main valley approximately 1 to 2 miles north of the Site's southern border (see Figures 2 and 3). The majority of the Site, including the land between the Main Campus Area and the southern border, is undeveloped hillsides and drainages.

The Site is located to the north of the SSFL, a former nuclear and rocket science research and testing facility currently co-owned by the Department of Energy, Boeing, and the National Aeronautics and Space Administration (NASA). The SSFL has been the subject of multiple environmental investigations and remedial actions related to chemical impacts to surface and subsurface environmental media. Because the Site is located hydrologically downgradient from the SSFL, multiple investigations of the Brandeis-Bardin campus have been conducted for potential runoff of chemicals of concern onto the Site. In addition, periodic sampling of various media at the Site has been conducted since 1991. Analytical results from this sampling have not indicated significant, if any, migration of contaminants of concern (COCs) or other impacts to the Site from the SSFL operations (DTSC 2017).

GSI was retained in 2019 to continue monitoring the Brandeis-Bardin campus for potential migration of COCs from the SSFL. GSI conducted the first sampling events of soils, sediments, water, and fruit from across the campus that same year and found no evidence of chemical impacts from the SSFL (GSI, 2019). The following sections describe the second of GSI's monitoring events, conducted in 2020, involving the collection and analysis of samples from the following sources to evaluate potential migration of COCs from the SSFL:

- Soil from high-use areas within the Main Campus Area;
- Soil and sediment from campsite areas outside the Main Campus Area;
- Sediment from upgradient drainage channels near the Site's southern border;
- Water from springs located near the Site's southern border; and
- Fruit (avocado, apple, grapefruit, orange and lemon) grown on trees within the Main Campus Area.

For the purpose of this program, sediment is defined as the loose material from the bottom of drainages that has been recently transported to its current location by surface water. Soil is defined as material from outside of drainages.



2 SAMPLING PLAN AND FIELD METHODS

Sampling locations included in this monitoring program fall into three categories:

- Areas of high use by campus guests;
- Drainages abutting the NBZ at the southern edge of the Site; and
- Fruit-bearing trees.

Analytical results from the three types of samples were used to provide an assessment of current and future potential exposure experienced by guests to the campus.

A sampling and analysis summary for the 2020 monitoring event is available in Table 1.

2.1 High-Use Areas

One soil or sediment sample was collected on 3 June 2020 from each of the following high-use areas, which are shown on Figures 2, 3, and 4:

- Terry Field
- Kids' Cabins
- Gan Field
- CIT Cabins
- Alpine Tower
- Hidden Valley Camp

All soil samples collected in the high-use areas were analyzed for the following:

- Title 22 Metals by United States Environmental Protection Agency (USEPA) Methods 6010 and 7471
- Perchlorate by USEPA Method 314.0
- Tritium by USEPA Method 906.0
- Strontium-90 by USEPA Method 905.0
- Cesium-137 by DOE HASL 300, 4.5.2.3/Ga-01-R

Samples for metals and perchlorate analysis were submitted to Eurofins Calscience of Irvine, California, while samples for radionuclide analysis were submitted to GEL Laboratories of Charleston, South Carolina. Both laboratories are California Environmental Laboratory Accreditation Program-certified analytical laboratories. Analytical results for radionuclides are reported on a dry weight basis.

2.2 Drainage Area Sampling

Drainage area sample locations are generally the same as those from GSI's 2019 investigations, except as described below, and are shown on Figures 2 and 5 through 10. Samples were collected on 2 and 3 June 2020. One sediment sample also was collected from the drainage channel near Old Well Camp during the June 2020 monitoring event. The Old Well Camp drainage is identified as a background reference location, as its runoff does not originate



from the SSFL (Tetra Tech, 2016). The recent sediment sample, and that collected in 2019, are intended to confirm relative background conditions at the Site.

One sediment sample was collected from the bottom of each drainage channel along with a water sample, if water was present. Water was also sampled during the June monitoring event directly from springs, if present. Samples were collected for the first time from the following locations:

- A water sample was collected from SRE-W due to the presence of surface water in the drainage.
- A water sample was collected from OS8-W due to the presence of surface water in the drainage.
- A water sample was collected from OS357-W to capture the combined outflow of springs OS3, OS5, and OS7.
- A sediment sample was collected from OS1-SED-1 to capture potential runoff from the SSFL and from OS1¹.

All soil, sediment, and water samples were analyzed for the following:

- Title 22 Metals² (metals) by United States Environmental Protection Agency (USEPA) Methods 6010 and 7471
- Perchlorate by USEPA Method 314.0
- Tritium by USEPA Method 906.0
- Strontium-90 by USEPA Method 905.0
- Cesium-137 by DOE HASL 300, 4.5.2.3/Ga-01-R (soil and sediment)
- Cesium-137 by USEPA Method 901.1 (water)

All water samples were additionally analyzed for volatile organic compounds (VOCs) by USEPA Method 8260.

Samples for metals, perchlorate, and VOCs analysis were submitted to Eurofins Calscience of Irvine, California, while samples for radionuclide analysis were submitted to GEL Laboratories of Charleston, South Carolina. Analytical results for radionuclides are reported on a dry weight basis.

2.3 Fruit Sampling

Fruit-bearing trees in a small fruit orchard and avocado grove, both located in the Main Campus Area (see Figure 3, 11, and 12), were sampled on 4 June 2020. The fruit samples (apples, avocados, grapefruits, lemons, and oranges) and their store-bought equivalents were analyzed for the following:

• Title 22 Metals³ (metals) by United States Environmental Protection Agency (USEPA) Methods 6010 and 7471

¹ OS1 consists of artesian wells RD-68A and 68B, which are regularly monitored by NASA as part of SSFL groundwater monitoring activities, so no sample was collected from these wells.

² California Code of Regulations (CCR), Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24.



- Tritium by USEPA Method 906.0
- Strontium-90 by USEPA Method 905.0
- Cesium-137 by DOE HASL 300, 4.5.2.3/Ga-01-R

Ripe fruits were preferentially sampled from the AJU trees, though not all fruits were ripe at the time of sampling. Ripe fruits purchased from a nearby grocery store serve as a point of comparison to the AJU fruits, with California-grown fruits being preferentially selected from the store, if available. All samples were submitted to GEL Laboratories in Charleston, South Carolina.

2.4 Sampling Methods

Soil and sediment samples were collected as grab samples from the top 6 inches of material using a decontaminated metal garden trowel. Leaf litter and other organics on top of the sampling location were excluded from the sample as much as possible. Samples to be analyzed for metals and perchlorate were collected into new, unused glass jars. Additional soil and sediment sample volume was collected into a 500-milliliter plastic jar or food-grade resealable plastic bag for analysis of radionuclides. Between samples, the sampling trowel was decontaminated using a solution of Liquinox and water, followed by rinsing with distilled water. All samples were stored in an ice-chilled cooler before transfer to the analytical laboratory, following standard chain-of-custody procedures.

Surface water samples were collected directly from water in the drainages into laboratoryprovided bottles and VOA jars by using a clean, unpreserved bottle from the bottle set to transfer water into the bottles and jars containing preservative. Spring water samples were collected directly from the spout of the spring in the same manner. All samples were stored in an ice-chilled cooler prior to transfer to the analytical laboratory, following standard chain-ofcustody procedures.

Each AJU fruit sample consisted of roughly 8 to 20 individual fruits collected from the same tree. Fruit were wiped with an unused paper towel moistened with distilled water before placement into a food-grade resealable plastic bag. All samples, including store-bought equivalents, were stored in an ice-chilled cooler prior to transfer to the analytical laboratory, following standard chain-of-custody procedures. Fruit were processed by the laboratory before analysis such that only the commonly consumed portions of each fruit were included. For grapefruit, oranges, avocado, and lemon samples, only the fruit flesh were included, while both the flesh and skin of the apple samples were included for analysis.

3 RESULTS

Laboratory analytical results for each sample area are presented below and are also summarized in Tables 2 through 6. Laboratory reports are included in Appendices A through C.

3.1 Data Validation

Analytical results were reviewed in accordance with the following documents:

³ California Code of Regulations (CCR), Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24.



- 2017 National Functional Guidelines for Inorganic Superfund Methods Data Review published by the USEPA.
- 2004 Multi-Agency Radiological Laboratory Analytical Protocols Manual published by the USEPA et al.

Results between the reporting limit and detection limit for a compound were flagged with a "J". Other flags were assigned as follows:

- The percent recovery of antimony in the laboratory matrix spike/matrix spike duplicate samples was below acceptable limits; as such, the non-detect results for antimony are flagged with a "UJ" designation, indicating the quantitation limit is approximate.
- Barium was detected in the method blank for drainage areas sediment samples above the method detection limit. As such, all drainage areas sediment samples were flagged with a "J".
- Naphthalene was detected in the water sample from location OS8-W and also was present in the trip blank. As such, this result is flagged with a "J".

All sample results are considered usable, and data quality is judged to be adequate for the intended purpose.

3.2 Screening Levels

Analytical results are evaluated by comparison to health-based screening levels and, when available, background values of compounds observed at the nearby SSFL. Screening levels for each medium are described in the following sections.

3.2.1 Soil and Sediment Screening Levels

Risk-based levels for metals and perchlorate in soil/sediment were drawn from Regional Screening Levels (RSLs) for soil under residential land use as published by the USEPA (2019) and modified by the Department of Toxic Substances Control of the California Environmental Protection Agency (DTSC, 2019). Background values for metals are drawn from those published by the DTSC for the SSFL (DTSC, 2013). Notably, naturally occurring background concentrations of certain metals exceed risk-based screening levels.

Health risk-based screening levels for radionuclides were generated using the Preliminary Remediation Goal (PRG) calculator for radionuclides published by the USEPA (2019), as described in the 2019 Monitoring Report (GSI, 2019). Default parameters for residential land-use were assumed for all input variables to provide a conservative risk threshold; for example, the parameters selected for exposure duration (26 years) and frequency (350 days per year) significantly exceed those of a typical camper, employee or other user of the Site. Exposure pathways were assumed to include incidental ingestion, dermal contact, external exposure and inhalation of resuspended soil. Because the Site is primarily used recreationally, the growth of produce for consumption was excluded from these calculations with respect to the soil and sediment but was included for purposes of calculating the PRG with respect to the fruit samples. Input values and further details regarding this calculation are included in the 2019 Monitoring Report (GSI, 2019).



Background levels for radionuclides were drawn from values published by HydroGeoLogic, Inc. in 2012 for the SSFL and generated from background sample datasets from McLaren/Hart Environmental Engineering Corporation (McLaren/Hart) in 1993 and 1995, and Ogden Environmental and Energy Services Co., Inc. (Ogden), in 1998. Background values generated for this monitoring program are the mean plus twice the standard deviation as calculated using the Kaplan Meier Method in ProUCL 5.1 (USEPA, 2015). The same method was previously employed by Tetra Tech to generate background radionuclide concentrations (Tetra Tech, 2016⁴).⁵ The background values documentation is included in the 2019 Monitoring Report (GSI 2019).

Additionally, the Old Well Camp drainage does not drain any portion of the SSFL site, and therefore is unlikely to be influenced by potential runoff from the SSFL. Sediment samples collected from this drainage are used as an indication of background conditions in sediment.

3.2.2 Spring Water Screening Levels

Detected concentrations of Title 22 metals and perchlorate in spring water were compared to California maximum contaminant levels (MCLs), as established in Title 22 of the California Code of Regulations (CCR) § 64431. Comparison to MCLs is a conservative approach as drinking water at the Site is municipally sourced. Metals in spring water also were compared to background groundwater concentrations generated for the SSFL (MWH Americas Inc., 2014). Background concentrations generated for SSFL were established to represent unimpacted, naturally occurring conditions in the vicinity of SSFL. Data from hundreds of samples were used to statistically evaluate background concentrations. Detections of metals in groundwater samples ranged over several orders of magnitude due to factors that included the variability and complexity of the regional geology. As such, the derived SSFL comparison concentrations provide conservative threshold values (MWH, 2014).

Radionuclide results in spring water were compared to MCLs as established in Title 22 CCR § 64443, as well as groundwater comparison concentrations for the SFFL based on MCLs or effective dose equivalents of 4 millirems per year (Stantec Consulting Services, 2019).

3.2.3 Fruit Screening Levels

Detected concentrations of Title 22 metals and perchlorate were compared to health risk-based PRGs developed for cancer (where applicable) and non-cancer endpoints using literature-based consumption rates and standard exposure factors for a residential receptor, which assume a 26-year exposure duration (20 years as an adult and 6 years as a child). Exposure frequency (i.e., the number of days per year that fruit is consumed) was derived for each type of fruit based on its local growing season. For citrus, exposure frequency was assumed to be 350 days per year, as citrus trees generally produce fruit year-round in Ventura County.⁶ For avocados, exposure frequency was set at 129 days, which is the average fruit-producing season of the 21 different

⁴ Available through AJU at

https://www.aju.edu/sites/default/files/docs/Tetra_Tech-Technical_Report_April_2016r.pdf

⁵ Note that only the higher concentration from duplicate samples was included in the calculation. Additionally, the most recent data was used from locations where multiple samples previously were collected.

⁶ <u>http://ceventura.ucdavis.edu/Com_Ag/Subtropical/Fruit_and_Nut_Varieties/</u>



avocado varieties grown in Ventura County.⁷ Apples grown in Ventura County typically produce fruit for three months, thus the exposure frequency for apple ingestion was set at 92 days.⁸

In California, the potential for adverse health effects from exposure to lead at residential sites is evaluated by calculating the blood lead level of a child. Blood lead levels were calculated using DTSC's LeadSpread8, which accounts for soil-based exposures at a site, as well as background lead exposure from other sources.⁹ Because LeadSpread8 does not include equations that calculate the contribution of homegrown produce to blood lead levels, blood lead levels for residents at the Site were estimated by first using the maximum measured soil lead concentration at the Site (12 mg/kg – Table 2) to account for background blood lead levels from incidental ingestion, inhalation, and dermal exposure to Site soils, and then calculating the additional quantity of lead that would be ingested due to the consumption of homegrown produce by adding the measured lead concentration in samples of produce collected from the Site (Table 6) to the soil lead levels as an approximation of the additional daily lead exposure attributable to ingestion of produce. When lead was not detected in a produce item, the analytical limit of detection was used for the lead concentration. The results of the lead analysis are presented in Section 3.5.

The PRGs for the radionuclides were calculated using the United States Environmental Protection Agency (US EPA) PRG Calculator for radionuclides. Inputs and details regarding the method for calculating these screening levels are included in Appendix A.

3.3 High-Use Area Sample Results

This section summarizes analytical results for soil samples collected in areas of high guest activity.

3.3.1 Metals and Perchlorate Results

Analytical results for metals and perchlorate in soil samples are tabulated on Table 2, and the laboratory data report is included in Appendix B. All compounds were (a) not detected above laboratory reporting limits, (b) detected at concentrations below the risk-based screening levels, or (c) detected above risk-based screening levels, but below regional background levels. These results indicate that on-Site concentrations of metals and perchlorate in soil are consistent with natural conditions and are not the result of migration from the SSFL or other anthropogenic sources.

3.3.2 Radionuclide Results

Analytical results for radionuclides are tabulated on Table 3, and laboratory data report is included in Appendix B. In each of the samples, radionuclides were either not detected above their respective minimal detectable concentrations, or were lower than published background levels and PRGs. These results indicate that on-Site concentrations of radionuclides in soil are consistent with natural conditions and are not the result of migration from the SSFL or other anthropogenic sources.

⁷ <u>http://ceventura.ucanr.edu/Com_Ag/Subtropical/Avocado_Handbook/Harvesting/When_to_pick_avocados_/</u>

⁸ http://ceventura.ucdavis.edu/Com_Ag/Subtropical/Fruit_and_Nut_Varieties/

⁹ https://dtsc.ca.gov/leadspread-8/



3.4 Upgradient Drainage Areas Sample Results

This section summarizes analytical results for the sediment and spring water samples collected from upgradient drainages near the property boundary shared with the SSFL.

3.4.1 Metals, Perchlorate and VOC Results

Analytical results for metals and perchlorate in sediment samples are tabulated on Table 2, and results for radionuclides are on Table 3. Laboratory data reports are included in Appendix D. In sediment, all compounds were either (a) not detected above their respective reporting limits, (b) detected at concentrations below the risk-based screening level, or (c) detected above the risk-based screening level, but below regional background levels. The data in total indicate that on-Site concentrations of metals, perchlorate and VOCs are consistent with natural conditions and are not the result of migration from the SSFL or other anthropogenic sources.

Analytical results for metals, perchlorate, and VOCs in spring and surface water samples are tabulated on Table 4, and results for radionuclides are on Table 5. Laboratory data reports are included in Appendix D. Barium, chromium, copper, lead, nickel, vanadium, and zinc were detected in one or more water samples at concentrations well below their respective MCLs. Chromium and lead were detected in the water sample from location SRE-W at concentrations slightly above the SSFL groundwater comparison concentrations. Chromium was detected at a concentration of 0.015 milligrams per liter (mg/L); the SSFL groundwater comparison concentration is 0.014 mg/L. Lead was detected at a concentration of 0.012 mg/L: the SSFL groundwater comparison concentration is 0.011 mg/L. However, the detected concentration of each of these metals is within the range of background concentrations detected at SSFL. The range of chromium concentrations in the data set for chromium from which the SSFL groundwater comparison concentration was derived was 0.00022 mg/L to 0.088 mg/L (total of 639 samples in the data set); the range in concentrations of lead was 0.00011 mg/L to 0.12 mg/L (total of 647 samples in the data set). Chromium and lead concentrations detected during the 2020 monitoring event, which are slightly higher than the statistically derived background comparison concentrations, are well within the range of each data set and do not indicate an impact from SSFL or other anthropogenic sources.

No perchlorate was detected in the spring and surface water samples. Naphthalene was detected at a concentration of 3 micrograms per liter (μ g/L) in the spring sample OS8-W. Napthalene is not a constituent of concern at SSFL, and this VOC was detected in the trip blank, suggesting its detection likely is not related to Site conditions. In any event, the presence of these metals in SRE-W is well below their respective MCLs.

Overall, the analytical results for metals, perchlorate, and VOCs for spring and surface water samples do not indicate the presence of on-Site chemical impacts from the SSFL or other anthropogenic sources.

3.4.2 Radionuclide Results

In sediment, no radionuclides were detected above their respective background levels or PRGs. In spring water, no radionuclides were detected above their respective minimal detectable concentrations. These results indicate the absence of on-Site radionuclide impacts



3.5 Fruit Sample Results

Analytical results for metals and perchlorate in fruit samples are tabulated on Table 6, and results for radionuclides are on Table 7. Laboratory data reports are included in Appendix E.

Arsenic, beryllium, cadmium, chromium, cobalt, copper, mercury, molybdenum, selenium, silver, thallium, vanadium, and perchlorate were not detected in samples of avocado, apples, or citrus grown on the Site (Table 6).¹⁰ Concentrations of other metals detected in fruit samples were well below their respective fruit-specific PRGs.

Of the on-Site produce samples, lead was detected only in the apple sample collected at the Site at a concentration of 397 μ g/kg, which is slightly above its detection limit of 330 μ g/kg. As discussed in Section 3.2.3, the potential for adverse health effects of lead in fruit samples was calculated by estimating the blood-lead level in a child. The results of the analysis do not suggest a significant adverse health effect for residential exposure. For example, the net 99th percentile blood lead levels based on soil and produce exposure combined were all less than 0.5 micrograms per deciliter (μ g/dl). For reference, an incremental increase in blood lead level of 1 μ g/dl is the benchmark criterion used in California to assess whether the presence of lead at a site results in unacceptable levels of lead in blood.¹¹

Radionuclides were not detected in fruit samples above their respective minimal detectable concentrations. The fruit-specific and all-produce detection limits for strontium-90 and cesium-137 were below their respective PRGs. For tritium, the detection limits for citrus (grapefruit, orange, and lemon) slightly exceeded the fruit specific PRG; detection limits for all fruits slightly exceeded the all-produce tritium PRG. However, given the absence of any radionuclide detection in any fruit, the slightly elevated detection limits are considered to be adequate to conclude that fruit at the Site is not impacted by radionuclides.

4 CONCLUSIONS

Samples taken in high-use areas, in drainage channels located at the border between the Brandeis-Bardin campus and the Northern Buffer Zone, and from fruit grown on-Site indicate that there are no chemical impacts from the SSFL. These results are consistent with analytical testing of media that has occurred since 1991. Additionally, analytical results relative to calculated human health screening criteria indicate that consumption of fruit grown at the Site is not expected to result in adverse health effects.

¹⁰ The derived screening level (PRG) for arsenic in produce is lower than the analytical detection limit. The detection limit, however, is adequate to identify potential impacts to fruit from the SSFL or other anthropogenic sources by accounting for (a) background concentrations of arsenic in soil, and (b) the expected arsenic level in fruit based on soil nutrient uptake rates.



5 **REFERENCES**

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2020 Monitoring Report

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Tables

- Table 1Sampling and Analysis Summary
- Table 2
 Soil and Sediment Analytical Results Metals and Perchlorate
- Table 3
 Soil and Sediment Analytical Results Radionuclides
- Table 4
 Spring and Surface Water Analytical Results Metals and Perchlorate
- Table 5
 Spring and Surface Water Analytical Results Radionuclides
- Table 6
 Fruit Analytical Results Metals and Perchlorate
- Table 7Fruit Analytical Results Radionuclides

TABLE 1 SAMPLING AND ANALYSIS SUMMARY AJU Brandeis-Bardin Campus Brandeis, CA

					Analyses ¹			
			Metals ²	Perchlorate ²	VOCs ²	Strontium-90 ³	Tritium ³	Cesium-137 ³
Sampling Location	Campus Area	Sample Type	6010B and 7471A	314.0	8260	905	906.0	901.1 (water), DOE HASL 300, 4.5.2.3/Ga-01- R (soil and sediment)
High Use Area Sam	ples		1		-	-		
HV-1		Soil	Х	Х	-	Х	Х	Х
HV-2	Hidden Valley Camp	Soil	Х	Х	-	Х	Х	Х
HV-SED-1		Sediment	Х	Х	-	Х	Х	Х
TF-1	Terry Field	Soil	Х	Х	-	Х	Х	Х
KC-1	Kids' Cabins	Soil	Х	Х	-	Х	Х	Х
GF-1	Gan Field	Soil	Х	Х	-	Х	Х	Х
CIT-1	CIT Cabins	Soil	Х	Х	-	Х	Х	Х
AT-1	Alpine Tower	Soil	Х	Х	—	Х	Х	Х
Drainage Samples								
OS1-W-2 ⁴	Downstream from OS1 and SSFL	Water						
OS1-SED-1	Downstream from OST and SST E	Sediment	Х	Х	-	Х	Х	Х
OS3-W	Spring OS3	Water	Х	Х	Х	Х	Х	Х
OS357-W or OS357-SED-1	Springs OS3, 5, and 7	Water OR Sediment	Х	х	X OR –	х	х	x
BP-SED-1	Downstream from the burn pit portion of the SSFL	Sediment	Х	Х	_	х	Х	Х
RRMDF-SED-1	• •	Sediment	X	X	_	X	X	X
RRMDF-W	Downstream from the reactor and RMDF portions of the SSFL	Water	X	X	Х	X	X	X
SRE-SED-2		Sediment	X	X	_	X	X	X
SRE-W	Downstream from the sodium reactor portion of the SSFL	Water	X	X	Х	X	X	X
OS8-SED-1		Sediment	X	X	-	X	X	X
OS8-W	Downstream of Spring OS8	Water	X	X	Х	X	X	X
OW-SED-1		Sediment	X	X	_	X	X	X
OW-W	Old Well Camp area	Water	X	X	Х	X	X	X
Fruit Samples								
AV-1	Avocado Grove	Avocado	Х	Х	_	Х	Х	Х
A-1		Apple	X	X	_	X	X	X
G-1		Grapefruit	X	X	_	X	X	X
L-1	Fruit Orchard	Lemon	X	X	_	X	X	X
0-1		Orange	X	X	_	X	X	X
AV-2		Avocado	X	X	_	X	X	X
A-2		Apple	X	X	_	X	X	X
G-2	Grocery Store	Grapefruit	X	X	_	X	X	X
L-2	,	Lemon	X	X	_	X	X	X
		Orange	X	X	+	X	X	X

Notes:

1. Methods shown are U.S. Envionmental Protection Agency methods, except as noted.

2. Samples analyzed by Eurofins Calscience of Irvine, except for fruit samples, which will be analyzed by GEL Laboratories of Charleston, SC.

3. Samples analyzed by GEL Laboratories of Charleston, SC.

4. Spring OS1 was found to be the same as artesian monitoring wells RD-68A and 68B, which are monitored regularly by NASA. As such, no water sample was collected from the wellhead during the June 2020 sampling event. Instead, a water sample will be collected in the immediate vicinity of the well if ponded water from the well is present on the ground.

Abbreviations:

X = analysis performed on sample indicated

- = analysis not performed on sample indicated

CIT = counselor-in-training

SSFL = Santa Susana Field Laboratory **bold** = new sample



TABLE 2 SOIL AND SEDIMENT ANALYTICAL RESULTS - METALS AND PERCHLORATE AJU Brandeis-Bardin Campus

Brandeis, CA

											٦	Title 22 Metal	ls ¹								
Sample Location Name	Sample Name	Matrix	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury ²	Molyb- denum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Per- chlorate ³
						•			·	•		mg/	/kg			·	•				
High Use Area Sam									•				-			•		-	-		
HV-1	HV-1-190422	Soil	4/22/2019	<1.8 UJ	6.9	100	0.54	<0.44	15	5.9	<5.3	5	<0.014	<1.8	9.4	<3.5	<0.88	<1.8	29	62	<0.039
	HV-1-200603	0011	6/3/2020	<10 UJ	5.4	62	<0.50	<0.50	11	3.5	7.4	4.0	<0.020	<2.0	6.5	<3.0	<1.5	<10	20	47	<0.040
HV-2	HV-2-190422	Soil	4/22/2019	<1.9 UJ	5.5	77	0.37	<0.47	18	5.7	<5.6	12	0.017	<1.9	11	<3.7	1.8	<1.9	30	64	<0.040
117 2	HV-2-200603	001	6/3/2020	<10 UJ	3.3	48	0.56	<0.51	13	3.8	8.1	8.4	<0.020	<2.0	8.5	<3.0	<1.5	<10	21	43	<0.040
HV-SED-1	HV-SED-1-190422	Sediment	4/22/2019	<1.4 UJ	3.8	53	<0.29	< 0.36	11	3.8	<4.3	7.5	<0.016	<1.4	6.7	<2.9	<0.71	<1.4	21	42	<0.040
HV-SED-1	HV-SED-1-200603	Sediment	6/3/2020	<10 UJ	3.1	53	<0.50	<0.50	11	3.7	8.5	9.3	0.024	<2.0	7.1	<3.0	<1.5	<10	22	44	<0.040
TF-1	TF-1-190422	Soil	4/22/2019	<1.1 UJ	4.6	110	0.34	<0.27	16	7.1	13	9.7	< 0.015	<1.1	10	<2.1	<0.53	<1.1	35	50	< 0.040
11-1	TF-1-200603	501	6/3/2020	<10 UJ	5.3	88	<0.50	<0.50	16	6.3	19	8.5	<0.020	<2.0	11	<3.0	<1.5	<10	34	52	< 0.040
KO 4	KC-1-190422	Soil	4/22/2019	<1.8 UJ	5.6	75	0.44	<0.45	18	6.8	8.6	9.6	<0.016	<1.8	12	<3.6	<0.89	<1.8	36	64	< 0.040
KC-1	KC-1-200603	501	6/3/2020	<10 UJ	5.9	60	< 0.50	<0.50	16	4.9	10	8.8	<0.020	2.8	9.6	<3.0	<1.5	<10	32	46	< 0.040
05.4	GF-1-190422	0.11	4/22/2019	<1.8 UJ	4.0	64	0.37	<0.45	15	5.6	6.0	8.6	0.015	<1.8	9.7	<3.6	<0.91	<1.8	31	80	< 0.040
GF-1	GF-1-200603	Soil	6/3/2020	<10 UJ	<3.1	30	<0.51	<0.51	6.1	1.9	4.5	<2.0	<0.020	<2.0	3.8	<3.1	<1.5	<10	13	27	<0.040
	CIT-1-190422		4/22/2019	<1.7 UJ	<3.3	38	< 0.33	<0.41	9.0	2.9	5.1	5.5	< 0.016	<1.7	5.5	<3.3	< 0.83	<1.7	15	45	< 0.040
CIT-1	CIT-1-200603	Soil	6/2/2020	<10 UJ	<3.0	32	< 0.51	<0.51	9.8	2.5	7.1	5.8	< 0.020	<2.0	5.8	<3.0	<1.5	<10	16	44	< 0.040
. – .	AT-1-190422		4/22/2019	<1.2 UJ	4.4	110	0.5	0.31	19	7.8	9.8	9.0	< 0.016	<1.2	14	<2.5	<0.62	<1.2	38	44	< 0.039
AT-1	AT-1-200603	Soil	6/3/2020	<10 UJ	15	31	< 0.50	< 0.50	36	2.5	11	2.7	<0.020	<2.0	4.9	<3.0	<1.5	<10	15	39	<0.040
Drainage Sediment																					
	BP-SED-1-190613		6/13/2019	<9.9 UJ	11	52	<0.50	<0.50	11	2.3	4.5	5.7	0.032	<2.0	6.2	<3.0	<1.5	<9.9	21	42	<0.040
BP-SED-1	BP-SED-1-200602	Sediment	6/2/2020	<10 UJ	11	43 J	<0.51	<0.51	10	3.3	6.5	7.7	0.022	<2.0	6.8	<3.0	<1.5	<10	19	37	<0.040
	OS8-SED-1-190613		6/13/2019	<9.9 UJ	3.8	34	<0.49	<0.49	12	1.4	4.8	5.4	<0.020	<2.0	6.1	<3.0	<1.5	<9.9	21	32	<0.040
OS8-SED-1	OS8-SED-1-200603	Sediment	6/2/2020	<9.9 UJ	<3.0	32 J	<0.50	<0.43	7.5	1.9	5.5	5.3	<0.020	<2.0	5.1	<3.0	<1.5	<9.9	14	25	<0.040
	RRMDF-SED-1-190613		6/13/2019	<10 UJ	4.2	63	0.54	<0.50	10	2.1	5.2	6.4	0.018 J	<2.0	5.7	<3.0	<1.5	<10	21	53	<0.040
RRMDF-SED-1	RRMDF-SED-1-200602	Sediment	6/3/2020	<10 UJ	<3.0	60 J	< 0.50	<0.50	9.5	3.2	7.4	6.7	<0.020	<2.0	6.5	<3.0	<1.5	<10	19	48	<0.040
SRE-SED-1	SRE-SED-1-190613	Sediment	6/13/2019	<10 UJ	4.3	51	0.51	<0.50	7.9	2.1	3.2	6.8	<0.020	<2.0	4.1	<3.0	<1.5	<10	20	47	<0.040
SRE-SED-2	SRE-SED-2-200603	Sediment	6/3/2020	<10 UJ	<3.1	42 J	< 0.51	<0.51	7.9	2.9	8.8	5.9	<0.020	<2.0	5.1	<3.1	<1.5	<10	18	36	< 0.040
	OW-SED-1-190613		6/13/2019	<10 UJ	<3.0	39	<0.50	< 0.50	7.3	1.2	2.0	4.0	<0.020	<2.0	3.8	<3.0	<1.5	<10	15	29	<0.040
OW-SED-1	OW-SED-1-200603	Sediment	6/3/2020	<10 UJ	<3.0	37 J	<0.51	<0.51	9.1	2.4	4.0	4.1	<0.020	<2.0	4.9	<3.0	<1.5	<10	19	29	<0.040
OS1-SED-1	OS1-SED-1-200603	Sediment	6/3/2020	<10 UJ	<3.0	32 J	<0.51	<0.51	6.2	2.5	3.5	3.0	<0.020	<2.0	4.0	<3.0	<1.5	<10	14	34	<0.040
Screening Criteria																-					
	Residential I	Risk-Based So	reening Levels ⁴	31	0.11	15,000	16	71	120,000	23	3,100	80	1	390	820	390	390	0.78	390	23,000	55
			karound Levels ⁵	0.86	39.7	319	1.87	0.58	81	38	102	42	0.13	3.2	113	0.896	0.138	0.991	151	215	0.00163
		Regional Bac	kyrouna Levels	0.80	39.1	319	1.87	0.58	δI	30	102	42	0.13	3.Z	113	0.890	0.138	0.991	101	213	10

Notes:

1. Samples analyzed for metals using U.S. Environmental Protection Agency (USEPA) Method 6010B unless otherwise indicated.

2. Samples analyzed for mercury using USEPA Method 7471A.

3. Samples analyzed for perchlorate using USEPA Method 314.0.

4. Regional screening levels for residential soil published by the USEPA (2019), modified by the California Department of Toxic Substances Control (DTSC, 2019).

5. Background threshold values as calculated by the DTSC for the Santa Susana Field Laboratory (2013).

6. Drainage samples collected in June 2020 are qualified for barium because this metal was found in the method blank. Samples were not re-extracted because the results were greater than 10 times the concentration found in the blank (1.6. mg/kg barium).

Abbreviations:

Bold = analyte detected above the laboratory reporting limit < = analyte was not detected above the reporting limit shown

mg/kg = milligrams per kilogram

UJ = The sample was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise

J = Analyte was detected below the reporting limit and above the detection limit. Value is estimated.

B = Constituent was found in the method blank above the reporting limit.

References:

Department of Toxic Substances Control (DTSC), 2013, Chemical Look-Up Table Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California, June 11.

DTSC, 2019, Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note Number 3, April.

U. S. Environmental Protection Agency USEPA, 2019, Regional Screening Levels, November.



GSI Job No. 5182 Issued 5 August 2020 Page 1 of 2

TABLE 3 SOIL AND SEDIMENT ANALYTICAL RESULTS - RADIONUCLIDES AJU Brandeis-Bardin Campus





Sample Location	Sample Name	Matrix	Date	Tritium ¹	Strontium-90 ²	Cesium-137 ³
		matrix	Collected		pCi/g⁴	
Main Campus Sampl	ing Locations					
HV-1	HV-1-190422	Soil	4/22/2019	<0.359	<0.273	<0.187
110-1	HV-1-200603	001	6/3/2020	<2.14	<0.0987	<0.0557
HV-2	HV-2-190422	Soil	4/22/2019	<0.362	<0.242	<0.125
110-2	HV-2-200603	501	6/3/2020	<2.22	<0.0978	<0.0409
HV-SED-1	HV-SED-1-190422	Sediment	4/22/2019	<0.363	<0.284	<0.161
	HV-SED-1-200603	Seument	6/3/2020	<2.09	<0.0929	<0.0618
TF-1	TF-1-190422	Soil	4/22/2019	<0.355	<0.495	<0.158
16-1	TF-1-200603	3011	6/3/2020	<2.23	<0.0954	<0.0551
KC-1	KC-1-190422	Cail	4/22/2019	<0.332	<0.266	<0.192
KC-1	KC-1-200603	Soil	6/3/2020	<2.15	<0.0981	<0.0458
	GF-1-190422	0	4/22/2019	<0.393	<0.281	<0.165
GF-1	GF-1-200603	Soil	6/3/2020	<2.08	<0.0981	0.0662
	CIT-1-190422	0 "	4/22/2019	<0.348	<0.246	<0.162
CIT-1	CIT-1-200602	Soil	6/2/2020	<2.21	< 0.0951	0.0789
AT 4	AT-1-190422	0.1	4/22/2019	< 0.356	<0.267	<0.207
AT-1	AT-1-200603	Soil	6/3/2020	<2.30	<0.0920	<0.0627
Drainage Sampling L			0/0/2020	-100	1010020	(0:002)
g=	BP-SED-1-190613		6/13/2019	<0.061	0.32	0.055
BP-SED-1	BP-SED-1-190829	Sediment	8/29/2019	_	< 0.0506	_
-	BP-SED-1-200602		6/2/2020	<3.14	< 0.0994	0.110
BP-SED-1A	BP-SED-1A-190829		8/29/2019	_	< 0.0968	_
BP-SED-1B	BP-SED-1B-190829	Sediment	8/29/2019	_	<0.0474	_
BP-SED-1C	BP-SED-1C-190829		8/29/2019	_	< 0.0976	_
	RRMDF-SED-1-190613		6/13/2019	<0.068	0.48	0.111
RRMDF-SED-1	RRMDF-SED-1-190829	Sediment	8/29/2019	-	< 0.0667	_
	RRMDF-SED-1-200602		6/2/2020	<3.45	<0.0948	0.198
RRMDF-SED-1A	RRMDF-SED-1A-190829		8/29/2019	_	< 0.0984	_
RRMDF-SED-1B	RRMDF-SED-1B-190829	Sediment	8/29/2019	_	<0.0661	_
RRMDF-SED-1C	RRMDF-SED-1C-190829		8/29/2019	_	<0.0582	_
	SRE-SED-1-190613		6/13/2019	<0.066	0.232	<0.037
SRE-SED-1	SRE-SED-1-190829	Sediment	8/29/2019	<0:000	<0.0982	<0:007
SRE-SED-1A	SRE-SED-1A-190829		8/29/2019	_	<0.053	_
SRE-SED-1B	SRE-SED-1B-190829	Sediment	8/29/2019		<0.0977	
SRE-SED-1C	SRE-SED-1C-190829	Countern	8/29/2019		<0.0435	
	SRE-SED-2-190829		8/29/2019		<0.0433	
SRE-SED-2	SRE-SED-2-190829	Sediment				
OS1-SED-1-200603	051-SED-2-200603	Sediment	6/3/2020 6/3/2020	<3.11 <3.13	<0.0931 <0.0637	0.0567 <0.0528
001020-1-200003	OS8-SED-1-200603	Seument	6/13/2020	<0.161	<0.0637 0.36	<0.0528 0.036
OS8-SED-1		Sediment	8/30/2019	<0.161	<0.0644	0.036
000-0ED-1	OS8-SED-1-190830	Seument				
OS8-SED-1A	058-SED-1-200603		6/3/2020	<3.21	< 0.0962	<0.0989
OS8-SED-1A OS8-SED-1B	OS8-SED-1A-190830	Sodimont	8/30/2019		<0.0821	_
OS8-SED-1B OS8-SED-1C	OS8-SED-1B-190830	Sediment	8/30/2019	_	<0.0991	_
030-3ED-10	OS8-SED-1C-190830		8/30/2019		<0.0462	
OW-SED-1	OW-SED-1-190613	Sediment	6/13/2019	<0.101	<0.128	0.03
	OW-SED-1-200603		6/3/2020	<3.28	<0.0989	0.072

TABLE 3 SOIL AND SEDIMENT ANALYTICAL RESULTS - RADIONUCLIDES AJU Brandeis-Bardin Campus



Brandeis, CA

Background Levels			
McLaren/Hart (1993; 1995)⁵	None	0.130	0.275
Ogden Environmental and Energy Services Co., Inc. (1998) ⁵	0.226	None	0.167
HydroGeoLogic, Inc. (2012) ⁶	7.38	0.075	0.193
Health-Based Screening Criteria			
Preliminary Remediation Goals ⁷	0.237	13.4	25.3

Notes:

- 1. Samples analyzed for tritium using U.S. Environmental Protection Agency (USEPA) Method 906.0 or equivalent.
- 2. Samples analyzed for strontium-90 using USEPA Method 905.0 or equivalent.
- 3. Samples analyzed for cesium-137 using USEPA Method 901.1 or equivalent (analytical method for June 2020 samples cited as DOE HASL 300, 4.5.2.3/Ga-01-R).
- 4. Where an analyte is reported by the laboratory at an estimated concentration that is less than the minimal detectable concentration (MDC), the result is shown as less than the MDC.
- 5. Background values were calculated as the mean plus twice the standard deviation of the data in the reports shown. Process further described in Section 3.2.1.
- 6. Background values are drawn from the look-up tables published by HydroGeoLogic, Inc. (2012) and approved by the
- 7. Preliminary remediation goals were generated using the 2019 USEPA calculator. Further details regarding methodology are available in the 2019 Monitoring Report dated 25 November 2019 by GSI Environmental Inc.
- 8. Results reported on a dry weight basis.

Abbreviations:

- Bold = analyte detected above the laboratory reporting limit
- pCi/g = picocuries per gram
- < = Analyte was not detected above the minimal detectable concentration (MDC) shown.
- = Sample not analyzed for analyte indicated.

References:

- HydroGeoLogic, Inc., 2012, Final Technical Memorandum, Look-Up Table Recommendations, Santa Susana Field Laboratory, Area IV Radiological Study, 27 November.
- McLaren/Hart Environmental Engineering Corporation, 1993, Multi-Media Sampling Report for the Brandeis-Bardin Institute and the Santa Monica Mountains Conservancy, Volume I, 10 March.
- McLaren/Hart Environmental Engineering Corporation, 1995, Additional Soil and Water Sampling, The Brandeis-Bardin Institute and Santa Monica Mountains Conservancy, 19 January.
- Ogden Environmental and Energy Services Co., Inc., 1998, Bell Canyon Area, Soil Sampling Report, Ventura County, California, Volume I, October.
- U.S. Environmental Protection Agency (USEPA), 2019, Preliminary Remediation Goals for Radionuclides (PRG), January.

TABLE 4 SPRING AND SURFACE WATER ANALYTICAL RESULTS - METALS AND PERCHLORATE AJU Brandeis-Bardin Campus Brandeis, CA

										٦	itle 22 Metal	s ¹								_	VOC	Cs ⁴
Sample Location Name	Sample Name	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury ²	Molyb- denum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Per- chlorate ³	Naphthalene	Other VOCs
								•			m	g/L		•			•	•			μg/	/L
Spring/Seep Samp	oles																					
OS8-W	OS8-W-200603	6/3/2020	<0.010	<0.010	0.046	<0.0020	< 0.0050	< 0.0050	<0.010	<0.010	< 0.0050	<0.00020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	< 0.004	3.0 J′	None
OS3-W	OS3-W-190613	6/13/2019	<0.010	<0.010	0.039	<0.0020	< 0.0050	< 0.0050	<0.010	0.0083 J	< 0.0050	< 0.00020	<0.020	0.0055 J	<0.010	<0.010	<0.010	<0.010	< 0.020	< 0.004	NA	NA
033-11	OS3-W-200602	6/2/2020	<0.010	<0.010	0.038	<0.0020	< 0.0050	< 0.0050	<0.010	<0.010	< 0.0050	<0.00020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	< 0.004	<1.0 J	None
OS357-W	OS357-W-200602	6/2/2020	<0.010	<0.010	0.034	<0.0020	< 0.0050	< 0.0050	<0.010	<0.010	< 0.0050	<0.00020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	0.048	< 0.004	<1.0 J	None
OS1-W	OS3-W-190613	6/13/2019	<0.010	<0.010	0.039	<0.0020	< 0.0050	< 0.0050	<0.010	0.0083 J	< 0.0050	<0.00020	<0.020	0.0055 J	<0.010	<0.010	<0.010	<0.010	<0.020	< 0.004	NA	NA
Surface Water/Rui	noff Samples																					
SRE-W	SRE-W-200603	6/3/2020	<0.010	<0.010	0.13	<0.0020	<0.0050	0.015	<0.010	0.019	0.012	<0.00020	<0.020	<0.010	<0.010	<0.010	<0.010	0.031	0.086	< 0.004	<1.0	None
Screening Criteria	1																					
	Maximum Con	taminant Level ⁵	0.006	0.010	1	0.004	0.005	0.05	None	1.3	0.015	0.002	None	0.1	0.05	None	0.002	None	None	0.006	None	Various
SSFL Gro	oundwater Comparison	Concentrations ⁶	0.0025	0.0077	0.15	0.00014	0.0002	0.014	0.0019	0.0047	0.011	0.000063	0.0022	0.017	0.0016	0.00017	0.00013	0.0026	6.3	None	None	Various

Notes:

1. Samples analyzed for metals using U.S. Environmental Protection Agency (USEPA) Method 6010B unless otherwise indicated.

2. Samples analyzed for mercury using USEPA Method 7471A.

3. Samples analyzed for perchlorate using USEPA Method 314.0.

4. Samples analyzed for VOCs using USEPA Method 8260.

5. California maximum contaminant levels as established in Title 22 of the California Code of Regulations.

6. Background concentrations in groundwater determined for the Santa Susana Field Lab (SSFL; MWH Americas, Inc., 2014).

7. J-flag qualifiers were applied to all naphthalene results, as naphthalene was detected in the trip blank (TB-200604 in lab report) at a concentration of 1.2 µg/L.

Abbreviations:

Bold = analyte detected above the laboratory reporting limit

< = analyte was not detected above the reporting limit shown VOCs = volatile organic compounds

mg/L = milligrams per liter μg/L = nanograms per liter

J = Analyte was detected below the reporting limit and above the detection limit. Value is estimated.

B = constituent was detected in the trip blank above the reporting limit.

NA = not analyzed

References: MWH Americas, Inc., 2014, Final Standardized Risk Assessment Methodology Revision 2 Addendum, Santa Susana Field Laboratory, Ventura County, California, August.



GSI Job No. 5182 Page 1 of 1

TABLE 5 Issued 5 August 2020 SPRING AND SURFACE WATER ANALYTICAL RESULTS -RADIONUCLIDES



AJU Brandeis-Bardin Campus

Brandeis, CA

Sample	Sample Name	Date	Tritium ¹	Strontium-90 ²	Cesium-137 ³
Location Name		Collected		pCi/L	
OS1-W	OS1-W-190613	6/13/2019	<310	<0.66	<7.1
OS3-W	OS3-W-190613	6/13/2019	<310	<0.65	<5.1
033-11	0S3-W-200602	06/02/20	<368	<1.28	<8.15
OS357-W	0S357-W-200602	06/02/20	<362	<1.32	<6.86
OS8-W	0S8-W-200603	06/03/20	<360	<1.37	<8.20
SRE-W	SRE-W-200603	06/03/20	<360	<1.54	<6.76
Screening Criteria	а				
	Maximum Cor	ntaminant Level ⁴	20,000	8.0	None
SSFL (Groundwater Comparison	Concentrations ⁵	20,000	8.0	200

Notes:

- 1. Samples analyzed for tritium using U.S. Environmental Protection Agency (USEPA) Method 906.0 or equiva
- 2. Samples analyzed for strontium-90 using USEPA Method 905.0 or equivalent.
- 3. Samples analyzed for cesium-137 using USEPA Method 901.1 or equivalent.
- 4. California maximum contaminant levels as established in Title 22 of the California Code of Regulations.
- 5. Concentrations are based on the maximum contaminant level or are based on the effective dose equivalent of 4 millirems per year (see Stantec, 2019).

Abbreviations:

pCi/L = picocuries per liter

< = Analyte was not detected above the reporting limit shown. For radionuclides, the mimimum</p> detectable concentration is displayed.

References:

Stantec Consulting Services, 2019, Boeing Report on Annual Groundwater Monitoring, 2018, Santa Susana Field Laboratory, Ventura County, California, Stantec PN: 185865105, 22 February.

TABLE 6 FRUIT ANALYTICAL RESULTS - METALS AND PERCHLORATE AJU Brandeis-Bardin Campus Brandeis, CA

Sample Location	Sample Name	Matrix	Date Collected	Antir	nony	Ars	enic	Bar	ium	Bery	/llium	Cad	nium	Chromi	um (III)	Col	balt	Cop	oper	Le	ad	Mer	cury ²
Name			Conected	PRG⁴	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.
													μg	ı/kg									
On-Site Sa	mples																						
AV-1	AV-1-200604	Avocado	6/4/2020	11000	1450	0.77	<475	540000	214	540	<95.1	2700	<95.1	4100000	<143	810	<143	110000	4500	Note 5	<314	430	<6.81
A-1	A-1-200604	Apple	6/4/2020	15000	<330	1.10	<500	740000	225	740	<100	3700	<100	5600000	<150	1100	<150	150000	563	Note 5	397	590	<7.73
G-1	G-1-200604	Grapefruit	6/4/2020	890	343	0.06	<453	45000	602	44.5	<90.6	220	<90.6	330000	<136	66.8	<136	8900	435	Note 5	<299	35.6	<7.20
0-1	0-1-200604	Orange	6/4/2020	890	<303	0.06	<459	45000	883	44.5	<91.7	220	<91.7	330000	<138	66.8	<138	8900	454	Note 5	<303	35.6	<7.08
L-1	L-1-200604	Lemon	6/4/2020	890	<304	0.06	<461	45000	437	44.5	<92.3	220	<92.3	330000	<138	66.8	<138	8900	367	Note 5	<304	35.6	<7.67
Off-Site Re	ference Samples	5																					·
AV-2	AV-2-200604	Avocado	6/4/2020	11000	<315	0.77	<477	540000	<95.4	540	<95.4	2700	<95.4	4100000	<143	810	<143	110000	3240	Note 5	446	430	<7.50
A-2	A-2-200604	Apple	6/4/2020	15000	460	1.10	<480	740000	343	740	<96.0	3700	<96.0	5600000	<144	1100	<144	150000	426	Note 5	<317	590	<7.31
G-2	G-2-200604	Grapefruit	6/4/2020	890	516	0.06	<481	45000	149	44.5	<96.2	220	<96.2	330000	<144	66.8	<144	8900	3360	Note 5	431	35.6	<7.50
O-2	0-2-200604	Orange	6/4/2020	890	<307	0.06	<466	45000	313	44.5	<93.1	220	<93.1	330000	<140	66.8	<140	8900	636	Note 5	<307	35.6	<8.01
L-2	L-2-200604	Lemon	6/4/2020	890	<326	0.06	<494	45000	<98.8	44.5	<98.8	220	<98.8	330000	<148	66.8	<148	8900	340	Note 5	<326	35.6	<7.53



TABLE 6 FRUIT ANALYTICAL RESULTS - METALS AND PERCHLORATE AJU Brandeis-Bardin Campus Brandeis, CA

Sample Location	Sample Name	Matrix	Date	Molybo	denum	Nic	kel	Sele	nium	Sil	ver	Tha	llium	Vana	dium	Zir	nc	Perch	nlorate
Name			Collected	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.
											μg,	/kg							
On-Site Sam	ples																		
AV-1	AV-1-200604	Avocado	6/4/2020	14000	<190	30000	<143	14000	<475	14000	<95.1	27.0	<475	14000	<95.1	810000	5610	1900	<0.437
A-1	A-1-200604	Apple	6/4/2020	19000	<200	41000	<150	19000	<500	19000	<100	37.0	<500	19000	<100	1100000	1480 J	2600	<0.455
G-1	G-1-200604	Grapefruit	6/4/2020	1100	<181	2400	<136	1100	<453	1100	<90.6	2.23	<453	1100	<90.6	67000	2400	160	<4.05
O-1	0-1-200604	Orange	6/4/2020	1100	<183	2400	315 J	1100	<459	1100	<91.7	2.23	<459	1100	<91.7	67000	3230	160	<10.2
L-1	L-1-200604	Lemon	6/4/2020	1100	<185	2400	<138	1100	<461	1100	<92.3	2.23	<461	1100	<92.3	67000	3450	160	<10.6
Off-Site Refe	erence Samples																		
AV-2	AV-2-200604	Avocado	6/4/2020	14000	<191	29713	245 J	14000	<477	14000	<95.4	27.0	<477	14000	<95.4	810000	4970	1900	<0.840
A-2	A-2-200604	Apple	6/4/2020	19000	<192	10726	151 J	19000	<480	19000	<96.0	37.0	<480	19000	<96.0	1100000	2270	2600	< 0.459
G-2	G-2-200604	Grapefruit	6/4/2020	1100	<192	2450	<144	1100	<481	1100	<96.2	2.23	<481	1100	<96.2	67000	4370	160	<4.29
O-2	0-2-200604	Orange	6/4/2020	1100	<186	2450	143 J	1100	<466	1100	<93.1	2.23	<466	1100	<93.1	67000	4050	160	<10.7
L-2	L-2-200604	Lemon	6/4/2020	1100	<198	2450	<148	1100	<494	1100	<98.8	2.23	<494	1100	<98.8	67000	1700 J	160	<10.0

Notes:

1. Samples analyzed for metals using U.S. Environmental Protection Agency (USEPA) Method 6010 unless otherwise indicated.

2. Samples analyzed for mercury using USEPA Method 7471A.

3. Samples collected in June 2020 were analyzed for perchlorate using SW846 6850 Modified (USEPA Method 6850).

4. Preliminary remediation goals assuming a residential exposure scenario for each produce type were calculated using the 2019 USEPA calculator.

5. Adverse health effects from exposure to lead at residential sites is evaluated by calculating the blood lead level of a child. The evaluation was conducted using the DTSC's LeadSpread8. For more information, see Appendix A. The results indicated that the presence of lead at the Site, when detected, does not result in adverse health effects for a residential exposure. 6. Preliminary remediation goals (produce-total) assumes consumption of each fruit concurrently.

Abbreviations:

Bold = analyte detected above the laboratory reporting limit

< = analyte was not detected above the reporting limit shown

µg/kg = micrograms per kilogram

-- = not applicable

J = Analyte was detected below the reporting limit and above the detection limit. Value is estimated.

References:

Department of Toxic Substances Control (DTSC), 2013, Chemical Look-Up Table Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California, June 11. DTSC, 2019, Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note Number 3, April. U. S. Environmental Protection Agency USEPA, 2019, Regional Screening Levels, November.



TABLE 7 FRUIT ANALYTICAL RESULTS - RADIONUCLIDES AJU Brandeis-Bardin Campus Brandeis, CA



Sample		0	Data	Т	ritium ¹	Stro	ntium-90 ²	Ces	ium-137 ³
Location	Sample Name	Sample Type	Date Collected	PRG⁴	Concentration	PRG⁴	Concentration	PRG⁴	Concentration
Name		туре	Conected			F	oCi/g⁵		
On-Site San	nples								
AV-1	AV-1-190830	Avocado	8/30/2019	7.76	-	3.21	<0.227	16.8	-
Av-1	AV-1-200604	Avocado	6/4/2020	7.70	<3.28	5.21	<0.237	10.0	<0.0288
A-1	A-1-190830	Apple	8/30/2019	9.5	-	3.9	<0.187	20.5	-
A-1	A-1-200604	Apple	6/4/2020	9.0	<4.90	5.5	<0.0447	20.5	<0.0115
G-1	G-1-190830	Grapefruit	8/30/2019	2.04	-	0.843	<0.212	4.41	-
6-1	G-1-200604	Giapeiruit	6/4/2020	2.04	<4.78	0.043	<0.0714	4.41	<0.0134
O-1	0-1-200604	Orange	6/4/2020	2.04	<4.98	0.843	<0.0488	4.41	<0.0113
L-1	L-1-190830	Lemon	8/30/2019	2.04	-	0.843	<0.117	4.41	-
L-1	L-1-200604	Lemon	6/4/2020	2.04	<4.57	0.043	<0.0419	4.41	<0.00739
Off-Site Ref	erence Samples								
AV-2	AV-2-190830	Avocado	8/30/2019	7.76	-	3.21	<0.225	16.8	-
AV-2	AV-2-200604	AVUCAUU	6/4/2020	7.70	<4.64	5.21	<0.140	10.0	<0.0145
A-2	A-2-190830	Apple	8/30/2019	9.5	-	3.9	<0.151	20.5	-
A-2	A-2-200604	Apple	6/4/2020	9.5	<3.28	5.9	<0.0634	20.5	<0.0123
G-2	G-2-190830	Grapefruit	8/30/2019	2.04	-	0.843	<0.150	4.41	-
0-2	G-2-200604	Giapelluit	6/4/2020	2.04	<3.38	0.043	<0.0425	4.41	<0.00968
0-2	0-2-200604	Orange	6/4/2020	2.04	<4.63	0.843	<0.0467	4.41	<0.0308
L-2	L-2-190830	Lemon	8/30/2019	2.04	-	0.843	<0.126	4.41	-
L-2	L-2-1200604	Lenion	6/4/2020	2.04	<3.25	0.043	<0.0440	4.41	<0.0114

Notes:

1. Samples analyzed for tritium using U.S. Environmental Protection Agency (USEPA) Method 906.0 or equivalent.

2. Samples analyzed for strontium-90 using USEPA Method 905.0 or equivalent.

3. Samples analyzed for cesium-137 using DOE HASL 300 GA-01-R.

4. Preliminary remediation goals assuming a residential exposure scenario for each produce type were calculated using the 2019 USEPA calculator.

5. Where an analyte is reported by the laboratory at an estimated concentration that is less than the minimal detectable concentration (MDC), the result is shown as less than the MDC.

Abbreviations:

pCi/g = picocuries per gram

PRG = preliminary remediation goal

< = analyte was not detected above the minimal detectable concentration (MDC) shown

References:

U.S. Environmental Protection Agency (USEPA), 2019, Preliminary Remediation Goals for Radionuclides (PRG), January.



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

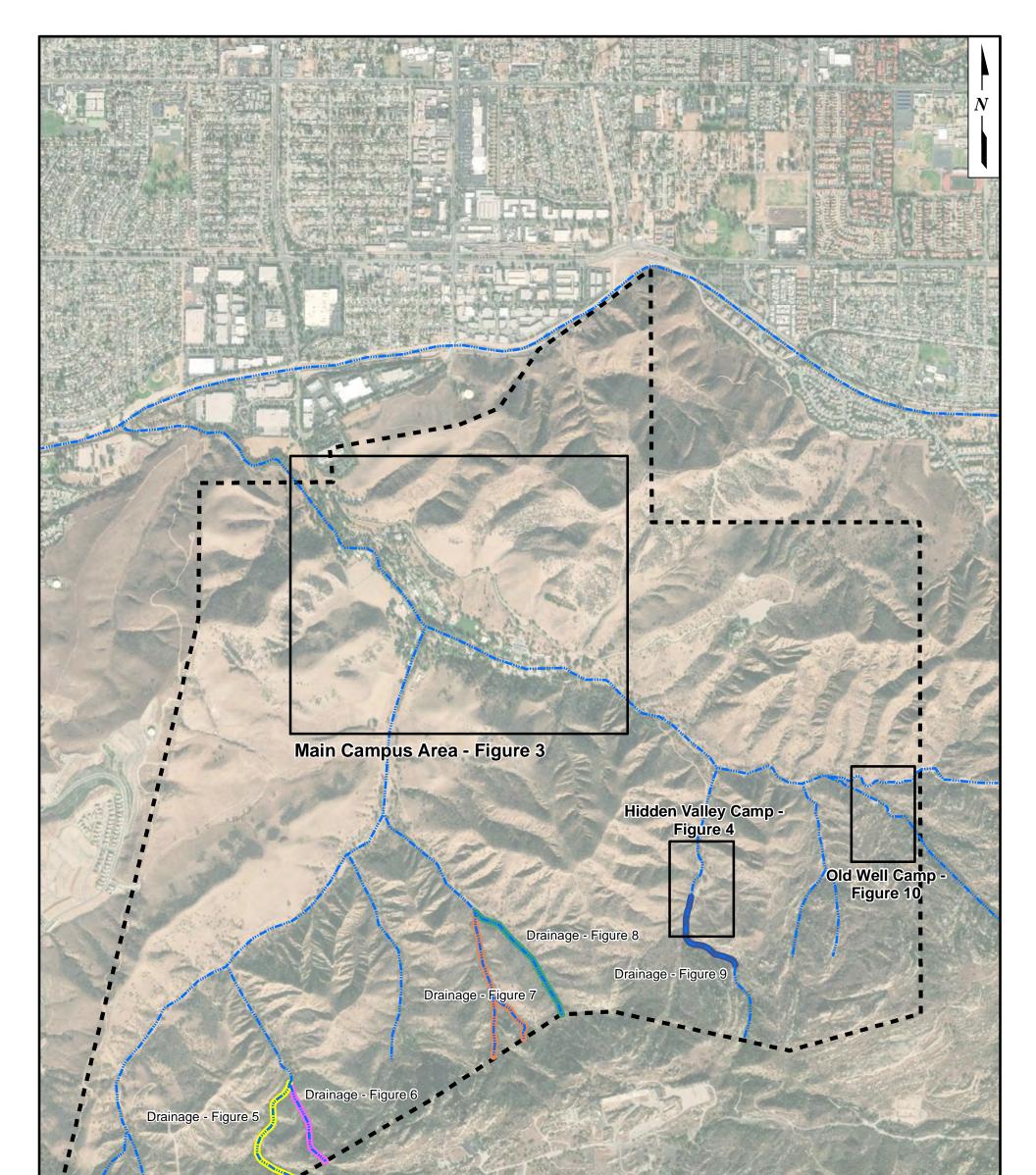
Figures

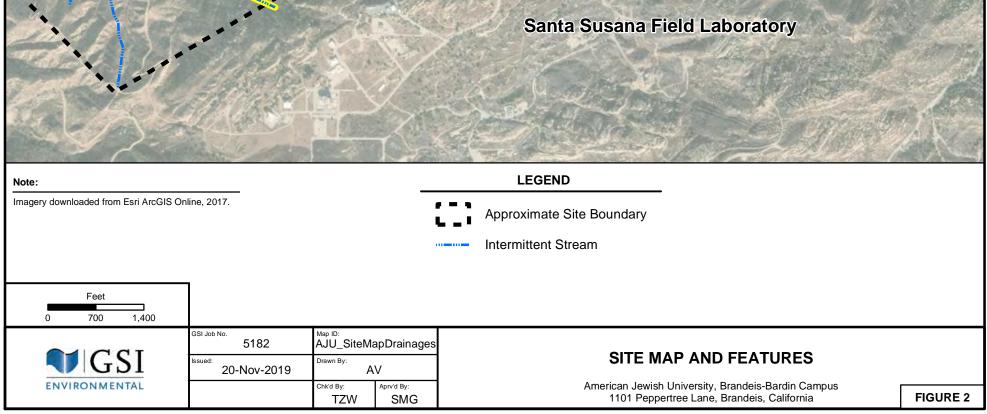
- Figure 1 Site Location Map
- Figure 2 Site Map and Features
- Figure 3 Main Campus Area Map and Sampling Locations
- Figure 4 Hidden Valley Camp Sampling Locations
- Figure 5 Sampling Locations OS3-W, OS357-W and BP-SED-1
- Figure 6 Sampling Location RRMDF-SED-1
- Figure 7 Sampling Locations SRE-SED-1, SRE-SED-2 and SRE-W
- Figure 8 Sampling Locations OS1-W and OS1-SED-1
- Figure 9 Sampling Locations OS8-SED-1 and OS-8-W
- Figure 10 Sampling Location OW-SED-1
- Figure 11 Fruit Orchard Sampling Locations
- Figure 12 Avocado Grove Sampling Locations



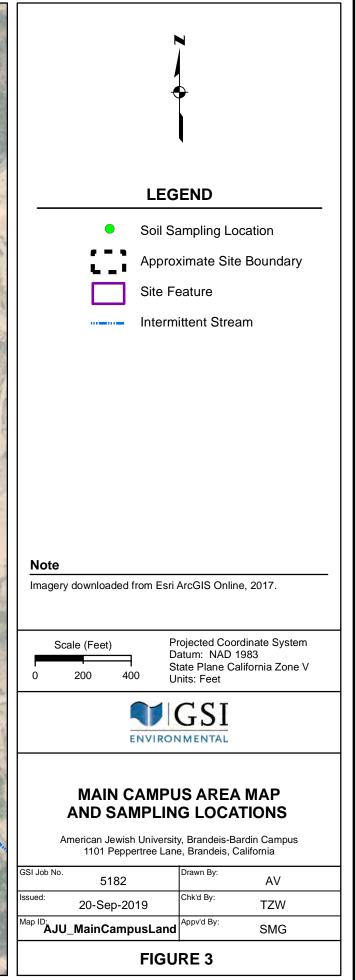
AJU_SiteLocMap

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California









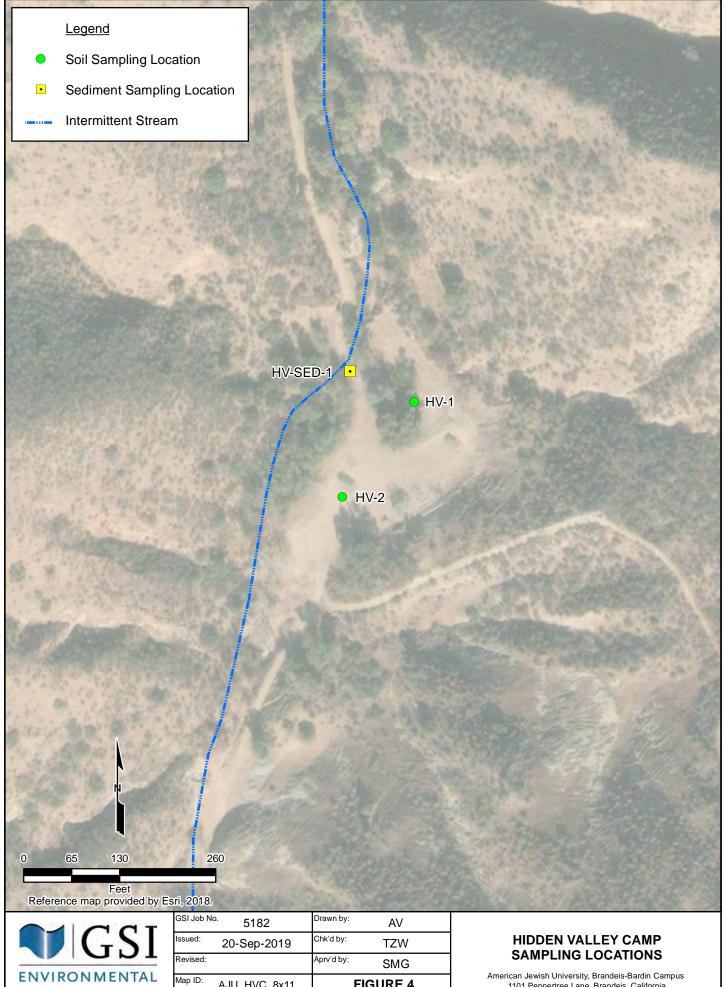
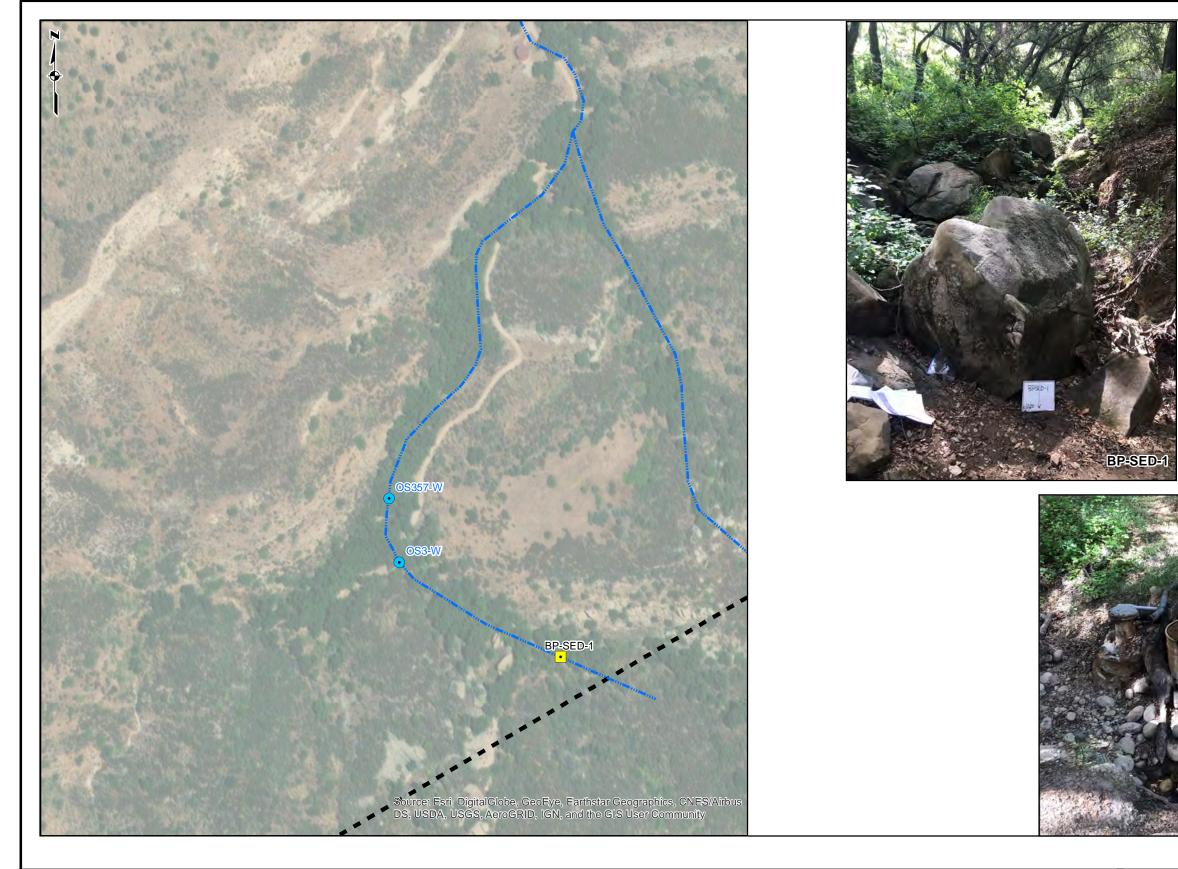


FIGURE 4

AJU_HVC_8x11

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California



LEGEND

Sediment Sampling Location

Intermittent Stream

• Water Sampling Location

Approximate Site Boundary

SAMPLING LOCATIONS OS3-W, OS357-W AND BP-SED-1

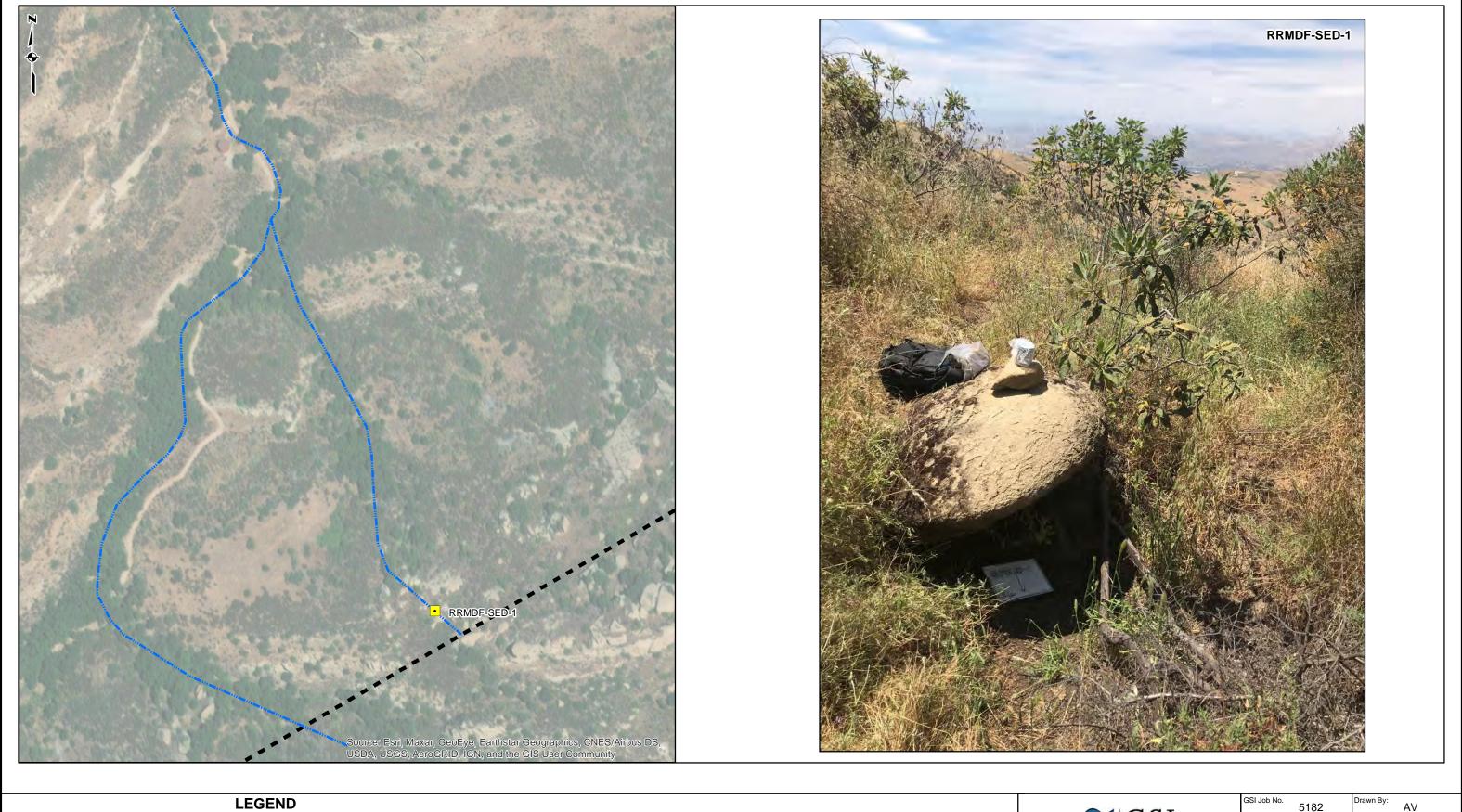
American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California



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Carlo C. Mallanda .

STATE NO.



Sediment Sampling Location •

Intermittent Stream

1 Approximate Site Boundary L

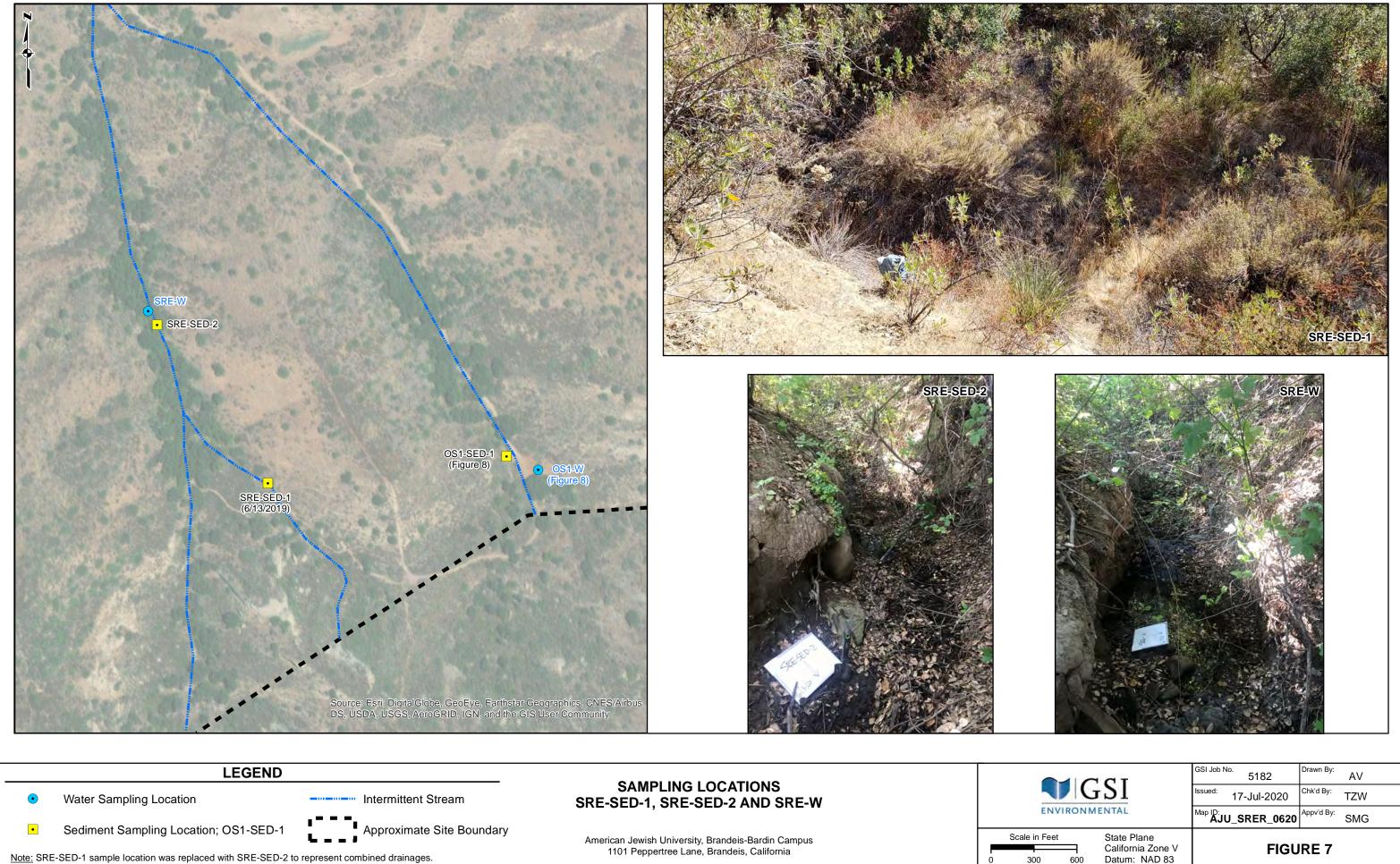
SAMPLING LOCATION RRMDF-SED-1



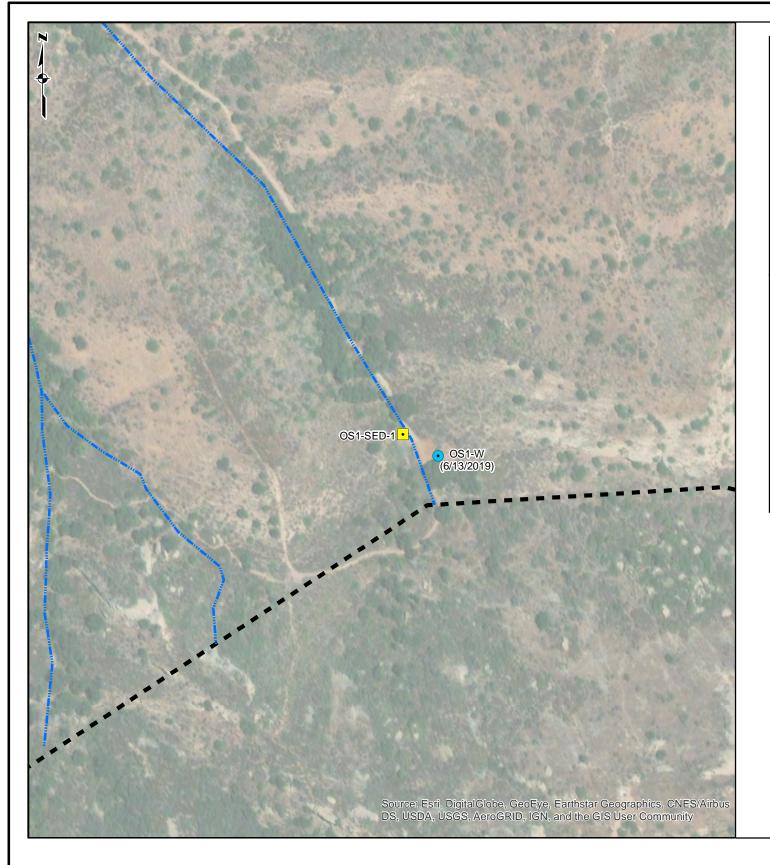
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American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California

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		Map ID: AJU_Re	actorRMDF_0620	Appv'd By:	SMG
Feet 600	State Plane California Zone V Datum: NAD 83		FIGU	RE 6	



	GSI Job No. 5182	Drawn By: AV
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ENVIRONMENTAL	Map ID: AJU_SRER_0620	Appv'd By: SMG
cale in Feet State Plane California Zone V 300 600 Datum: NAD 83	FIGL	IRE 7





Note that Spring OS1 was found to be the same as artesian monitoring wells RD-68A and 68B, which are monitored regularly by NASA. As such, no sample was collected during the June 2020 monitoring event.

LEGEND

Water Sampling Location

•

Intermittent Stream

Sediment Sampling Location L _

Approximate Site Boundary

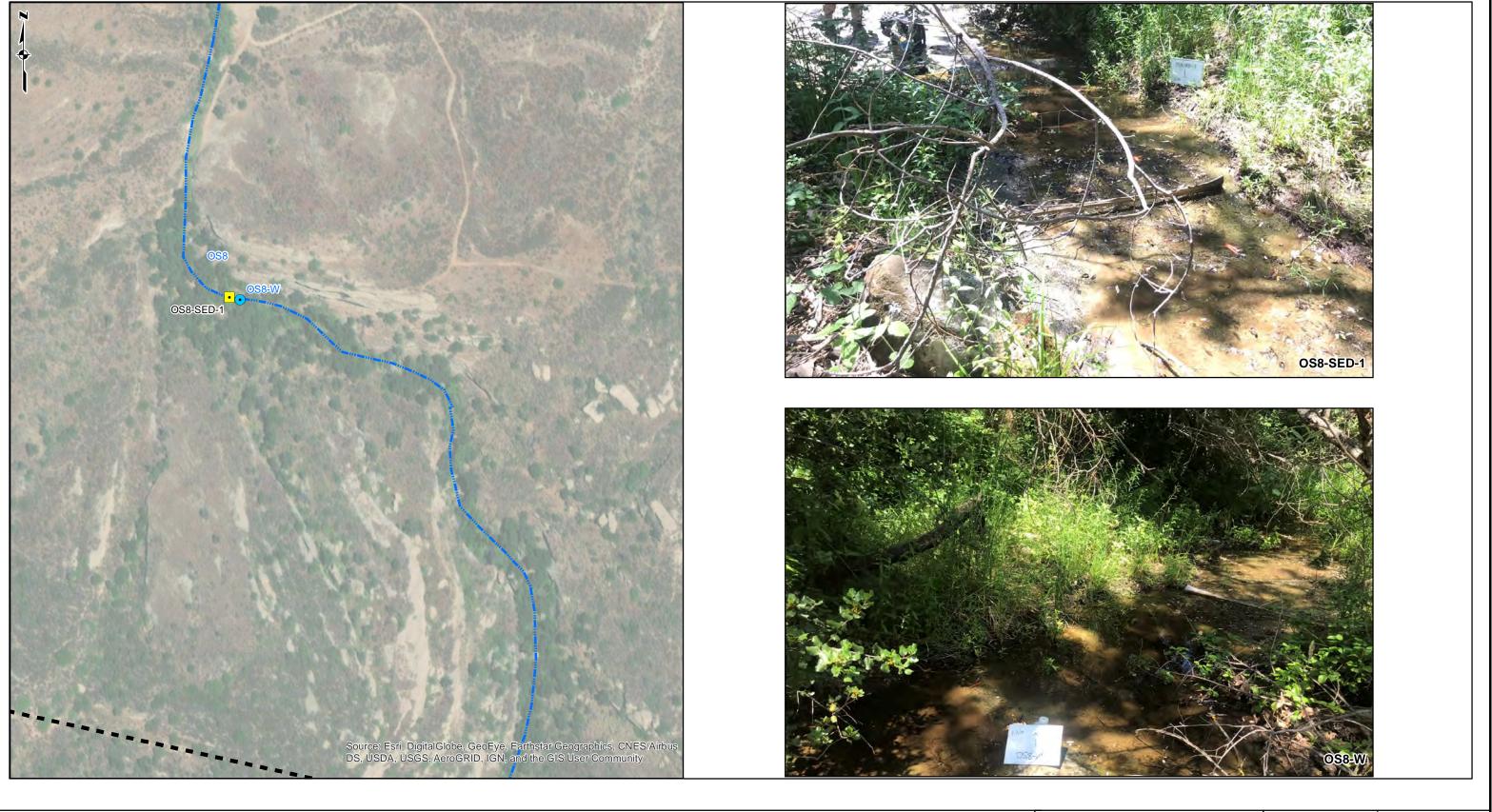
SAMPLING LOCATIONS **OS1-W AND OS1-SED-1**

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California



GSI	GSI Job No. 5182 Drawn By: AV Issued: 17-Jul-2020 Chk'd By: TZW	
ENVIRONMENTAL	Map ID: AJU_OS1_0620 Appv'd By: SMG	
Scale in FeetState PlaneCalifornia Zone V300600Datum: NAD 83	FIGURE 8	

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LEGEND

• Water Sampling Location

•

Intermittent Stream

Sediment Sampling Location Approximate Site Boundary

SAMPLING LOCATIONS OS8-SED-1 AND OS8-W

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California



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	GSI Job No. 5182 Issued: 21-Jul-2020 Map ID:	Drawn By: AV Chk'd By: TZW
Feet State Plane California Zone V 600 Datum: NAD 83	FIGU	IRE 9



Approximate Site Boundary



Intermittent Stream

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Sediment Sampling Location

LEGEND

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California

	GSI Job No. 5182 Issued: 17-Jul-2020 Map ID: AJU_OWC_0620	Drawn By: AV Chk'd By: TZW Appv/d By: A		
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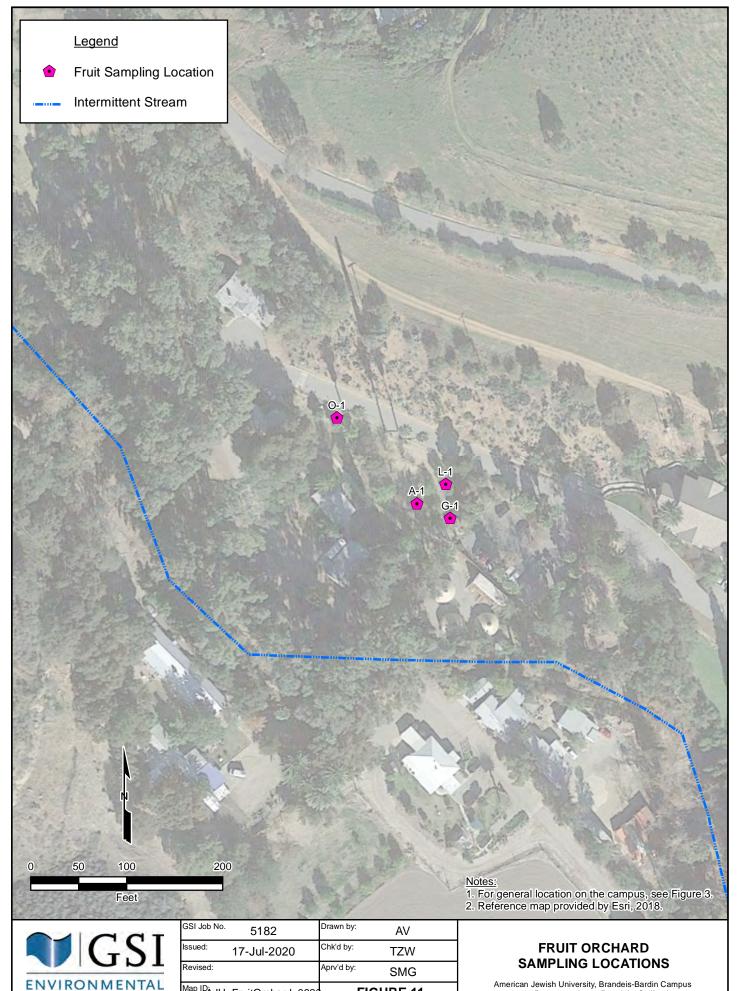


FIGURE 11

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane, Brandeis, California

Map IDAJU_FruitOrchard_0620





2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendices

Appendix A.	Preliminary Remediation Goal Calculations – Crop Samples
Appendix B.	Analytical Laboratory Reports – High-Use Area Samples
Appendix C.	Analytical Laboratory Reports – Drainage Areas Sediment Samples
Appendix D.	Analytical Laboratory Reports – Drainage Areas Water Samples
Appendix E.	Analytical Laboratory Reports – Fruit Samples



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendix A

Preliminary Remediation Goal Calculations – Crop Samples



Appendix A Preliminary Remediation Goal Calculations – Crop Samples

OVERVIEW

This document describes the methodology used to calculate preliminary remediation goals (PRGs) for radionuclides (cesium-137, tritium, and strontium-90), metals¹, and perchlorate that may be present in crops at the American Jewish University (AJU) Brandeis-Bardin Campus in Brandeis, California, located at 1101 Peppertree Lane in Brandeis, California (the Site).

The PRGs address a single residential exposure scenario in which an individual living on the Site consumes homegrown apples, citrus, and avocados. These specific types of produce were selected for evaluation because they are grown on Site, were present during the June 2020 monitoring event, and may be ingested by the individuals who reside there.

METHODOLOGY

Radionuclides.

The PRGs for the radionuclides were calculated using the United States Environmental Protection Agency (US EPA) PRG Calculator for radionuclides. The calculator is a database tool comprised of standard risk-based equations for radioactive contaminants. The radionuclide PRGs are based on the carcinogenicity of the individual isotopes, and, for isotopes like cesium-137 and strontium-90, also account for the carcinogenicity of daughter radionuclides (progeny). Non-cancer health effects are not considered for most radionuclides (uranium is the exception to this, but is not a concern for the AJU Site). The conceptual framework of the PRG calculator is EPA's *Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals) (RAGS Part B).*² The PRG Calculator can be used with default exposure assumptions, or with select site-specific exposure factors, as appropriate. The equations and default assumptions are available online.³

Radionuclide PRGs were calculated by selecting a target risk level of one in a million (1 x 10⁻⁶), a region-specific climate zone (Los Angeles), and by specifying that the radionuclides were not in secular equilibrium. The latter selection results in PRGs that account for exposures to, and health effects from, daughter radionuclides. For the AJU Site, the only daughter product that is relevant for produce consumption is Yttrium-90 (Strontium-90 daughter product). Tritium does not have radioactive progeny. Barium-137 (Cesium 137 daughter product) has a half-life of 2.6 minutes and does not contribute significantly to human exposure from the consumption of produce.

¹ Metals evaluated are California "Title 22" metals – see Table 6 of this report

² <u>https://www.epa.gov/risk/risk-assessment-guidance-superfund-rags-part-b</u>

³ <u>https://epa-prgs.ornl.gov/radionuclides/equations.html</u> and <u>https://epa-prgs.ornl.gov/radionuclides/prg_guide.html</u>

GSI Job No.: 5182 Issued: 5 August 2020 Page 2 of 5



Metals and Perchlorate.

The PRGs for metals and perchlorate were calculated for both cancer and noncancer endpoints, as appropriate for the individual substance, and the lowest PRG selected. Lead was addressed separately. For lead, the potential for adverse effects from ingestion is based on the blood lead level, an endpoint which was calculated using the California Department of Toxic Substances Control (DTSC's) LeadSpread-8 model (see below).⁴

Exposure Parameters

Because the AJU property has apple, lemon, grapefruit, and avocado trees, the produce consumption scenario considered exposure via ingestion of these produce items that were grown on Site. Given that site-specific consumption rates of these fruits were not available, intake rates of apples and citrus were obtained from the US EPA Exposure Factors Handbook⁵. and adjusted to account for the body weight of a child (15.0 kilograms [kg]) and an adult (80kg).⁶ The fruit intake rates are summarized in Table A1, below. Intake rates for lemon and grapefruit are represented by a generalized citrus ingestion rate, as no specific intake rates for lemon and grapefruit are available. Avocado ingestion rates are from the U.S. Center for Disease Control & Prevention's (CDC) National Health & Nutrition Examination Survey (NHANES) database (NHANES), and are based on a two-day "dietary recall" study of avocado ingested as raw avocado, avocado dressing, avocado sushi roll, and lettuce salad with avocado. Respondents estimated the mass of foods consumed based on their recall (i.e., memory) of what they had eaten on each of two days. Because some foods contained avocado as one of several ingredients (e.g. avocado dressing, sushi roll, and lettuce salad), GSI made the conservative assumption that the reported mass of these foods were comprised entirely of avocado when calculating the average estimate of avocado intake.

The PRGs utilized many standard exposure factors for a residential receptor, including variables such as a 26-year exposure duration (20 years as an adult, 6 years as a child), and a 350-day per year exposure frequency for citrus, which generally produces fruit year around in Ventura County.⁷ For avocados, exposure frequency was set at 129 days, which is the average fruit-producing season of the 21 different avocado varieties grown in Ventura County.⁸ Apples grown in Ventura County typically produce fruit for three months, thus the exposure frequency for apple ingestion was set at 92 days.⁹

⁴ <u>https://dtsc.ca.gov/leadspread-8/</u>

⁵ https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236252

⁶ California Department of Toxic Substances Control. Human and Ecological Risk Office, 2019. HHRA Note 3.

⁷ <u>http://ceventura.ucdavis.edu/Com Ag/Subtropical/Fruit and Nut Varieties/</u>

⁸ <u>http://ceventura.ucanr.edu/Com_Ag/Subtropical/Avocado_Handbook/Harvesting/When_to_pick_avocados_/</u>

⁹ http://ceventura.ucdavis.edu/Com_Ag/Subtropical/Fruit_and_Nut_Varieties/



Produce Item	Child Intake Rate (grams/day)	Adult Intake Rate (grams/day)
Apple	21.76	76.41
Citrus	77.52	362.98
Avocado	41.9 (not age-specific)	41.9 (not age-specific)

Table A1. Produce Intake Rates

Radionuclide PRGs

Table A2 lists the PRGs for radionuclides in individual produce items. Note that an "All Produce" PRG was previously reported for radionuclides in the 2019 monitoring report,¹⁰ but is not included here given its overly-conservative assumption regarding fruit consumption by a Site resident. Specifically, the All Produce PRG made the assumption that a Site resident would ingest all produce items on a daily basis – a practice that is highly unlikely and unrealistic. Accordingly, All Produce PRGs will no longer be considered in evaluating Site data.

Table A2. Radionuclide PRGs for Individual Produce Items

Radionuclide	Apple Consumption PRG (pCi/g)	Citrus Consumption PRG (pCi/g)	Avocado Consumption PRG (pCi/g)
Cesium-137	20.5	4.41	16.8
Tritium	9.5	2.04	7.76
Strontium-90	3.9	0.843	3.21
Yttrium-90 (Strontium-90 daughter)	3 x 10 ⁴	7 x 10 ³	3 x 10 ⁴

PRGs for Metals and Perchlorate

Table A3 lists PRGs calculated for metals and perchlorate for the consumption of individual produce items.

Chamical	Apple	Citrus	Avocado
Chemical	Consumption	Consumption	Consumption
Antimony	1.5E+04	8.9E+02	1.1E+04 ¹
Arsenic ²	1.1E+00	6.3E-02	7.7E-01
Barium	7.4E+05	4.5E+04	5.4E+05
Beryllium	7.4E+02	4.5E+01	5.4E+02
Cadmium	3.7E+03	2.2E+02	2.7E+03
Chromium (3+)	5.6E+06	3.3E+05	4.1E+06

Table A3. Metal and Perchlorate	PRGs for Individual	Produce Items (ug/kg)
Table A3. Wetal and Fercinolate	FRGS IOI IIIUIVIUUAI	FIOUULE ILEINS (µy/ky)

¹⁰ GSI Environmental, 2019, 2019 Monitoring Report, American Jewish University, Brandeis-Bardin Campus, 1101 Peppertree Lane, Brandeis, California, 25 November.



Chemical	Apple Consumption	Citrus Consumption	Avocado Consumption
Cobalt	1.1E+03	6.7E+01	8.1E+02
Copper	1.5E+05	8.9E+03	1.1E+05
Lead	See text	See text	See text
Mercury	5.9E+02	3.6E+01	4.3E+02
Molybdenum	1.9E+04	1.1E+03	1.4E+04
Nickel	4.1E+04	2.4E+03	3.0E+04
Selenium	1.9E+04	1.1E+03	1.4E+04
Silver	1.9E+04	1.1E+03	1.4E+04
Thallium	3.7E+01	2.2E+00	2.7E+01
Vanadium	1.9E+04	1.1E+03	1.4E+04
Zinc	1.1E+06	6.7E+04	8.1E+05
Perchlorate	2.6E+03	1.6E+02	1.9E+03

¹ PRG accounts for the limited (10%) gastrointestinal absorption of antimony (ATSDR 2019. Toxicologic Profile for Antimony <u>https://www.atsdr.cdc.gov/toxprofiles/TP.asp?id=332&tid=58</u>)

² Arsenic PRG is based on a cancer endpoint. All other PRGs are based on non-cancer effects.

Evaluation of Lead from Ingestion of Produce Grown at the AJU Site

In California, the potential for adverse health effects from exposure to lead at residential sites is evaluated by calculating the blood lead level of a child – the residential age group that is most susceptible to the effects of elevated lead exposure. Blood lead levels are typically calculated using DTSC's LeadSpread8, which accounts for soil-based exposures at a site, as well as background lead exposure from other sources.¹¹ Because LeadSpread8 does not include equations that calculate the contribution of homegrown produce to blood lead levels, blood lead levels for residents at the AJU Site were estimated by first using the maximum measured soil lead concentration at the Site (12 mg/kg - Table 2) to account for background blood lead levels from incidental ingestion, inhalation, and dermal exposure to Site soils. GSI then calculated the additional guantity of lead that would be ingested due to the consumption of homegrown produce by adding the measured lead concentration in samples of produce collected from the Site (Table 6) to the soil lead levels as an approximation of the additional daily lead exposure attributable to ingestion of produce. When lead was not detected in a produce item (as was the case for avocados and all citrus), the analytical limit of detection was used for the lead concentration. When each of these produce lead concentrations were added to LeadSpread8, they resulted in negligible increases in blood lead levels. For example, the net 99th percentile blood lead levels based on soil and produce exposure combined were all less than 0.5 µg/dl. For reference, an incremental increase in blood lead level of 1 µg/dl is the benchmark criterion used in California to assess whether the presence of lead at a site results in unacceptable levels of lead in blood.¹² As such, the results indicate that the presence of lead at the Site does not result in an adverse health effect for a residential exposure.

¹¹ <u>https://dtsc.ca.gov/leadspread-8/</u>

GSI Job No.: 5182 Issued: 5 August 2020 Page 5 of 5



DISCUSSION

The PRGs summarized in Tables A2 and A3 are likely conservative PRGs for individuals that may reside at the AJU Site, as they assume that a residential receptor spends most of their time on Site on an on-going basis over a significant portion of their lifetime. Further, it was assumed that during that time, the resident regularly consumes apples, avocados, grapefruit, lemons, and oranges grown on the Site.

None of the radionuclides were detected in produce collected on Site (Table 7), thus there is no indication that residents of the AJU Site would be exposed to Tritium, Cesium-137, or Strontium-90 from consumption of Site-grown apples, avocados, or citrus.

Arsenic, beryllium, cadmium, trivalent chromium (Cr⁺³), cobalt, copper, mercury, molybdenum, selenium, silver, thallium, vanadium, and perchlorate were not detected in samples of avocado, apples, or citrus grown on the AJU Site (Table 6). For arsenic, it is important to note that the produce PRGs are below the analytical detection limit for arsenic (453 to 500 µg/kg, depending on the type of produce), and that Site-specific background concentrations of arsenic in produce have not been established. However, given that arsenic detections in Site soils (Table 2) were far below the Site soil background of 39.7 mg/kg (39,700 µg/kg), arsenic concentrations in produce, if any, would not be expected to exceed a background value.¹³

Of the remaining substances that were analyzed for in produce, antimony was detected only in avocado and grapefruit, and at concentrations well below the produce-specific PRGs (Table 6 and Table A3). Barium, copper, and zinc – common elements in Site soils – were detected in all on-Site produce samples, albeit at concentrations far below their respective PRGs (Table 6 and Table A3). Nickel was detected in a Site-grown orange at 315 μ g/kg – a concentration substantially below the produce-specific PRG for this metal (Table A3). Of the on-Site produce samples, lead was detected only in apples. As discussed above (see Evaluation of Lead from Ingestion of Produce Grown at the AJU Site), lead exposure via consumption of home-grown produce does not pose a concern for human health.

¹³ Note that the presence of arsenic in soil can exceed conservative risk-based screening criteria at naturally-occurring, background concentrations. For this reason, evaluation of arsenic is related to its background concentration. It is logical to assume that fruit grown in the region would contain similar "background" concentrations of arsenic.



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendix B

Analytical Laboratory Reports – High-Use Area Samples

🔅 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pleasanton 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

Laboratory Job ID: 720-98769-1

Client Project/Site: AJU-BB Revision: 1

For:

GSI Environmental, Inc 155 Grand Avenue Suite 704 Oakland, California 94612

Attn: Susan Gallardo

Atsanch Sit

Authorized for release by: 6/24/2020 1:15:59 PM

Afsaneh Salimpour, Senior Project Manager (925)484-1919 afsaneh.salimpour@testamericainc.com

LINKS Review your project results through TOTOLACCESS Have a Question? Ask The

Expert

Visit us at: www.eurofinsus.com/Env This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
QC Sample Results	15
QC Association Summary	19
Lab Chronicle	22
Certification Summary	24
Method Summary	25
Sample Summary	26
Chain of Custody	27
Receipt Checklists	29

3

Qualifiers

RPD

TEF

TEQ

TNTC

Metals	
Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
Glossary	,

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

Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-98769-1

Laboratory: Eurofins TestAmerica, Pleasanton

Narrative

Job Narrative 720-98769-1

Case Narrative

Revised Report on 6/24/20 to report to RL. **Comments** No additional comments.

Receipt

The samples were received on 6/4/2020 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

HPLC/IC

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

Metals

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Antimony for preparation batch 440-611455 and analytical batch 440-611815 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: The method blank for preparation batch 440-611455 and analytical batch 440-611815 contained Barium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

General Chemistry

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

Client Sample ID: HV-1-200603

Lab Sample ID: 720-98769-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Arsenic	5.4		3.0		mg/Kg	5	6010B	Total/NA
Barium	62		1.5		mg/Kg	5	6010B	Total/NA
Chromium	11		1.0		mg/Kg	5	6010B	Total/NA
Cobalt	3.5		1.0		mg/Kg	5	6010B	Total/NA
Copper	7.4		2.0		mg/Kg	5	6010B	Total/NA
Lead	4.0		2.0		mg/Kg	5	6010B	Total/NA
Nickel	6.5		2.0		mg/Kg	5	6010B	Total/NA
Vanadium	20		1.0		mg/Kg	5	6010B	Total/NA
Zinc	47		5.0		mg/Kg	5	6010B	Total/NA

Client Sample ID: HV-2-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type	
Arsenic	3.3		3.0		mg/Kg	5	6010B	Total/NA	
Barium	48		1.5		mg/Kg	5	6010B	Total/NA	
Beryllium	0.56		0.51		mg/Kg	5	6010B	Total/NA	
Chromium	13		1.0		mg/Kg	5	6010B	Total/NA	
Cobalt	3.8		1.0		mg/Kg	5	6010B	Total/NA	
Copper	8.1		2.0		mg/Kg	5	6010B	Total/NA	
Lead	8.4		2.0		mg/Kg	5	6010B	Total/NA	
Nickel	8.5		2.0		mg/Kg	5	6010B	Total/NA	
Vanadium	21		1.0		mg/Kg	5	6010B	Total/NA	
Zinc	43		5.1		mg/Kg	5	6010B	Total/NA	

Client Sample ID: HV-SED-1-200603

Result Qualifier Analyte RL MDL Unit Dil Fac D Method Prep Type 3.0 Arsenic 3.1 5 6010B Total/NA mg/Kg Barium 53 1.5 mg/Kg 5 6010B Total/NA 1.0 Chromium 11 mg/Kg 5 6010B Total/NA 5 Cobalt 3.7 1.0 mg/Kg 6010B Total/NA Copper 8.5 2.0 mg/Kg 5 6010B Total/NA 5 6010B Total/NA Lead 9.3 2.0 mg/Kg 2.0 5 Total/NA Nickel 7.1 mg/Kg 6010B 5 Vanadium 22 6010B Total/NA 1.0 mg/Kg Zinc 44 mg/Kg 5 6010B Total/NA 5.0 Mercury 0.024 0.020 mg/Kg 1 7471A Total/NA

Client Sample ID: TF-1-200603

Lab Sample ID: 720-98769-4

Lab Sample ID: 720-98769-3

Analyte	Result Qualifie	er RL	MDL Unit	Dil Fac	Method	Prep Type
Arsenic	5.3	3.0	mg/Kg	5	6010B	Total/NA
Barium	88	1.5	mg/Kg	5	6010B	Total/NA
Chromium	16	1.0	mg/Kg	5	6010B	Total/NA
Cobalt	6.3	1.0	mg/Kg	5	6010B	Total/NA
Copper	19	2.0	mg/Kg	5	6010B	Total/NA
Lead	8.5	2.0	mg/Kg	5	6010B	Total/NA
Nickel	11	2.0	mg/Kg	5	6010B	Total/NA
Vanadium	34	1.0	mg/Kg	5	6010B	Total/NA
Zinc	52	5.0	mg/Kg	5	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: KC-1-200603

5

Lab Sample ID: 720-98769-5

Lab Sample ID: 720-98769-6

Lab Sample ID: 720-98769-7

Lab Sample ID: 720-98769-8

Analyte	Result (Qualifier RL	MDL Unit	Dil Fac	D Metho	d Prep Type
Arsenic	5.9	3.0	mg/ł	(g 5	6010B	Total/NA
Barium	60	1.5	mg/ł	Kg 5	6010B	Total/NA
Chromium	16	1.0	mg/ł	Kg 5	6010B	Total/NA
Cobalt	4.9	1.0	mg/ł	(g 5	6010B	Total/NA
Copper	10	2.0	mg/ł	Kg 5	6010B	Total/NA
Lead	8.8	2.0	mg/ł	(g 5	6010B	Total/NA
Molybdenum	2.8	2.0	mg/ł	(g 5	6010B	Total/NA
Nickel	9.6	2.0	mg/ł	Kg 5	6010B	Total/NA
Vanadium	32	1.0	mg/ł	(g 5	6010B	Total/NA
Zinc	46	5.0	mg/ł	(g 5	6010B	Total/NA

Client Sample ID: GF-1-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type	
Barium	30		1.5		mg/Kg	5	6010B	Total/NA	
Chromium	6.1		1.0		mg/Kg	5	6010B	Total/NA	
Cobalt	1.9		1.0		mg/Kg	5	6010B	Total/NA	
Copper	4.5		2.0		mg/Kg	5	6010B	Total/NA	
Nickel	3.8		2.0		mg/Kg	5	6010B	Total/NA	
Vanadium	13		1.0		mg/Kg	5	6010B	Total/NA	44
Zinc	27		5.1		mg/Kg	5	6010B	Total/NA	

Client Sample ID: CIT-1-200603

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac	Method	Prep Type
Barium	32	1.5	mg/Kg	5	6010B	Total/NA
Chromium	9.8	1.0	mg/Kg	5	6010B	Total/NA
Cobalt	2.5	1.0	mg/Kg	5	6010B	Total/NA
Copper	7.1	2.0	mg/Kg	5	6010B	Total/NA
Lead	5.8	2.0	mg/Kg	5	6010B	Total/NA
Nickel	5.8	2.0	mg/Kg	5	6010B	Total/NA
Vanadium	16	1.0	mg/Kg	5	6010B	Total/NA
Zinc	44	5.1	mg/Kg	5	6010B	Total/NA

Client Sample ID: AT-1-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	15		3.0		mg/Kg	5	_	6010B	Total/NA
Barium	31		1.5		mg/Kg	5		6010B	Total/NA
Chromium	36		1.0		mg/Kg	5		6010B	Total/NA
Cobalt	2.5		1.0		mg/Kg	5		6010B	Total/NA
Copper	11		2.0		mg/Kg	5		6010B	Total/NA
Lead	2.7		2.0		mg/Kg	5		6010B	Total/NA
Nickel	4.9		2.0		mg/Kg	5		6010B	Total/NA
Vanadium	15		1.0		mg/Kg	5		6010B	Total/NA
Zinc	39		5.0		mg/Kg	5		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HV-1-200603 Date Collected: 06/03/20 10:45 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC) Analyte Perchlorate		Qualifier	RL 0.040	MDL	Unit mg/Kg	D	Prepared	Analyzed 06/11/20 15:35	Dil Fac
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F1	10		mg/Kg		06/05/20 08:35	06/08/20 17:40	5
Arsenic	5.4		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:40	5
								00/00/00 17 10	-

Barium	62	1.5	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Beryllium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Cadmium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Chromium	11	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Cobalt	3.5	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Copper	7.4	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Lead	4.0	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Molybdenum	ND	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Nickel	6.5	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Selenium	ND	3.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Thallium	ND	10	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Vanadium	20	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Zinc	47	5.0	mg/Kg	06/05/20 08:35 06/08/20 17:40	5
Silver	ND	1.5	mg/Kg	06/05/20 08:35 06/08/20 17:40	5

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.020	mg/Kg		06/05/20 10:09	06/08/20 15:08	1

6/24/2020 (Rev. 1)

Matrix: Solid

Lab Sample ID: 720-98769-1

6

Client Sample ID: HV-2-200603 Date Collected: 06/03/20 11:00

ND

Date Received: 06/04/20 16:05

Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 16:30	1
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Arsenic	3.3		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Barium	48		1.5		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Beryllium	0.56		0.51		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Cadmium	ND		0.51		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Chromium	13		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Cobalt	3.8		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Copper	8.1		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Lead	8.4		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Nickel	8.5		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Selenium	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Thallium	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Vanadium	21		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Zinc	43		5.1		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Silver	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 17:54	5
Method: 7471A - Mercury (CVAA	.)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

0.020

mg/Kg

Job ID: 720-98769-1

Lab Sample ID: 720-98769-2

06/09/20 09:10 06/09/20 13:06

Matrix: Solid

5 6

1

Client Sample ID: HV-SED-1-200603 Date Collected: 06/03/20 10:50 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (I	C) - Soluble								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 16:48	1
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:57	5

Anumony	ND	10	iiig/rtg	00/05/20 00.55 00/06/20 17.57	5	
Arsenic	3.1	3.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Barium	53	1.5	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Beryllium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Cadmium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Chromium	11	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Cobalt	3.7	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Copper	8.5	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Lead	9.3	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Molybdenum	ND	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Nickel	7.1	2.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Selenium	ND	3.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Thallium	ND	10	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Vanadium	22	1.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Zinc	44	5.0	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Silver	ND	1.5	mg/Kg	06/05/20 08:35 06/08/20 17:57	5	
Method: 7471A - Mercury	(CVAA)					

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.024	0.020	mg/Kg	0	6/05/20 10:09	06/09/20 10:03	1

Lab Sample ID: 720-98769-3 Matrix: Solid

6

Client Sample ID: TF-1-200603 Date Collected: 06/03/20 13:20 Date Received: 06/04/20 16:05

Date Received: 06/04/20 16:0	15					
Method: 314.0 - Perchlorate	e (IC) - Soluble					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed

Perchlorate	ND		0.040		mg/Kg			06/11/20 17:07	1	
 Method: 6010B - Metals (ICP)										6
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Arsenic	5.3		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Barium	88		1.5		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	jč
Beryllium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Cadmium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	15
Chromium	16		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Cobalt	6.3		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Copper	19		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Lead	8.5		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Nickel	11		2.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Selenium	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Thallium	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Vanadium	34		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Zinc	52		5.0		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
Silver	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 17:59	5	
_ Method: 7471A - Mercury (CVAA	()									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.020		mg/Kg		06/05/20 10:09	06/09/20 10:06	1	

Lab Sample ID: 720-98769-4 Matrix: Solid

6

Dil Fac

Job ID: 720-98769-1

Lab Sample ID: 720-98769-5 Matrix: Solid

Date Collected: 06/03/20 13:40 Date Received: 06/04/20 16:05

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Client Sample ID: KC-1-200603

Method: 314.0 - Perchlorate (IC) Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analvzed	Dil Fac	ī
Perchlorate	ND		0.040		mg/Kg			06/11/20 17:25	1	
Method: 6010B - Metals (ICP) Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:01	5	
Arsonic	5 9		3.0		ma/Ka		06/05/20 08:35	06/08/20 18:01	5	

Arsenic	5.9	3.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Barium	60	1.5	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	Ö
Beryllium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Cadmium	ND	0.50	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	9
Chromium	16	1.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Cobalt	4.9	1.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Copper	10	2.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Lead	8.8	2.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Molybdenum	2.8	2.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Nickel	9.6	2.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Selenium	ND	3.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Thallium	ND	10	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Vanadium	32	1.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Zinc	46	5.0	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	
Silver	ND	1.5	mg/Kg	06/05/20 08:35 06/08/20 18:01	5	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		06/05/20 10:09	06/09/20 10:08	1

6/24/2020 (Rev. 1)

Client Sample ID: GF-1-200603 Date Collected: 06/03/20 13:55 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC) - Soluble								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 17:43	1

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Method: 6010B - Metals (ICP)										6
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Arsenic	ND		3.1		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	6
Barium	30		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	Ŏ
Beryllium	ND		0.51		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Cadmium	ND		0.51		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	9
Chromium	6.1		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Cobalt	1.9		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Copper	4.5		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Lead	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Nickel	3.8		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Selenium	ND		3.1		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Thallium	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Vanadium	13		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Zinc	27		5.1		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
Silver	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:04	5	
_ Method: 7471A - Mercury (CVAA	.)									
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.020		mg/Kg		06/05/20 10:09	06/09/20 10:10	1	

Lab Sample ID: 720-98769-6

Matrix: Solid

6/24/2020 (Rev. 1)

Client Sample ID: CIT-1-200603 Date Collected: 06/02/20 13:10 Date Received: 06/04/20 16:05

Date Received: 06/04/20 16:05									
	C) - Soluble)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 13:56	1

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Perchlorate	ND		0.040		mg/Kg			06/11/20 13:56	1	
Method: 6010B - Metals (ICP)										6
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Arsenic	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	6
Barium	32		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	0
Beryllium	ND		0.51		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Cadmium	ND		0.51		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	l A
Chromium	9.8		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Cobalt	2.5		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Copper	7.1		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Lead	5.8		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Nickel	5.8		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Selenium	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Thallium	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Vanadium	16		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Zinc	44		5.1		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Silver	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:06	5	
Method: 7471A - Mercury (CVAA										
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.020		mg/Kg		06/05/20 10:09	06/09/20 10:12	1	

Lab Sample ID: 720-98769-7 Matrix: Solid

6

6/24/2020 (Rev. 1)

Client Sample ID: AT-1-200603 Date Collected: 06/03/20 14:10 Date Received: 06/04/20 16:05

ſ	 Method: 314.0 - Perchlorate (I	C) - Soluble						
l	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
l	Perchlorate	ND ND	0.040	mg/Kg			06/11/20 14:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Arsenic	15		3.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Barium	31		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Beryllium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Cadmium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Chromium	36		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	ī
Cobalt	2.5		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Copper	11		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Lead	2.7		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Nickel	4.9		2.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Selenium	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	2
Thallium	ND		10		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Vanadium	15		1.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Zinc	39		5.0		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Silver	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 18:08	5	
Method: 7471A - Mercury (CVAA	.)									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.020		mg/Kg		06/05/20 10:11	06/09/20 11:32	1	

Job ID: 720-98769-1

Lab Sample ID: 720-98769-8 Matrix: Solid

id 2 - 4 ac 5

1

Method: 314.0 - Perchlorate (IC)

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Soluble

Prep Type: Soluble

Dil Fac

1

Analyzed

06/11/20 14:56

%Rec.

Limits

75 - 125

%Rec.

Limits

75 - 125

96

101

Lab Sample ID: MRL 440-612249/9 **Client Sample ID: Lab Control Sample** Matrix: Solid Analysis Batch: 612249 Spike MRL MRL Analyte Added Result Qualifier Unit D %Rec Perchlorate 4.00 ND ug/L Lab Sample ID: MRL 440-612254/8 **Client Sample ID: Lab Control Sample Matrix: Solid** Analysis Batch: 612254 Spike MRL MRL Analyte Added Result Qualifier Unit D %Rec 4.00 Perchlorate 4.05 ug/L Lab Sample ID: MB 440-612305/1-A **Client Sample ID: Method Blank** Matrix: Solid Analysis Batch: 612249 MB MB Analyte **Result Qualifier** RL MDL Unit D Prepared Perchlorate 0.040 ND mg/Kg Lab Sample ID: LCS 440-612305/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid

Analysis Batch: 612249								
-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perchlorate	0.500	0.474		mg/Kg		95	85 - 115	

Lab Sample ID: 720-98769- Matrix: Solid Analysis Batch: 612249	-1 MS						CI	lient Sa		HV-1-200603 ype: Soluble
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perchlorate	ND		0.499	0.593		mg/Kg		119	80 - 120	
 Lab Sample ID: 720-98769-	-1 MSD						С	lient Sa	mple ID: I	HV-1-200603

Matrix: Solid Analysis Batch: 612249								ient Sa	Prep T		
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perchlorate	ND		0.498	0.574		mg/Kg		115	80 - 120	3	15

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-6114 Matrix: Solid Analysis Batch: 611815								le ID: Methoc Prep Type: To Prep Batch: (otal/NA
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg		06/05/20 08:35	06/08/20 17:33	5
Arsenic	ND		3.0		mg/Kg		06/05/20 08:35	06/08/20 17:33	5
Barium	ND		1.5		mg/Kg		06/05/20 08:35	06/08/20 17:33	5
Beryllium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 17:33	5
Cadmium	ND		0.50		mg/Kg		06/05/20 08:35	06/08/20 17:33	5
Chromium	ND		1.0		mg/Kg		06/05/20 08:35	06/08/20 17:33	5

Prep Type: Total/NA Prep Batch: 611455

Client Sample ID: Method Blank

2 3 4 5 6 7 8

13

Matrix: Solid Analysis Batch: 611815

Lab Sample ID: MB 440-611455/1-A ^5

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

MB	МВ				
Analyte Result	Qualifier RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Cobalt ND	1.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Copper ND	2.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Lead ND	2.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Molybdenum ND	2.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Nickel ND	2.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Selenium ND	3.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Thallium ND	10	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Vanadium ND	1.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Zinc ND	5.0	mg/Kg	06/05/20 08:35	06/08/20 17:33	5
Silver ND	1.5	mg/Kg	06/05/20 08:35	06/08/20 17:33	5

Lab Sample ID: LCS 440-611455/2-A ^5 Matrix: Solid Analysis Batch: 611815

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 611455

Analysis Batch. 611615	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	49.9		mg/Kg		100	80 - 120
Arsenic	50.0	44.6		mg/Kg		89	80 - 120
Barium	50.0	46.1		mg/Kg		92	80 - 120
Beryllium	50.0	45.9		mg/Kg		92	80 - 120
Cadmium	50.0	45.4		mg/Kg		91	80 - 120
Chromium	50.0	47.6		mg/Kg		95	80 - 120
Cobalt	50.0	46.4		mg/Kg		93	80 - 120
Copper	50.0	47.6		mg/Kg		95	80 - 120
Lead	50.0	46.8		mg/Kg		94	80 - 120
Molybdenum	50.0	49.8		mg/Kg		100	80 - 120
Nickel	50.0	47.1		mg/Kg		94	80 - 120
Selenium	50.0	43.4		mg/Kg		87	80 - 120
Thallium	50.0	46.0		mg/Kg		92	80 - 120
Vanadium	50.0	45.4		mg/Kg		91	80 - 120
Zinc	50.0	45.6		mg/Kg		91	80 - 120
Silver	25.0	23.5		mg/Kg		94	80 - 120

Lab Sample ID: 720-98769-1 MS Matrix: Solid Analysis Batch: 611815

Analysis Batch: 611815	Sample	Sample	Spike	MS	MS				Prep Batch: 611455 %Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	ND	F1	49.3	18.7	F1	mg/Kg		38	75 - 125
Arsenic	5.4		49.3	48.4		mg/Kg		87	75 - 125
Barium	62		49.3	106		mg/Kg		91	75 - 125
Beryllium	ND		49.3	45.6		mg/Kg		92	75 - 125
Cadmium	ND		49.3	42.8		mg/Kg		87	75 - 125
Chromium	11		49.3	57.0		mg/Kg		94	75 - 125
Cobalt	3.5		49.3	46.9		mg/Kg		88	75 - 125
Copper	7.4		49.3	54.0		mg/Kg		95	75 - 125
Lead	4.0		49.3	47.6		mg/Kg		89	75 - 125
Molybdenum	ND		49.3	47.8		mg/Kg		95	75 - 125
Nickel	6.5		49.3	50.9		mg/Kg		90	75 - 125

Eurofins TestAmerica, Pleasanton

Client Sample ID: HV-1-200603

Prep Type: Total/NA

Client Sample ID: HV-1-200603

%Rec.

Limits

D %Rec

Prep Type: Total/NA

Prep Batch: 611455

RPD

RPD Limit

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

Lab Sample ID: 720-98769-1 MS						Client Sample ID: HV-1-2006						
Matrix: Solid									Prep Type: Total/NA			
Analysis Batch: 611815	Sample	Sample	Spike	MS	MS				Prep Batch: 611455 %Rec.			
Analyte	•	Qualifier	Added	-	Qualifier	Unit	D	%Rec	Limits			
Selenium	ND		49.3	42.6		mg/Kg		87	75 - 125			
Thallium	ND		49.3	41.8		mg/Kg		85	75 - 125			
Vanadium	20		49.3	65.0		mg/Kg		92	75 - 125			
Zinc	47		49.3	88.9		mg/Kg		85	75 - 125			
Silver	ND		24.6	22.8		mg/Kg		92	75 - 125			

MSD MSD

Result Qualifier Unit

Lab Sample ID: 720-98769-1 MSD
Matrix: Solid
Analysis Batch: 611815SampleSampleSpikeAnalyteResultQualifierAddedAntimonyNDF150.0Arsenic5.450.0

Antimony	ND F1	50.0	20.7 F1	mg/Kg	41	75 - 125	10	20
Arsenic	5.4	50.0	49.1	mg/Kg	87	75 ₋ 125	1	20
Barium	62	50.0	103	mg/Kg	83	75 - 125	3	20
Beryllium	ND	50.0	45.2	mg/Kg	90	75 - 125	1	20
Cadmium	ND	50.0	42.3	mg/Kg	85	75 ₋ 125	1	20
Chromium	11	50.0	56.8	mg/Kg	92	75 ₋ 125	0	20
Cobalt	3.5	50.0	46.8	mg/Kg	87	75 - 125	0	20
Copper	7.4	50.0	53.6	mg/Kg	92	75 ₋ 125	1	20
Lead	4.0	50.0	47.2	mg/Kg	86	75 - 125	1	20
Molybdenum	ND	50.0	47.6	mg/Kg	93	75 ₋ 125	0	20
Nickel	6.5	50.0	50.6	mg/Kg	88	75 ₋ 125	1	20
Selenium	ND	50.0	42.8	mg/Kg	86	75 - 125	0	20
Thallium	ND	50.0	41.6	mg/Kg	83	75 ₋ 125	1	20
Vanadium	20	50.0	65.3	mg/Kg	91	75 - 125	0	20
Zinc	47	50.0	90.2	mg/Kg	86	75 - 125	1	20
Silver	ND	25.0	22.6	mg/Kg	91	75 - 125	1	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 440-61 Matrix: Solid Analysis Batch: 611764		MB MB						Clie	ent Sam	ple ID: Metho Prep Type: ⁻ Prep Batch	Total/NA
Analyte		sult Qualifier		RL	MD	L Unit		D P	repared	Analyzed	Dil Fac
Mercury		ND	0.	020		mg/K	g	06/0	5/20 10:09	06/08/20 15:04	1
Lab Sample ID: LCS 440-6 Matrix: Solid Analysis Batch: 611764	11497/2-A		Spike	Ľ	CS L	cs	Clie	nt Sa	mple ID:	Lab Control Prep Type: Prep Batch %Rec.	Total/NA
Analyte			Added			ualifier	Unit	D	%Rec	Limits	
Mercury			0.408	0.4	34		mg/Kg		106	80 - 120	
Lab Sample ID: 720-98769 Matrix: Solid Analysis Batch: 611764	-1 MS							CI	ient Sar	nple ID: HV-1 Prep Type: ⁻ Prep Batch	Total/NA
	Sample	Sample	Spike	I	IS M	S				%Rec.	
Analyte	Result	Qualifier	Added	Res	ult Q	ualifier	Unit	D	%Rec	Limits	
Mercury	ND		0.392	0.4	17		mg/Kg		106	75 - 125	

QC Sample Results

Job ID: 720-98769-1

Method: 7471A - Mercury (CVAA)

		,									
Lab Sample ID: 720-98769	-1 MSD						Clie	ent San	nple ID: H	IV-1-2	00603
Matrix: Solid									Prep Typ	e: Tot	tal/NA
Analysis Batch: 611764									Prep Ba		
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.408	0.429		mg/Kg		105	75 - 125	3	20
Lab Sample ID: MB 440-61 Matrix: Solid	1498/1-A						Clien	nt Samı	ole ID: Me Prep Typ		
Analysis Batch: 611910									Prep Ba		
		MB MB							. Top Ba		
Analyte	Re	sult Qualifier	R	L	MDL Unit	D	Pre	pared	Analyz	ed	Dil Fac
Mercury		ND	0.02	20	mg/K	g		/20 10:11	-		1
Lah Comula ID: LCC 440.0	44400/0 4					Olion		ala ID.	Lab Can	4ma 0.	
Lab Sample ID: LCS 440-6	11490/2-A					Clien	t Sam	pie iD:	Lab Con		
Matrix: Solid									Prep Typ		
Analysis Batch: 611910			Spike	1.09	LCS				Prep Ba %Rec.	ICH: 0	11490
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Mercury			0.408	0.369		mg/Kg		90	80 - 120		
			0.400	0.505		ilig/itg		30	00 - 120		
Lab Sample ID: 720-98769	-8 MS						Clie	ent San	nple ID: A	T-1-2	00603
Matrix: Solid									Prep Typ		
Analysis Batch: 611910									Prep Ba		
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Mercury	ND		0.408	0.368		mg/Kg		90	75 - 125		
Lab Sample ID: 720-98769							Clie	ont San	nple ID: A	T-1-2	00603
Matrix: Solid							Unc		Prep Typ		
Analysis Batch: 611910									Prep Ba		
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.400	0.349		mg/Kg		87	75 - 125	5	20
Lab Sample ID: MB 440-61	1771/1_0						Clion	t Sami	ole ID: Me	thod	Blank
Matrix: Solid							oner	it Saing	Prep Typ		
Analysis Batch: 611911									Prep Ba		
Analysis Batch. 011911		МВ МВ							гтер Ба	ten. 0	
Analyte	Re	esult Qualifier	R	L	MDL Unit	D	Pre	pared	Analyz	ed	Dil Fac
Mercury		ND	0.02		0.012 mg/K			20 09:10	-		1
Lab Sample ID: LCS 440-6	11771/ 2-A					Clien	t Sam	ple ID:	Lab Con		
Matrix: Solid									Prep Typ		
Analysis Batch: 611911			0		1.00				Prep Ba	tch: 6	11771
Amelia			Spike		LCS	11	P 4		%Rec.		
Analyte		· ·	Added		Qualifier	Unit	_ D _	%Rec	Limits		
Mercury			0.408	0.415		mg/Kg		102	80 - 120		

Prep Type

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Soluble

Total/NA

Soluble

Soluble

Matrix

Solid

Method

314.0

314.0

314.0

314.0

314.0

314.0

314.0

314.0

314.0

314.0

314.0

Client Sample ID

HV-SED-1-200603

HV-1-200603

HV-2-200603

TF-1-200603

KC-1-200603

GF-1-200603

Method Blank

HV-1-200603

HV-1-200603

Lab Control Sample

Lab Control Sample

Analysis Batch: 612249

HPLC/IC

Lab Sample ID

720-98769-1

720-98769-2

720-98769-3

720-98769-4

720-98769-5

720-98769-6

MB 440-612305/1-A

LCS 440-612305/2-A

MRL 440-612249/9

720-98769-1 MS

720-98769-1 MSD

Prep Batch

612305

612305

612305

612305

612305

612305

612305

612305

612305

612305

6 7 8 9

Analysis Batch: 612254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
720-98769-7	CIT-1-200603	Soluble	Solid	314.0	612305	
720-98769-8	AT-1-200603	Soluble	Solid	314.0	612305	
MRL 440-612254/8	Lab Control Sample	Total/NA	Solid	314.0		

Leach Batch: 612305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-1	HV-1-200603	Soluble	Solid	DI Leach	
720-98769-2	HV-2-200603	Soluble	Solid	DI Leach	
720-98769-3	HV-SED-1-200603	Soluble	Solid	DI Leach	
720-98769-4	TF-1-200603	Soluble	Solid	DI Leach	
720-98769-5	KC-1-200603	Soluble	Solid	DI Leach	
720-98769-6	GF-1-200603	Soluble	Solid	DI Leach	
720-98769-7	CIT-1-200603	Soluble	Solid	DI Leach	
720-98769-8	AT-1-200603	Soluble	Solid	DI Leach	
MB 440-612305/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 440-612305/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
720-98769-1 MS	HV-1-200603	Soluble	Solid	DI Leach	
720-98769-1 MSD	HV-1-200603	Soluble	Solid	DI Leach	

Metals

Prep Batch: 611455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-1	HV-1-200603	Total/NA	Solid	3050B	
720-98769-2	HV-2-200603	Total/NA	Solid	3050B	
720-98769-3	HV-SED-1-200603	Total/NA	Solid	3050B	
720-98769-4	TF-1-200603	Total/NA	Solid	3050B	
720-98769-5	KC-1-200603	Total/NA	Solid	3050B	
720-98769-6	GF-1-200603	Total/NA	Solid	3050B	
720-98769-7	CIT-1-200603	Total/NA	Solid	3050B	
720-98769-8	AT-1-200603	Total/NA	Solid	3050B	
MB 440-611455/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 440-611455/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
720-98769-1 MS	HV-1-200603	Total/NA	Solid	3050B	
720-98769-1 MSD	HV-1-200603	Total/NA	Solid	3050B	

2 3 4 5 6

Metals

Prep Batch: 611497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-1	HV-1-200603	Total/NA	Solid	7471A	
720-98769-3	HV-SED-1-200603	Total/NA	Solid	7471A	
720-98769-4	TF-1-200603	Total/NA	Solid	7471A	
720-98769-5	KC-1-200603	Total/NA	Solid	7471A	
720-98769-6	GF-1-200603	Total/NA	Solid	7471A	
720-98769-7	CIT-1-200603	Total/NA	Solid	7471A	
MB 440-611497/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-611497/2-A	Lab Control Sample	Total/NA	Solid	7471A	
720-98769-1 MS	HV-1-200603	Total/NA	Solid	7471A	
720-98769-1 MSD	HV-1-200603	Total/NA	Solid	7471A	

Prep Batch: 611498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-8	AT-1-200603	Total/NA	Solid	7471A	
MB 440-611498/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-611498/2-A	Lab Control Sample	Total/NA	Solid	7471A	
720-98769-8 MS	AT-1-200603	Total/NA	Solid	7471A	
720-98769-8 MSD	AT-1-200603	Total/NA	Solid	7471A	

Analysis Batch: 611764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-1	HV-1-200603	Total/NA	Solid	7471A	611497
MB 440-611497/1-A	Method Blank	Total/NA	Solid	7471A	611497
LCS 440-611497/2-A	Lab Control Sample	Total/NA	Solid	7471A	611497
720-98769-1 MS	HV-1-200603	Total/NA	Solid	7471A	611497
720-98769-1 MSD	HV-1-200603	Total/NA	Solid	7471A	611497

Prep Batch: 611771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-2	HV-2-200603	Total/NA	Solid	7471A	
MB 440-611771/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-611771/2-A	Lab Control Sample	Total/NA	Solid	7471A	

Analysis Batch: 611815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-1	HV-1-200603	Total/NA	Solid	6010B	611455
720-98769-2	HV-2-200603	Total/NA	Solid	6010B	611455
720-98769-3	HV-SED-1-200603	Total/NA	Solid	6010B	611455
720-98769-4	TF-1-200603	Total/NA	Solid	6010B	611455
720-98769-5	KC-1-200603	Total/NA	Solid	6010B	611455
720-98769-6	GF-1-200603	Total/NA	Solid	6010B	611455
720-98769-7	CIT-1-200603	Total/NA	Solid	6010B	611455
720-98769-8	AT-1-200603	Total/NA	Solid	6010B	611455
MB 440-611455/1-A ^5	Method Blank	Total/NA	Solid	6010B	611455
LCS 440-611455/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	611455
720-98769-1 MS	HV-1-200603	Total/NA	Solid	6010B	611455
720-98769-1 MSD	HV-1-200603	Total/NA	Solid	6010B	611455
Analysis Batch: 61187	79				

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98769-3	HV-SED-1-200603	Total/NA	Solid	7471A	611497

Metals (Continued)

Analysis Batch: 611879 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
720-98769-4	TF-1-200603	Total/NA	Solid	7471A	611497	
720-98769-5	KC-1-200603	Total/NA	Solid	7471A	611497	5
720-98769-6	GF-1-200603	Total/NA	Solid	7471A	611497	
720-98769-7	CIT-1-200603	Total/NA	Solid	7471A	611497	
Analysis Batch: 611	910					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
720-98769-8	AT-1-200603	Total/NA	Solid	7471A	611498	8
MB 440-611498/1-A	Method Blank	Total/NA	Solid	7471A	611498	
LCS 440-611498/2-A	Lab Control Sample	Total/NA	Solid	7471A	611498	C
720-98769-8 MS	AT-1-200603	Total/NA	Solid	7471A	611498	
720-98769-8 MSD	AT-1-200603	Total/NA	Solid	7471A	611498	
Analysis Batch: 611	911					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
MB 440-611771/1-A	Method Blank	Total/NA	Solid	7471A	611771	
LCS 440-611771/2-A	Lab Control Sample	Total/NA	Solid	7471A	611771	
Analysis Batch: 611	945					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
720-98769-2	HV-2-200603	Total/NA	Solid	7471A	611771	

Job ID: 720-98769-1

Client Sample ID: HV-1-200603 Date Collected: 06/03/20 10:45 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.02 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 15:35	PS	TAL IRV
Total/NA	Prep	3050B			2.00 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 17:40	TQN	TAL IRV
Total/NA	Prep	7471A			0.51 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611764	06/08/20 15:08	MEM	TAL IRV

5 Lab Sample ID: 720-98769-2

Matrix: Solid

Client Sample ID: HV-2-200603 Date Collected: 06/03/20 11:00 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.01 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 16:30	PS	TAL IRV
Total/NA	Prep	3050B			1.97 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 17:54	TQN	TAL IRV
Total/NA	Prep	7471A			0.50 g	50 mL	611771	06/09/20 09:10	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611945	06/09/20 13:06	EMS	TAL IRV

Client Sample ID: HV-SED-1-200603 Date Collected: 06/03/20 10:50 Date Received: 06/04/20 16:05

-	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.02 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 16:48	PS	TAL IRV
Total/NA	Prep	3050B			2.00 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 17:57	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611879	06/09/20 10:03	EMS	TAL IRV

Client Sample ID: TF-1-200603 Date Collected: 06/03/20 13:20 Date

Date Received	d: 06/04/20 1	6:05								
Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.00 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 17:07	PS	TAL IRV
Total/NA	Prep	3050B			1.99 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 17:59	TQN	TAL IRV
Total/NA	Prep	7471A			0.50 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611879	06/09/20 10:06	EMS	TAL IRV

Lab Sample ID: 720-98769-1 Matrix: Solid

8
9

Lab Sample ID: 720-98769-3 Matrix: Solid

Lab Sample ID: 720-98769-4

Eurofins TestAmerica, Pleasanton

Matrix: Solid

Client Sample ID: KC-1-200603 Date Collected: 06/03/20 13:40 Date Received: 06/04/20 16:05

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.01 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 17:25	PS	TAL IRV
Total/NA	Prep	3050B			2.01 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 18:01	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611879	06/09/20 10:08	EMS	TAL IRV

Client Sample ID: GF-1-200603 Date Collected: 06/03/20 13:55 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.02 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612249	06/11/20 17:43	PS	TAL IRV
Total/NA	Prep	3050B			1.96 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 18:04	TQN	TAL IRV
Total/NA	Prep	7471A			0.51 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611879	06/09/20 10:10	EMS	TAL IRV

Client Sample ID: CIT-1-200603 Date Collected: 06/02/20 13:10 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.00 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 13:56	PS	TAL IRV
Total/NA	Prep	3050B			1.98 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 18:06	TQN	TAL IRV
Total/NA	Prep	7471A			0.50 g	50 mL	611497	06/05/20 10:09	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611879	06/09/20 10:12	EMS	TAL IRV

Client Sample ID: AT-1-200603 Date Collected: 06/03/20 14:10 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.01 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 14:14	PS	TAL IRV
Total/NA	Prep	3050B			2.01 g	50 mL	611455	06/05/20 08:35	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 18:08	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:32	EMS	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Sample ID: 720-98769-7 Matrix: Solid

Lab Sample ID: 720-98769-8

Matrix: Solid

Job ID: 720-98769-1

Lab Sample ID: 720-98769-5 Matrix: Solid

Lab Sample ID: 720-98769-6

Matrix: Solid

Accreditation/Certification Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Job ID: 720-98769-1

10

Laboratory: Eurofins TestAmerica, Pleasanton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-20 *
USDA	US Federal Programs	P330-18-00328	11-06-21

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-9	06-16-20
Oregon	NELAP	4028 - 008	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Method	Method Description	Protocol	Laboratory
314.0	Perchlorate (IC)	EPA	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
7471A	Mercury (CVAA)	SW846	TAL IRV
3050B	Preparation, Metals	SW846	TAL IRV
7471A	Preparation, Mercury	SW846	TAL IRV
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL IRV
	eferences: - ASTM International		
EPA = l	JS Environmental Protection Agency		
SW846	= "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods".	, Third Edition, November 1986 And Its Update	es.

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asse
720-98769-1	HV-1-200603	Solid	06/03/20 10:45	06/04/20 16:05	
720-98769-2	HV-2-200603	Solid	06/03/20 11:00	06/04/20 16:05	
720-98769-3	HV-SED-1-200603	Solid	06/03/20 10:50	06/04/20 16:05	
720-98769-4	TF-1-200603	Solid	06/03/20 13:20	06/04/20 16:05	
720-98769-5	KC-1-200603	Solid	06/03/20 13:40	06/04/20 16:05	
720-98769-6	GF-1-200603	Solid	06/03/20 13:55	06/04/20 16:05	
720-98769-7	CIT-1-200603	Solid	06/02/20 13:10	06/04/20 16:05	
720-98769-8	AT-1-200603	Solid	06/03/20 14:10	06/04/20 16:05	

Eurofins TestAmerica, Pleasanton

120-95 769

CHAIN-OF-CUSTODY RECORD Date: U/1/22 Page 1 of 1

EOCU-			IPROJECT NAME						PROJECT NO:		
2	GSI Environmental Inc.	thc.		AJU-88					51	82	
	155 Grand Ave. Suite 704	e 704	PROJECT CONTACT:	Susan Gallardo	llardo				LAB CONTACT: Af	LAB CONTACT: Afsaneh Salimpour (Pleasanton)	Pleasanton)
	Oakland, CA 94612 (510) 463-8484	12	GLOBAL ID:	1					SAMPLER(S): (PRIVIT)	liter Havel	Havell Joch Vuss
TEL:	(510) 463-8484	E-MAIL	smgallardo@gsi-net.com; tzwicks@gsi-net.com	net.com; tzv	vicks@gsi-	net.com		REQ	REQUESTED ANAI	ANALYSES	
LABORATORY	TORY Eurofins Calscience	Iscience					ú	Please c	Please check box or fill in blank as needed	as needed.	
TURNAF	TURNAROUND TIME: SAME DAY	05 DAYS	☐ 46 HR ⊠STANDARD					(0.410)			
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More ID SAMPLING MATRIX NO. 0F Parchiolate Wore ID ONTE The Marrier More ID Parchiolate 06/23 L/3/20 1045 Caxl 1 X X X 06/23 L/3/20 1045 Caxl X X X X 06/23 L/3/20 X X X X X X 06/23 L/3/20 L/3/20 X X X X X 06/23 L/3/20 X X X X X X 06/23 L/3/20 L/2/20 X X X X X 06/20 L/1/20 L/1/20			⊒ 48 HR ⊠STANDARD				24710108	(0.416)								
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Client: GSI Environmental, Inc

Login Number: 98769 List Number: 2 Creator: Bonta, Lucia F

Radioactivity wasn't checked or is = background as measured by a survey meter.</td True The cooler's custody seal, if present, is intact. N/A Not present Sample custody seals, if present, are intact. N/A Not Present
Sample custody seals, if present, are intact. N/A Not Present
The cooler or samples do not appear to have been compromised or True tampered with.
Samples were received on ice. True
Cooler Temperature is acceptable. True
Cooler Temperature is recorded. True
COC is present. True
COC is filled out in ink and legible. True
COC is filled out with all pertinent information. True
Is the Field Sampler's name present on COC? True
There are no discrepancies between the containers received and the COC. True
Samples are received within Holding Time (excluding tests with immediate True HTs)
Sample containers have legible labels. True
Containers are not broken or leaking. True
Sample collection date/times are provided. True
Appropriate sample containers are used. True
Sample bottles are completely filled. True
Sample Preservation Verified. N/A
There is sufficient vol. for all requested analyses, incl. any requested True MS/MSDs
Containers requiring zero headspace have no headspace or bubble is True <6mm (1/4").
Multiphasic samples are not present. True
Samples do not require splitting or compositing. True
Residual Chlorine Checked. N/A

Job Number: 720-98769-1

List Source: Eurofins Irvine





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512876

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512876 GEL Work Order: 512876

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

B duth man

Reviewed by

Company : Address :	155 Grar Suite 704	ld Ave		12					F	Report Date:	Jı	ıly 2,	2020	
Contact:	Travis W	icks												
Project:	Near S S	FL												_
Client Sam Sample ID Matrix: Collect Da Receive Da Collector: Moisture:	: 512 Soi te: 03-	JUN-2 JUN-2 ent	01 20					oject: ient ID:		IE00119 IE002				
Parameter	Quali	ïer	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date '	Time	Batch 1	Mtd.
Rad Gamma Spe Gammaspec, G Cesium-137 Rad Gas Flow Pr GFPC, Sr90, So Strontium-90 Rad Liquid Scint	amma, Solid (S U coportional Co olid "Dry Weigi U cillation Analys	- unting ht Cori	0.00587 g rected" 0.0454	Dry Weight C +/-0.0301 +/-0.0581	orrected" 0.0557 0.0987	+/-0.0302 +/-0.0586	0.100 0.100	pCi/g pCi/g			06/09/20 06/27/20			
<i>LSC, Tritium D</i> Tritium	ustillation, Soil U	As Re	<i>eceived</i> 0.488	+/-1.20	2.14	+/-1.20	0.200	pCi/g		EW3	06/24/20	1244	2013898	3
The following Pr	rep Methods w	ere pe	erformed											
Method	Description					Analyst	Date	Tin	ıe	Prep Batch				
Dry Soil Prep	Dry Soil Prep	GL-RA	D-A-021			LYT1	06/08/20	092	9	2008720				
The following An	nalytical Metho	ods we	ere perfor	med										
Method	Description													
1	DOE HASL 30	0, 4.5.2	2.3/Ga-01-l	R										
2	EPA 905.0 Mo	dified/l	DOE RP50	1 Rev. 1 Modi	fied									
3	EPA 906.0 Mo	dified												
Surrogate/Trace	er Recovery	Те	est					F	Batch	ID Recover	ry% Ac	cepta	ble Limi	ts
Strontium Car	rier	(GFPC, Sr9	90, Solid "Dr	y Weight Co	orrected"		2	20089	96 96	.6 (25%-	125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.				
Address :	155 Grand Ave				
	Suite 704				
	Oakland, California 94612			Report Date:	July 2, 2020
Contact:	Travis Wicks				
Project:	Near S SFL				
Client Sample	ID: HV-1-200603		Project:	GSIE00119	
Sample ID:	512876001		Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 Grand Suite 704	nmental Inc. Ave alifornia 946	12					R	eport Date:	J	uly 2,	2020	
Contact:	Travis Wic	ks											
Project:	Near S SFL												
Client Sam Sample ID Matrix: Collect Da Receive D Collector: Moisture:	0: 51287 Soil ate: 03-JU	N-20 N-20					oject: lent ID:		E00119 E002				
Parameter	Qualifie	r Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date	Time	Batch	Mtd.
Cesium-137 Rad Gas Flow Pr <i>GFPC, Sr90, S</i>	Gamma, Solid (Star U roportional Coun folid "Dry Weight	0.0280 ting Corrected"	+/-0.0362	0.0409	+/-0.0363	0.100	pCi/g			06/09/20			
Strontium-90	U	0.0279	+/-0.0551	0.0978	+/-0.0553	0.100	pCi/g		MXS2	06/27/20	1242	2008958	; 2
Rad Liquid Scint	tillation Analysis Distillation, Soil "A	s Received"											
Tritium	U	-0.180	+/-1.16	2.22	+/-1.16	0.200	pCi/g		EW3	06/24/20	1332	2013898	3
The following P	rep Methods wer	e performed											
Method	Description	_			Analyst	Date	Tin	ne	Prep Batch				
Dry Soil Prep	Dry Soil Prep GL	-RAD-A-021			LYT1	06/08/20	092	29	2008720				
The following A	nalytical Methods	were perfoi	rmed										
Method	Description	, were period	lineu										
1	DOE HASL 300,	4.5.2.3/Ga-01-	R										
2	EPA 905.0 Modif	ied/DOE RP50	1 Rev. 1 Modi	fied									
3	EPA 906.0 Modif	ied											
Surrogate/Trace	er Recovery	Test					I	Batch	ID Recover	:y% Ac	cepta	ble Lim	its
Strontium Car	rier	GFPC, Sr	90, Solid "Dr	y Weight C	orrected"			20089	58 83	.1	(25%-	125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: HV-2-200603			Project:	GSIE00119	
Sample ID:	512876002			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 Gran Suite 704							F	Report Date:	July 2,	2020	
Contact:	Travis W	icks										
Project:	Near S Sl	FL										
Client Sam Sample ID Matrix: Collect Da Receive D Collector: Moisture:): 512 Soil ite: 03-J	UN-20 UN-20 nt	603				oject: ient ID:		IE00119 IE002			
Parameter	Qualif	ier Result	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Cesium-137 Rad Gas Flow Pr	Gamma, Solid (St U	0.0554 Inting	+/-0.0475	Corrected" 0.0618 0.0929	+/-0.0477 +/-0.0547	0.100 0.100	pCi/g pCi/g			06/09/20 1126 06/27/20 1242		
Rad Liquid Scint	•											
LSC, Tritium D	Distillation, Soil U	As Received- 0.554-		2.09	+/-1.03	0.200	pCi/g		EW3	06/24/20 1419	2012200	2 2
				2.09	+/-1.03	0.200	pc1/g		Ews	00/24/20 1419	2013696	, ,
The following Part Method	rep Methods we Description	ere performe	ed		Analyst	Date	Tir	n 0	Prep Batch			
	-		1		LYT1	06/08/20	092		-			
Dry Soil Prep	Dry Soil Prep O	JL-KAD-A-02	1			06/08/20	09.	29	2008720			
The following A		ds were perf	ormed									
Method	Description											
1	DOE HASL 30	0, 4.5.2.3/Ga-0	1-R									
2	EPA 905.0 Mod	lified/DOE RP	501 Rev. 1 Mod	ified								
3	EPA 906.0 Mod	lified										
Surrogate/Trace	er Recovery	Test]	Batch	ID Recover	y% Accepta	ble Lim	its
Strontium Car	rier	GFPC, S	Sr90, Solid "Dı	ry Weight Co	rrected"			20089	96 96	.6 (25%-	125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.				
Address :	155 Grand Ave				
	Suite 704				
	Oakland, California 94612			Report Date:	July 2, 2020
Contact:	Travis Wicks				
Project:	Near S SFL				
Client Sample Sample ID:	ID: HV-SED-1-200603 512876003		Project: Client ID:	GSIE00119 GSIE002	
Parameter	Qualifier Result Uncertainty M	MDC TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

 Surrogate/Tracer Recovery
 Test
 Batch ID
 Recovery%
 Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 Gr Suite 7	and Ave 04	ental Inc. e fornia 9461	12					R	leport Date:	July 2,	2020	
Contact:	Travis	Wicks											
Project:	Near S	SFL											
Client Sam Sample ID Matrix: Collect Da Receive D Collector: Moisture:	D: 5 S tte: 0 ate: 0 C	F-1-200 128760 oil 3-JUN- 5-JUN- lient .04%	04 20					oject: lent ID:		IE00119 IE002			
Parameter	Qua	lifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spe Gammaspec, G Cesium-137 Rad Gas Flow Pr GFPC, Sr90, S Strontium-90	Gamma, Solid roportional (Golid "Dry We	U C ountinş ight Cor U	0.0123 g	Dry Weight C +/-0.0293 +/-0.0570	<i>orrected"</i> 0.0551 0.0954	+/-0.0298 +/-0.0578	0.100 0.100	pCi/g pCi/g			06/09/20 1126 06/27/20 1242		
Rad Liquid Scint		•	• 11										
LSC, Tritium D Tritium		U ASK	<i>eceivea</i> 0.450	+/-1.24	2.23	+/-1.25	0.200	pCi/g		EW3	06/24/20 1507	2013898	3
The following P	ron Mothode	woro n	rformod					1 0					
Method	Descriptio		<u>i i i i i i i i i i i i i i i i i i i </u>			Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Pre	p GL-RA	D-A-021			LYT1	06/08/20	092	29	2008720			
The following A	nalytical Mat	hoda w	no norfor	mod									
Method	Description			illeu									
1	DOE HASL	300, 4.5.	2.3/Ga-01-I	R									
2	EPA 905.0 N	/Iodified/	DOE RP50	1 Rev. 1 Modi	fied								
3	EPA 906.0 N	Aodified											
Surrogate/Trac	er Recovery	Т	est]	Batch	ID Recover	y% Accepta	ble Lim	its
Strontium Car	rier	(GFPC, Sr9	0, Solid "Dr	y Weight C	Corrected"			20089	958 96	.6 (25%-	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: TF-1-200603			Project:	GSIE00119	
Sample ID:	512876004			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 G Suite '	rand Ave 704	ental Inc. e fornia 9461	2					R	leport Date:	July 2	2, 2020	
Contact:	Travis	Wicks											
Project:	Near S	S SFL											
Client Sam Sample ID Matrix: Collect Da Receive D Collector: Moisture:	D: 55 Sate: 00 Pate: 00	C-1-20 128760 oil 3-JUN- 5-JUN- Client .5%	05 20					oject: ient ID:		IE00119 IE002			
Parameter	Qua	alifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch	Mtd.
Rad Gamma Spec Gammaspec, G Cesium-137 Rad Gas Flow Pr GFPC, Sr90, S Strontium-90 Rad Liquid Scint	Gamma, Solid roportional Solid "Dry We tillation Ana	UI C ounting eight Cor U I lysis	0.000 g rected" 0.0937	Dry Weight C +/-0.0707 +/-0.0643	orrected" 0.0458 0.0981	+/-0.0713 +/-0.0665	0.100 0.100	pCi/g pCi/g			06/09/20 1127 06/27/20 1242		
LSC, Tritium D Tritium		oil "As R U	eceived" 0.270	+/-1.18	2.15	+/-1.18	0.200	pCi/g		EW3	06/24/20 1554	2013805	2 3
				1/-1.10	2.15	17-1.10	0.200	pel/g		LWS	00/24/20 1334	2015070	5
The following Particular The following Particu	Tep Methods Description		erformed			Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Pr		AD-A-021			LYT1	06/08/20	092		2008720			
	-	-				2111	00,00,20	071		2000720			
The following Ai Method			ere perfor	med									
	Descriptio		/										
1	DOE HASL				C 1								
2 3	EPA 905.01 EPA 906.01		DOE RP50	1 Rev. 1 Modi	fied								
-													
Surrogate/Trace	er Recovery	Т	est]	Batch	ID Recover	y% Accept	able Lim	its
Strontium Car	rrier	(GFPC, Sr9	0, Solid "Dr	y Weight C	orrected"			20089	958 89	.9 (25%	5-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: KC-1-200603			Project:	GSIE00119	
Sample ID:	512876005			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 C Suite	Grand Av 704	nental Inc. ve fornia 946	12					R	Report Date:	July 2,	, 2020	
Contact:	Travis	s Wicks											
Project:	Near	S SFL											
Client Sam Sample ID Matrix: Collect Da Receive Da Collector: Moisture:	te: (ate: (GF-1-20 5128760 Soil 03-JUN 05-JUN Client 12.4%	006 -20					oject: lent ID:		IE00119 IE002			
Parameter	Qu	alifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spe Gammaspec, G Cesium-137 Rad Gas Flow Pr GFPC, Sr90, S Strontium-90 Rad Liquid Scint LSC, Tritium D	iamma, Solia coportional olid "Dry Wo tillation Ana Distillation, S	Countin eight Co U alysis	0.0662 ng rrected" -0.00232	Dry Weight C +/-0.0458 +/-0.0503 +/-1.15	<i>corrected</i> " 0.0381 0.0981 2.08	+/-0.0461 +/-0.0503 +/-1.16	0.100 0.100 0.200	pCi/g pCi/g pCi/g		MXS2	06/09/20 1127 06/27/20 1242 06/24/20 1642	2008958	3 2
				17 1.15	2.00	17 1.10	0.200	pens		1115	00/24/20 1042	2015070	. 5
The following Pi Method	Descripti		beriormea			Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Pr		AD-A-021			LYT1	06/08/20	092	29	2008720			
The following Ar	nalytical Ma	thods u	ore perfor	mod									
Method	Descriptio		ere perio	meu									
1	DOE HASI	300, 4.5	5.2.3/Ga-01-	R									
2	EPA 905.0	Modified	DOE RP50	1 Rev. 1 Modi	fied								
3	EPA 906.0	Modified	l										
Surrogate/Trace	er Recovery	- T	Test]	Batch	ID Recover	y% Accepta	ble Lim	its
Strontium Car	rier		GFPC, Sr	90, Solid "Dr	y Weight C	Corrected"			20089	958 76	.4 (25%-	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: GF-1-200603			Project:	GSIE00119	
Sample ID:	512876006			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

		· · · · · · · · · · · · · · · · · · ·	-
Surrogate/Tracer Recovery	Test		Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 Grand Suite 704	onmental Inc. l Ave California 946	12					R	leport Date:	July 2,	, 2020	
Contact:	Travis Wi	cks										
Project:	Near S SF	Ľ										
Client Sam Sample ID Matrix: Collect Da Receive D Collector: Moisture:	0: 5128 Soil ite: 02-J						oject: ient ID:		IE00119 IE002			
Parameter	Qualifi	er Result (J ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Cesium-137 Rad Gas Flow Pr <i>GFPC, Sr90, S</i> Strontium-90 Rad Liquid Scint	Gamma, Solid (Sta roportional Cou folid "Dry Weight U	0.0789 nting <i>Corrected</i> " 0.0748 s	Dry Weight C +/-0.0628 +/-0.0595 +/-1.11	<i>corrected</i> " 0.0523 0.0951 2.21	+/-0.0632 +/-0.0610 +/-1.11	0.100 0.100 0.200	pCi/g pCi/g pCi/g			06/09/20 1127 06/27/20 1243 06/24/20 1729	2008958	2
The following P	rep Methods we	re performed										
Method	Description				Analyst	Date	Tin	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep G	L-RAD-A-021			LYT1	06/08/20	092	.9	2008720			
The following A	nalytical Method	ls were perfo	rmed									
Method	Description											
1	DOE HASL 300	, 4.5.2.3/Ga-01	·R									
2	EPA 905.0 Mod	ified/DOE RP5	01 Rev. 1 Mod	fied								
3	EPA 906.0 Mod	ified										
Surrogate/Trace	er Recovery	Test					I	Batch	ID Recover	ry% Accepta	ble Limi	its
Strontium Car	rier	GFPC, Sr	90, Solid "Dr	y Weight C	Corrected"			20089	958 94	.4 (25%-	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704 October de California 04612					1 1 2 2020
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample				Project:	GSIE00119	
Sample ID:	512876007			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Company : Address :	155 Gra Suite 70								F	Report Date:	July 2.	, 2020	
Contact:	Travis V	Vicks											
Project:	Near S S	SFL											
Client Sam Sample ID Matrix: Collect Da Receive Da Collector: Moisture:	: 512 So te: 03- ate: 05- Cli	T-1-200603 2876008 il -JUN-20 ent 1%						oject: ient ID:		IE00119 IE002			
Parameter	Quali	fier Resu	lt Uncert	ainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec Gammaspec, G Cesium-137 Rad Gas Flow Pr GFPC, Sr90, Sc Strontium-90	amma, Solid (S UI coportional Co olid "Dry Weig U	0.0 Dunting <i>ht Corrected</i> -0.0049	00 +/-0	eight C).0792).0478	<i>orrected"</i> 0.0627 0.0920	+/-0.0800 +/-0.0478	0.100 0.100	pCi/g pCi/g			06/09/20 1128 06/27/20 1243		
Rad Liquid Scint LSC, Tritium D	•		d"										
Tritium	U			/-1.41	2.30	+/-1.45	0.200	pCi/g		EW3	06/24/20 1817	2013898	3
The following Pi	rep Methods v	vere perforn	ned										
Method	Description	-				Analyst	Date	Ti	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep	GL-RAD-A-()21			LYT1	06/08/20	09	29	2008720			
The following Ar	nalvtical Meth	ods were pe	rformed										
Method	Description	I											
1	DOE HASL 3	00, 4.5.2.3/Ga	-01-R										
2	EPA 905.0 M	odified/DOE F	RP501 Rev.	1 Modi	fied								
3	EPA 906.0 M	odified											
Surrogate/Trace	er Recovery	Test							Batch	ID Recover	y% Accepta	ble Lim	its
Strontium Car	rier	GFPC	, Sr90, Sol	lid "Dr	y Weight C	Corrected"			20089	958 96	.6 (25%)	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: AT-1-200603			Project:	GSIE00119	
Sample ID:	512876008			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

		· · · · · · · · · · · · · · · · · · ·	-
Surrogate/Tracer Recovery	Test		Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

OC Summary

			Q	C S	ummary	7	,	D		
Client :	GSI Environmental Inc.							Report D	ate: July 2, 2020	
	155 Grand Ave								Page 1 of 3	
	Suite 704 Oakland, California									
Contact:	Travis Wicks									
Workorder:	512876									
Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe Batch	2009009									
QC1204574623	512876001 DUP									
Cesium-137		U	-0.00587	U	-0.00420	pCi/g	0		N/A RXF2	06/09/2014:06
		Uncert:	+/-0.0301		+/-0.0297					
		TPU:	+/-0.0302		+/-0.0298					
QC1204574624	LCS									
Americium-24	l	486			520	pCi/g		107	(75%-125%) RXF2	06/09/2011:55
		Uncert:			+/-9.63					
		TPU:			+/-47.4					
Cobalt-60		98.8			95.1	pCi/g		96.2	(75%-125%)	
		Uncert:			+/-3.05					
		TPU:			+/-9.67					
Cesium-137		165			160	pCi/g		97.1	(75%-125%)	
		Uncert:			+/-3.32					
		TPU:			+/-13.5					
QC1204574622	MB									
Cesium-137				U	-0.00290	pCi/g			RXF2	06/09/2011:28
		Uncert:			+/-0.0128	•				
		TPU:			+/-0.0129					
Rad Gas Flow	2000050									
	2008958									
-	512876001 DUP									
Strontium-90		U	0.0454	U	0.0431	pCi/g	0		N/A MXS2	06/27/2012:42
		Uncert:	+/-0.0581		+/-0.0570					
		TPU:	+/-0.0586		+/-0.0575					
QC1204574469	LCS									
Strontium-90		5.50			4.65	pCi/g		84.4	(75%-125%) MXS2	06/27/2012:42
		Uncert:			+/-0.282					
		TPU:			+/-0.918					
QC1204574467	MB									
Strontium-90				U	-0.0425	pCi/g			MXS2	06/27/2012:42
		Uncert:			+/-0.0429					
		TPU:			+/-0.0429					
Rad Liquid Scin										
Batch	2013898									
	512876001 DUP									
Tritium		U	0.488	U	0.474	pCi/g	0		N/A EW3	06/24/2019:52
		Uncert:	+/-1.20		+/-1.24					
		TPU:	+/-1.20		+/-1.24					
QC1204583985	LCS									
Tritium		67.3			61.0	pCi/g		90.6	(75%-125%) EW3	06/24/2020:57
		Uncert:			+/-7.64					

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QC Summary

Workorder: 512870	6							Page 2	of 3	
Parmname	NOM	Sample	Qual	QC U	U nits H	RPD% F	REC%	Range	Anlst	Date Time
Rad Liquid ScintillationBatch2013898										
0.0100/500000	TI	PU:	+/	/-15.8						
QC1204583982 MB										
Tritium			U	0.683	pCi/g				EW3	06/24/2019:04
	Unce	ert:	+/	/-1.19						
	TI	PU:	+/	/-1.20						
QC1204583984 51287600	01 MS									
Tritium	144	U 0.488		115	pCi/g		80.3	(75%-125%)	EW3	06/24/2020:40
	Unce	ert: +/-1.20	+/	/-14.8						
	TI	PU: +/-1.20	+/	/-30.1						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512876				-			Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

											Page of	Page	ageof
FROM	GSI Environmental Inc.	, ou	PROJECT NAME:	AJU-BB						PROJECT NO .:	T NO.: 61 87	0	2
	155 Grand Ave. Suite 704	e 704	PROJECT CONTACT:	Susan Gallardo	allardo					LAB CON	LAB CONTACT: D_:_1 1 _ 1 _ 1		
	Uakland, CA 94612 (510) 463-8484	12	GLOBAL ID:	1						SAMPLEF	SAMPLER(S); (PRINT)	man	11
TEL:	(2	E-MAIL:	smgallardo@gsi-net.com; tzwicks@gsi-net.com	i-net.com: tz	wicks@psi-	het com					Lalu thevel	(t) s	A V055
LABORATORY:	RY: GEL Laboratories	tories			50 A				Please chec	ESTED ck box or fill	REQUESTED ANALYSES	10 T	
TURNAROUND TIME:	ND TIME: SAME DAY	☐24 HR ☐5 DAYS ∑	☐ 48 HR ⊠STANDARD				(t.						
PECIAL IN Sr-90 M H-3 ME	special instructions: - Sr-90 MDC of 0.1 pCi/g - H-3 MDC of 0.2 pCi/g	- Cs-13	- Cs-137 MDC of 0.1 pCi/g	6/i	erved		sr-90 (905. 137 (905.	(906) ғ-н					
LAB USE ONLY	SAMPLE ID	DATE S/	SAMPLING	MATRIX	NO. OF	reserv		****					
	HU-1-20003	6 13/20	104S) 205		Ч	13						
ゴ	HV-2-20003		08)1				₫×						
<u> </u>	HV-SED-1-200603	2	1050										
	TF-1-200603		(320		× 		XX						
*	KC-1-206603		(外)		\times		XX						
9		-1	(355				$\overline{\times}$						
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Disciplina			2		Rec	Received by: (Signature)	ignature)	120	52		Date:	1.2	Time:
priciphili	veiliguistied by: (Signature)				4								

Laboratories

Client: GSIE		SAMPLE RECEIPT & REVIEW FORM
		SDG/AR/COC/Work Order: SJ28710
Received By: STACY BOO	NE	Date Received: JUNE 5, 2020
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
uspected Hazard Information	Y _{cs} Na	3935 4669 0289 - 4'c 3935 4669 0278 - 21 - *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
)Shipped as a DOT Hazardous?		Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
) Did the client designate the samples are to be ceived as radioactive?		COC notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as dioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad I Rad 2 Rad 3
Did the client designate samples are zardous?	1	COC notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?		f D or E is yes, select Hazards below. 'CB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Shipping containers received intact and sealed?	V CC	Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Chain of custody documents included with shipment?	Z	Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*	1	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius
Daily check performed and passed on IR temperature gun?		Temperature Device Serial #: TEMP: Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
at proper pH?		Sample ID's and Containers Affected: If Preservation added, Lotti: If Xos are Execution C. 11 Mile
Do any samples require Volatile Analysis?		If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?		ID's and tests affected:
Sample ID's on COC match ID's on bottles?		ID's and containers affected:
Date & time on COC match date & time on bottles?		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?		Circle Applicable: No container count on COC Other (describe)
DEL provided? COC form is properly signed in elinquished/received sections?	1	Circle Applicable: Not relinquished Other (describe)
ents (Use Continuation Form if needed):	TIM	E: 11: 30 SAMPLE TIME : 11:40
PM (or PMA) rev	view: Inítia	ths Date 28 20 Page of GL-CHL-SR-001 Rev 6

97 • 2

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Radiochemistry Technical Case Narrative GSI Environmental Inc. SDG #: 512876

Product: Dry Weight Preparation Method: Dry Soil Prep Preparation Procedure: GL-RAD-A-021 REV# 23 Preparation Batch: 2008720

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<u>Client Sample Identification</u>
512876001	HV-1-200603
512876002	HV-2-200603
512876003	HV-SED-1-200603
512876004	TF-1-200603
512876005	KC-1-200603
512876006	GF-1-200603
512876007	CIT-1-200602
512876008	AT-1-200603

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R **Analytical Procedure:** GL-RAD-A-013 REV# 27 **Analytical Batch:** 2009009

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008720

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512876001	HV-1-200603
512876002	HV-2-200603
512876003	HV-SED-1-200603
512876004	TF-1-200603
512876005	KC-1-200603
512876006	GF-1-200603

512876007	CIT-1-200602
512876008	AT-1-200603
1204574622	Method Blank (MB)
1204574623	512876001(HV-1-200603) Sample Duplicate (DUP)
1204574624	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Qualifier Information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Results are considered a false positive due to high peak-width.	Cesium-137	512876005	KC-1-200603
			512876008	AT-1-200603

Product: GFPC, Sr90, Solid <u>Analytical Method:</u> EPA 905.0 Modified/DOE RP501 Rev. 1 Modified <u>Analytical Procedure:</u> GL-RAD-A-004 REV# 21 <u>Analytical Batch:</u> 2008958

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008720

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512876001	HV-1-200603
512876002	HV-2-200603
512876003	HV-SED-1-200603
512876004	TF-1-200603
512876005	KC-1-200603
512876006	GF-1-200603
512876007	CIT-1-200602
512876008	AT-1-200603
1204574467	Method Blank (MB)
1204574468	512876001(HV-1-200603) Sample Duplicate (DUP)
1204574469	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Soil Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2013898

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512876001	HV-1-200603
512876002	HV-2-200603
512876003	HV-SED-1-200603
512876004	TF-1-200603
512876005	KC-1-200603
512876006	GF-1-200603
512876007	CIT-1-200602
512876008	AT-1-200603
1204583982	Method Blank (MB)
1204583983	512876001(HV-1-200603) Sample Duplicate (DUP)
1204583984	512876001(HV-1-200603) Matrix Spike (MS)
1204583985	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1204583984 (HV-1-200603MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendix C

Analytical Laboratory Reports – Drainage Areas Sediment Samples

🔅 eurofins

Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pleasanton 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

Laboratory Job ID: 720-98771-1

Client Project/Site: AJU-BB Revision: 2

For:

GSI Environmental, Inc 155 Grand Avenue Suite 704 Oakland, California 94612

Attn: Susan Gallardo

Atsanch Sit

Authorized for release by: 6/26/2020 3:37:36 PM

Afsaneh Salimpour, Senior Project Manager (925)484-1919 afsaneh.salimpour@testamericainc.com

..... Links





Visit us at: www.eurofinsus.com/Env This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
QC Sample Results	13
QC Association Summary	16
Lab Chronicle	18
Certification Summary	20
Method Summary	21
Sample Summary	22
Chain of Custody	23
Receipt Checklists	25

Qualifiers

j	3
Qualifier Description	
Compound was found in the blank and sample.	
MS and/or MSD recovery exceeds control limits.	5
	·

Glossary

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

Job ID: 720-98771-1

Laboratory: Eurofins TestAmerica, Pleasanton

Narrative

Job Narrative 720-98771-1

Revised Report on 6/24/20 to report to RL. Revised on 6/26/20for sample ID. Comments

No additional comments.

Receipt .

The samples were received on 6/4/2020 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): SRE-SED-1-200603 (720-98771-3). On the COC was listed SRE-SED-1 and on the container was listed SRE-SED-2. Per client request the sample Id should be SRE-SED-2

HPLC/IC

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

Metals

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries of Antimony for preparation batch 440-611458 and analytical batch 440-611815 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: The method blank for preparation batch 440-611458 and analytical batch 440-611815 contained Barium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Client Sample ID: BP-SED-1-200602

Lab Sample ID: 720-98771-1

Lab Sample ID: 720-98771-2

Lab Sample ID: 720-98771-3

Lab Sample ID: 720-98771-4

Analyte	Result	Qualifier	RL	MDL Unit	Dil Fac D	Method	Prep Type
Arsenic	11		3.0	mg/Kg	5	6010B	Total/NA
Barium	43	В	1.5	mg/Kg	5	6010B	Total/NA
Chromium	10		1.0	mg/Kg	5	6010B	Total/NA
Cobalt	3.3		1.0	mg/Kg	5	6010B	Total/NA
Copper	6.5		2.0	mg/Kg	5	6010B	Total/NA
Lead	7.7		2.0	mg/Kg	5	6010B	Total/NA
Nickel	6.8		2.0	mg/Kg	5	6010B	Total/NA
Vanadium	19		1.0	mg/Kg	5	6010B	Total/NA
Zinc	37		5.1	mg/Kg	5	6010B	Total/NA
Mercury	0.022		0.020	mg/Kg	1	7471A	Total/NA

Client Sample ID: RRMDF-SED-1-200602

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	60	B	1.5		mg/Kg	5	_	6010B	Total/NA
Chromium	9.5		1.0		mg/Kg	5		6010B	Total/NA
Cobalt	3.2		1.0		mg/Kg	5		6010B	Total/NA
Copper	7.4		2.0		mg/Kg	5		6010B	Total/NA
_ead	6.7		2.0		mg/Kg	5		6010B	Total/NA
Nickel	6.5		2.0		mg/Kg	5		6010B	Total/NA
/anadium	19		1.0		mg/Kg	5		6010B	Total/NA
Zinc	48		5.0		mg/Kg	5		6010B	Total/NA

Client Sample ID: SRE-SED-2-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	42	B	1.5		mg/Kg	5	_	6010B	Total/NA
Chromium	7.9		1.0		mg/Kg	5		6010B	Total/NA
Cobalt	2.9		1.0		mg/Kg	5		6010B	Total/NA
Copper	8.8		2.0		mg/Kg	5		6010B	Total/NA
Lead	5.9		2.0		mg/Kg	5		6010B	Total/NA
Nickel	5.1		2.0		mg/Kg	5		6010B	Total/NA
Vanadium	18		1.0		mg/Kg	5		6010B	Total/NA
Zinc	36		5.1		mg/Kg	5		6010B	Total/NA

Client Sample ID: OS1-SED-1-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	32	B	1.5		mg/Kg	5	_	6010B	Total/NA
Chromium	6.2		1.0		mg/Kg	5		6010B	Total/NA
Cobalt	2.5		1.0		mg/Kg	5		6010B	Total/NA
Copper	3.5		2.0		mg/Kg	5		6010B	Total/NA
Lead	3.0		2.0		mg/Kg	5		6010B	Total/NA
Nickel	4.0		2.0		mg/Kg	5		6010B	Total/NA
Vanadium	14		1.0		mg/Kg	5		6010B	Total/NA
Zinc	34		5.1		mg/Kg	5		6010B	Total/NA

Client Sample ID: OS8-SED-1-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	32	B	1.5		mg/Kg	5	_	6010B	Total/NA
Chromium	7.5		0.99		mg/Kg	5		6010B	Total/NA
Cobalt	1.9		0.99		mg/Kg	5		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Pleasanton

Lab Sample ID: 720-98771-5

Detection Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Client Sample ID: OS8-SED-1-200603 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Copper	5.5		2.0		mg/Kg	5	6010B	Total/NA
Lead	5.3		2.0		mg/Kg	5	6010B	Total/NA
Nickel	5.1		2.0		mg/Kg	5	6010B	Total/NA
Vanadium	14		0.99		mg/Kg	5	6010B	Total/NA
Zinc	25		5.0		mg/Kg	5	6010B	Total/NA

Client Sample ID: OW-SED-1-200603

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	0 Method	Prep Type
Barium	37	B	1.5		mg/Kg	5	6010B	Total/NA
Chromium	9.1		1.0		mg/Kg	5	6010B	Total/NA
Cobalt	2.4		1.0		mg/Kg	5	6010B	Total/NA
Copper	4.0		2.0		mg/Kg	5	6010B	Total/NA
Lead	4.1		2.0		mg/Kg	5	6010B	Total/NA
Nickel	4.9		2.0		mg/Kg	5	6010B	Total/NA
Vanadium	19		1.0		mg/Kg	5	6010B	Total/NA
Zinc	29		5.1		mg/Kg	5	6010B	Total/NA

Job ID: 720-98771-1

Lab Sample ID: 720-98771-5

Lab Sample ID: 720-98771-6

Chromium

Molybdenum

Cobalt

Copper

Lead

Nickel

Selenium

Thallium

Zinc

Vanadium

Client Sample ID: BP-SED-1-200602 Date Collected: 06/02/20 10:15 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC) - Soluble	•							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 14:32	1
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F1	10		mg/Kg		06/05/20 08:45	06/08/20 18:55	5
Arsenic	11		3.0		mg/Kg		06/05/20 08:45	06/08/20 18:55	5
Barium	43	В	1.5		mg/Kg		06/05/20 08:45	06/08/20 18:55	5
Beryllium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 18:55	5
Cadmium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 18:55	5

1.0

1.0

2.0

2.0

2.0

2.0

3.0

10

1.0

5.1

mg/Kg

Silver	ND	1.5	mg/Kg
Method: 7471A - Mercury (CVAA) Analyte	Result Qualifier	RL	MDL Unit

10

3.3

6.5

7.7

ND

6.8

ND

ND

19

37

wethod: 7471A - wercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.022		0.020		mg/Kg		06/05/20 10:11	06/09/20 11:40	1

Lab Sample ID: 720-98771-1 Matrix: Solid

06/05/20 08:45 06/08/20 18:55

06/05/20 08:45 06/08/20 18:55

06/05/20 08:45 06/08/20 18:55

06/05/20 08:45 06/08/20 18:55

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06/05/20 08:45 06/08/20 18:55

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5

Method: 6010B - Metals (ICP)

Analyte

Perchlorate

Client Sample ID: RRMDF-SED-1-200602 Date Collected: 06/02/20 14:00 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC) - Soluble

-98771-2

Job ID: 720-98771-1

						-	Matrix	: Solid	
									4
Soluble Result	Qualifier	RL 0.040	MDL	Unit mg/Kg	D	Prepared	Analyzed	Dil Fac	5
ND		0.040		mg/itg			00/11/20 14:50	I	6
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	7

Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	10		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Arsenic	ND	3.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Barium	60 B	1.5		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Beryllium	ND	0.50		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Cadmium	ND	0.50		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Chromium	9.5	1.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Cobalt	3.2	1.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Copper	7.4	2.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Lead	6.7	2.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Molybdenum	ND	2.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Nickel	6.5	2.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Selenium	ND	3.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Thallium	ND	10		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Vanadium	19	1.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Zinc	48	5.0		mg/Kg		06/05/20 08:45	06/08/20 19:04	5
Silver	ND	1.5		mg/Kg		06/05/20 08:45	06/08/20 19:04	5

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.020	mg/Kg		06/05/20 10:11	06/09/20 11:44	1

Cobalt

Chromium

Client Sample ID: SRE-SED-2-200603 Date Collected: 06/03/20 08:25 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC)	- Soluble)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 15:08	1
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Arsenic	ND		3.1		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Barium	42	В	1.5		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Beryllium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Cadmium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 19:11	5

1.0

1.0

7.9

2.9

mg/Kg

mg/Kg

mg/Kg

Analyte Mercury	ND	Qualifier	RL 0.020	MDL	mg/Kg	_ D	Prepared 06/05/20 10:11	Analyzed 06/09/20 11:46	Dil Fac
Method: 7471A - Mercury (CVAA)	Booult	Qualifier	ы	MDI	Unit	_	Branarad	Apolyzod	Dil Eco
Silver	ND		1.5		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Zinc	36		5.1		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Vanadium	18		1.0		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Thallium	ND		10		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Selenium	ND		3.1		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Nickel	5.1		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Lead	5.9		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
Copper	8.8		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:11	5
					0 0				

6/26/2020 (Rev. 2)

Lab Sample ID: 720-98771-3 Matrix: Solid

06/05/20 08:45 06/08/20 19:11

06/05/20 08:45 06/08/20 19:11

6

5

Client Sample ID: OS1-SED-1-200603 Date Collected: 06/03/20 09:40 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC) - Soluble								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.040		mg/Kg			06/11/20 15:25	1
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg		06/05/20 08:45	06/08/20 19:14	5

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Arsenic	ND	3.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Barium	32 B	1.5	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Beryllium	ND	0.51	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Cadmium	ND	0.51	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Chromium	6.2	1.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Cobalt	2.5	1.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Copper	3.5	2.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Lead	3.0	2.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Molybdenum	ND	2.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Nickel	4.0	2.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Selenium	ND	3.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Thallium	ND	10	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Vanadium	14	1.0	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Zinc	34	5.1	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Silver	ND	1.5	mg/Kg	06/05/20 08:45 06/08/20 19:14	5
Method: 7471A - Mercury (CVAA)				

Analyte	Result Qualifie		MDL U	Unit D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.020	n	mg/Kg	06/05/20 10:11	06/09/20 11:48	1

6/26/2020 (Rev. 2)

Lab Sample ID: 720-98771-4 Matrix: Solid

Client Sample ID: OS8-SED-1-200603 Date Collected: 06/03/20 11:30 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC Analyte Perchlorate	•	Qualifier	RL 0.040	MDL	Unit mg/Kg	D	Prepared	Analyzed 06/11/20 15:43	Dil Fac
Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		9.9		mg/Kg		06/05/20 08:45	06/08/20 19:16	5
Arsenic	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5

Method Analyte	i: 7471A - Mercury (CVAA)	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Silver		ND		1.5		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Zinc		25		5.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Vanadiu	m	14		0.99		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Thallium		ND		9.9		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Selenium	1	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Nickel		5.1		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Molybden	านm	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Lead		5.3		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Copper		5.5		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Cobalt		1.9		0.99		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Chromiu	ım	7.5		0.99		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Cadmium	1	ND		0.50		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	J
Beryllium		ND		0.50		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	
Barium		32	В	1.5		mg/Kg		06/05/20 08:45	06/08/20 19:16	5	Õ
						0 0					

Analyte	, Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		06/05/20 10:11	06/09/20 11:50	1

Lab Sample ID: 720-98771-5 Matrix: Solid

5

6

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Mercury

Client Sample ID: OW-SED-1-200603 Date Collected: 06/03/20 12:30 Date Received: 06/04/20 16:05

Method: 314.0 - Perchlorate (IC)	- Soluble						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND	0.040	mg/Kg			06/11/20 16:01	1
Method: 6010B - Metals (ICP)							

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND		10		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Arsenic	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	6
Barium	37	В	1.5		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	Ŏ
Beryllium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Cadmium	ND		0.51		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	8
Chromium	9.1		1.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Cobalt	2.4		1.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Copper	4.0		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Lead	4.1		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Nickel	4.9		2.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Selenium	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Thallium	ND		10		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Vanadium	19		1.0		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Zinc	29		5.1		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
Silver	ND		1.5		mg/Kg		06/05/20 08:45	06/08/20 19:18	5	
_ Method: 7471A - Mercury (CVAA										
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	

0.020

mg/Kg

ND

Lab Sample ID: 720-98771-6 Matrix: Solid

06/05/20 10:11 06/09/20 12:01

1

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Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MRL 440-612249/9							Clier	t Sar	nple ID:	Lab Control Samp	le
Matrix: Solid										Prep Type: Total/N	A
Analysis Batch: 612249											
			Spike	MRI	. MRL					%Rec.	
Analyte			Added	Resul	t Qual	ifier	Unit	D	%Rec	Limits	
Perchlorate			4.00	NE)		ug/L		96	75 - 125	
Lab Sample ID: MRL 440-612254/8							Clier	t Sar	nple ID:	: Lab Control Samp	ole
Matrix: Solid										Prep Type: Total/N	A
Analysis Batch: 612254											
			Spike	MRI	. MRL					%Rec.	
Analyte			Added	Resul	t Qual	ifier	Unit	D	%Rec	Limits	
Perchlorate			4.00	4.05	5		ug/L		101	75 - 125	
Lab Sample ID: MB 440-612305/1-A								Clie	nt Sam	ple ID: Method Blar	nk
Matrix: Solid										Prep Type: Solub	
Analysis Batch: 612249											
	MB	MB									
Analyte F	Result	Qualifier		RL	MDL	Unit	D	P	repared	Analyzed Dil F	ac
								·			-
Perchlorate	ND			0.040		mg/K	g			06/11/20 14:56	Т
				0.040		mg/K		ıt Sar	nple ID:		ı le
Perchlorate Lab Sample ID: LCS 440-612305/2-A Matrix: Solid				0.040		mg/K		it Sar	nple ID:	Lab Control Samp	
Lab Sample ID: LCS 440-612305/2-A Matrix: Solid				0.040		mg/K		ıt Sar	nple ID:		
Lab Sample ID: LCS 440-612305/2-A			Spike		6 LCS	mg/K		it Sar	nple ID	Lab Control Samp	
Lab Sample ID: LCS 440-612305/2-A Matrix: Solid				LCS				it Sar D	nple ID %Rec	: Lab Control Samp Prep Type: Solub	

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-611458/1-A ^5 Matrix: Solid Analysis Batch: 611815

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 611458

Analysis Baten. of fore	МВ	мв						Thep Baterin	011400
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		9.9		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Arsenic	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Barium	1.61		1.5		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Beryllium	ND		0.49		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Cadmium	ND		0.49		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Chromium	ND		0.99		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Cobalt	ND		0.99		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Copper	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Lead	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Molybdenum	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Nickel	ND		2.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Selenium	ND		3.0		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Thallium	ND		9.9		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Vanadium	ND		0.99		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Zinc	ND		4.9		mg/Kg		06/05/20 08:45	06/08/20 18:48	5
Silver	ND		1.5		mg/Kg		06/05/20 08:45	06/08/20 18:48	5

Job ID: 720-98771-1

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

Lab Sample ID: LCS 440-611458/2-A ^5				Clie	nt Sar	nple ID	: Lab Control Sample
Matrix: Solid							Prep Type: Total/NA
Analysis Batch: 611815							Prep Batch: 611458
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	49.5	49.7		mg/Kg		100	80 - 120
Arsenic	49.5	45.4		mg/Kg		92	80 - 120
Barium	49.5	46.2		mg/Kg		93	80 - 120
Beryllium	49.5	46.1		mg/Kg		93	80 - 120
Cadmium	49.5	45.6		mg/Kg		92	80 - 120
Chromium	49.5	47.7		mg/Kg		96	80 - 120
Cobalt	49.5	46.6		mg/Kg		94	80 - 120
Copper	49.5	48.0		mg/Kg		97	80 - 120
Lead	49.5	47.0		mg/Kg		95	80 - 120
Molybdenum	49.5	49.9		mg/Kg		101	80 - 120
Nickel	49.5	47.2		mg/Kg		95	80 - 120
Selenium	49.5	43.8		mg/Kg		88	80 - 120
Thallium	49.5	46.3		mg/Kg		94	80 - 120
Vanadium	49.5	45.8		mg/Kg		93	80 - 120
Zinc	49.5	46.0		mg/Kg		93	80 - 120
Silver	24.8	23.6		mg/Kg		96	80 - 120

Lab Sample ID: 720-98771-1 MS Matrix: Solid

Analysis Batch: 611815	Samplo	Sample	Spike	MS	MS				Prep Batch: 611458 %Rec.
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits
Antimony	ND		50.0	23.9		mg/Kg		48	75 - 125
Arsenic	11		50.0	52.6		mg/Kg		83	75 - 125
Barium	43	В	50.0	84.2		mg/Kg		83	75 - 125
Beryllium	ND		50.0	43.7		mg/Kg		86	75 - 125
Cadmium	ND		50.0	41.1		mg/Kg		82	75 - 125
Chromium	10		50.0	54.2		mg/Kg		88	75 - 125
Cobalt	3.3		50.0	45.0		mg/Kg		83	75 - 125
Copper	6.5		50.0	51.0		mg/Kg		89	75 - 125
Lead	7.7		50.0	49.1		mg/Kg		83	75 - 125
Molybdenum	ND		50.0	45.5		mg/Kg		89	75 - 125
Nickel	6.8		50.0	49.0		mg/Kg		84	75 - 125
Selenium	ND		50.0	40.8		mg/Kg		82	75 - 125
Thallium	ND		50.0	39.7		mg/Kg		79	75 - 125
Vanadium	19		50.0	61.8		mg/Kg		86	75 - 125
Zinc	37		50.0	77.5		mg/Kg		82	75 - 125
Silver	ND		25.0	22.0		mg/Kg		88	75 - 125

Lab Sample ID: 720-98771-1 MSD Matrix: Solid Analysis Batch: 611815

Analysis Batch: 611815									Prep Ba		11458
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND	F1	49.5	23.6	F1	mg/Kg		48	75 - 125	2	20
Arsenic	11		49.5	51.1		mg/Kg		81	75 - 125	3	20
Barium	43	В	49.5	89.6		mg/Kg		95	75 - 125	6	20
Beryllium	ND		49.5	42.8		mg/Kg		85	75 - 125	2	20
Cadmium	ND		49.5	40.3		mg/Kg		81	75 - 125	2	20

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Client Sample ID: BP-SED-1-200602

Prep Type: Total/NA

Client Sample ID: BP-SED-1-200602

Prep Type: Total/NA

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

Lab Sample ID: 720-98771-7	1 MSD					CI	ient S	Sample	ID: BP-SE	ED-1-20	00602
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 611815									Prep Ba	atch: 61	11458
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chromium	10		49.5	53.0		mg/Kg		86	75 - 125	2	20
Cobalt	3.3		49.5	44.0		mg/Kg		82	75 - 125	2	20
Copper	6.5		49.5	49.9		mg/Kg		88	75 - 125	2	20
Lead	7.7		49.5	47.9		mg/Kg		81	75 - 125	2	20
Molybdenum	ND		49.5	44.9		mg/Kg		88	75 - 125	1	20
Nickel	6.8		49.5	47.8		mg/Kg		83	75 - 125	2	20
Selenium	ND		49.5	40.3		mg/Kg		81	75 - 125	1	20
Thallium	ND		49.5	39.4		mg/Kg		80	75 - 125	1	20
Vanadium	19		49.5	60.9		mg/Kg		85	75 - 125	2	20
Zinc	37		49.5	76.5		mg/Kg		80	75 - 125	1	20
Silver	ND		24.8	21.5		mg/Kg		87	75 - 125	2	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 440-61149 Matrix: Solid Analysis Batch: 611910	8/1 -A							Clie		ole ID: Method Prep Type: To Prep Batch:	otal/NA
• • •	MB	MB					_	_			
Analyte	Result	Qualifier	1	RL	MDL	Unit	D	P	repared	Analyzed	Dil Fac
Mercury	ND		0.0	20		mg/Kg		06/0	5/20 10:11	06/09/20 11:28	1
Lab Sample ID: LCS 440-6114	98/2-A						Clien	t Sa	mple ID:	Lab Control S	Sample
Matrix: Solid										Prep Type: To	
Analysis Batch: 611910										Prep Batch:	611498
-			Spike	LCS	LCS	6				%Rec.	
Analyte			Added	Result	t Qua	alifier	Unit	D	%Rec	Limits	
Mercury			0.408	0.369)		mg/Kg		90	80 - 120	

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Analysis Batch: 612249

HPLC/IC

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 440-612305/1-A	Method Blank	Soluble	Solid	314.0	612305
LCS 440-612305/2-A	Lab Control Sample	Soluble	Solid	314.0	612305
MRL 440-612249/9	Lab Control Sample	Total/NA	Solid	314.0	

Analysis Batch: 612254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98771-1	BP-SED-1-200602	Soluble	Solid	314.0	612305
720-98771-2	RRMDF-SED-1-200602	Soluble	Solid	314.0	612305
720-98771-3	SRE-SED-2-200603	Soluble	Solid	314.0	612305
720-98771-4	OS1-SED-1-200603	Soluble	Solid	314.0	612305
720-98771-5	OS8-SED-1-200603	Soluble	Solid	314.0	612305
720-98771-6	OW-SED-1-200603	Soluble	Solid	314.0	612305
MRL 440-612254/8	Lab Control Sample	Total/NA	Solid	314.0	

Leach Batch: 612305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98771-1	BP-SED-1-200602	Soluble	Solid	DI Leach	
720-98771-2	RRMDF-SED-1-200602	Soluble	Solid	DI Leach	
720-98771-3	SRE-SED-2-200603	Soluble	Solid	DI Leach	
720-98771-4	OS1-SED-1-200603	Soluble	Solid	DI Leach	
720-98771-5	OS8-SED-1-200603	Soluble	Solid	DI Leach	
720-98771-6	OW-SED-1-200603	Soluble	Solid	DI Leach	
MB 440-612305/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 440-612305/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Metals

Prep Batch: 611458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98771-1	BP-SED-1-200602	Total/NA	Solid	3050B	
720-98771-2	RRMDF-SED-1-200602	Total/NA	Solid	3050B	
720-98771-3	SRE-SED-2-200603	Total/NA	Solid	3050B	
720-98771-4	OS1-SED-1-200603	Total/NA	Solid	3050B	
720-98771-5	OS8-SED-1-200603	Total/NA	Solid	3050B	
720-98771-6	OW-SED-1-200603	Total/NA	Solid	3050B	
MB 440-611458/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 440-611458/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
720-98771-1 MS	BP-SED-1-200602	Total/NA	Solid	3050B	
720-98771-1 MSD	BP-SED-1-200602	Total/NA	Solid	3050B	

Prep Batch: 611498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98771-1	BP-SED-1-200602	Total/NA	Solid	7471A	
720-98771-2	RRMDF-SED-1-200602	Total/NA	Solid	7471A	
720-98771-3	SRE-SED-2-200603	Total/NA	Solid	7471A	
720-98771-4	OS1-SED-1-200603	Total/NA	Solid	7471A	
720-98771-5	OS8-SED-1-200603	Total/NA	Solid	7471A	
720-98771-6	OW-SED-1-200603	Total/NA	Solid	7471A	
MB 440-611498/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 440-611498/2-A	Lab Control Sample	Total/NA	Solid	7471A	

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Metals

Analysis Batch: 611815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98771-1	BP-SED-1-200602	Total/NA	Solid	6010B	611458
720-98771-2	RRMDF-SED-1-200602	Total/NA	Solid	6010B	611458
720-98771-3	SRE-SED-2-200603	Total/NA	Solid	6010B	611458
720-98771-4	OS1-SED-1-200603	Total/NA	Solid	6010B	611458
720-98771-5	OS8-SED-1-200603	Total/NA	Solid	6010B	611458
720-98771-6	OW-SED-1-200603	Total/NA	Solid	6010B	611458
MB 440-611458/1-A ^5	Method Blank	Total/NA	Solid	6010B	611458
LCS 440-611458/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	611458
720-98771-1 MS	BP-SED-1-200602	Total/NA	Solid	6010B	611458
720-98771-1 MSD	BP-SED-1-200602	Total/NA	Solid	6010B	611458

Analysis Batch: 611910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
720-98771-1	BP-SED-1-200602	Total/NA	Solid	7471A	611498	
720-98771-2	RRMDF-SED-1-200602	Total/NA	Solid	7471A	611498	
720-98771-3	SRE-SED-2-200603	Total/NA	Solid	7471A	611498	
720-98771-4	OS1-SED-1-200603	Total/NA	Solid	7471A	611498	
720-98771-5	OS8-SED-1-200603	Total/NA	Solid	7471A	611498	
720-98771-6	OW-SED-1-200603	Total/NA	Solid	7471A	611498	13
MB 440-611498/1-A	Method Blank	Total/NA	Solid	7471A	611498	
LCS 440-611498/2-A	Lab Control Sample	Total/NA	Solid	7471A	611498	

Client Sample ID: BP-SED-1-200602 Date Collected: 06/02/20 10:15 Date Received: 06/04/20 16:05

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.02 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 14:32	PS	TAL IRV
Total/NA	Prep	3050B			1.98 g	50 mL	611458	06/05/20 08:45	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 18:55	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:40	EMS	TAL IRV

a 06/11/20 14:32 PS TAL IRV 6 3 06/05/20 08:45 NE1 TAL IRV 7 5 06/08/20 18:55 TQN TAL IRV 7 3 06/05/20 10:11 MEM TAL IRV 8 0 06/09/20 11:40 EMS TAL IRV 8 Lab Sample ID: 720-98771-2 Matrix: Solid 10

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Client Sample ID: RRMDF-SED-1-200602 Date Collected: 06/02/20 14:00 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.02 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 14:50	PS	TAL IRV
Total/NA	Prep	3050B			1.99 g	50 mL	611458	06/05/20 08:45	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 19:04	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:44	EMS	TAL IRV

Client Sample ID: SRE-SED-2-200603 Date Collected: 06/03/20 08:25 Date Received: 06/04/20 16:05

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.01 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 15:08	PS	TAL IRV
Total/NA	Prep	3050B			1.96 g	50 mL	611458	06/05/20 08:45	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 19:11	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:46	EMS	TAL IRV

Client Sample ID: OS1-SED-1-200603 Date Collected: 06/03/20 09:40 Date Received: 06/04/20 16:05

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.00 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 15:25	PS	TAL IRV
Total/NA	Prep	3050B			1.97 g	50 mL	611458	06/05/20 08:45	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 19:14	TQN	TAL IRV
Total/NA	Prep	7471A			0.51 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:48	EMS	TAL IRV

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Lab Sample ID: 720-98771-1 Matrix: Solid

Lab Sample ID: 720-98771-3

Lab Sample ID: 720-98771-4

Matrix: Solid

Matrix: Solid

Client Sample ID: OS8-SED-1-200603 Date Collected: 06/03/20 11:30 Date Received: 06/04/20 16:05

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			3.99 g	40 mL	612305	06/11/20 11:34	CTH	TAL IRV
Soluble	Analysis	314.0		1			612254	06/11/20 15:43	PS	TAL IRV
Total/NA	Prep	3050B			2.02 g	50 mL	611458	06/05/20 08:45	NE1	TAL IRV
Total/NA	Analysis	6010B		5			611815	06/08/20 19:16	TQN	TAL IRV
Total/NA	Prep	7471A			0.49 g	50 mL	611498	06/05/20 10:11	MEM	TAL IRV
Total/NA	Analysis	7471A		1			611910	06/09/20 11:50	EMS	TAL IRV

Client Sample ID: OW-SED-1-200603 Date Collected: 06/03/20 12:30 Date Received: 06/04/20 16:05

Prep Type Soluble Soluble	Batch Type Leach Analysis	Batch Method DI Leach 314.0	Run	Dil Factor	Initial Amount 4.02 g	Final Amount 40 mL	Batch Number 612305 612254	Prepared or Analyzed 06/11/20 11:34 06/11/20 16:01		Lab TAL IRV TAL IRV	-
Total/NA Total/NA	Prep Analysis	3050B 6010B		5	1.97 g	50 mL	611458 611815	06/05/20 08:45 06/08/20 19:18		TAL IRV TAL IRV	
Total/NA Total/NA	Prep Analysis	7471A 7471A		1	0.50 g	50 mL	611498 611910	06/05/20 10:11 06/09/20 12:01	MEM EMS	TAL IRV TAL IRV	

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Job ID: 720-98771-1

Lab Sample ID: 720-98771-5 Matrix: Solid

Lab Sample ID: 720-98771-6

Matrix: Solid

Eurofins TestAmerica, Pleasanton

Accreditation/Certification Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Job ID: 720-98771-1

10

Laboratory: Eurofins TestAmerica, Pleasanton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-20 *
USDA	US Federal Programs	P330-18-00328	11-06-21

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-9	06-16-20
Oregon	NELAP	4028 - 008	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Method	Method Description	Protocol	Laboratory
314.0	Perchlorate (IC)	EPA	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
7471A	Mercury (CVAA)	SW846	TAL IRV
3050B	Preparation, Metals	SW846	TAL IRV
7471A	Preparation, Mercury	SW846	TAL IRV
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL IRV
Protocol R	References:		
ASTM =	= ASTM International		
EPA = l	JS Environmental Protection Agency		
SW846	= "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods"	. Third Edition. November 1986 And Its Update	es.

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins TestAmerica, Pleasanton

Sample Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

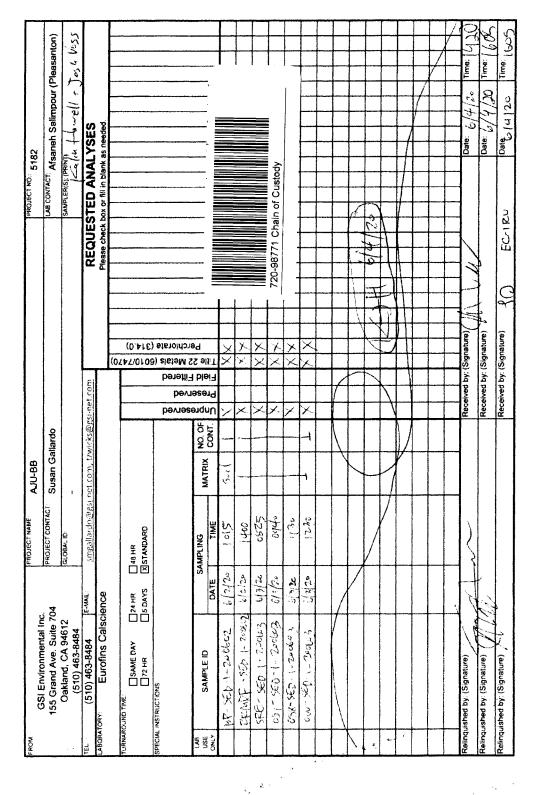
Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
720-98771-1	BP-SED-1-200602	Solid	06/02/20 10:15	06/04/20 16:05	
720-98771-2	RRMDF-SED-1-200602	Solid	06/02/20 14:00	06/04/20 16:05	
720-98771-3	SRE-SED-2-200603	Solid	06/03/20 08:25	06/04/20 16:05	
720-98771-4	OS1-SED-1-200603	Solid	06/03/20 09:40	06/04/20 16:05	
720-98771-5	OS8-SED-1-200603	Solid	06/03/20 11:30	06/04/20 16:05	
720-98771-6	OW-SED-1-200603	Solid	06/03/20 12:30	06/04/20 16:05	

Eurofins TestAmerica, Pleasanton

110-022

G G S I

CHAIN-OF-CUSTODY RECORD Date: 0/1/20 Page 1 of 1



0.610 8 12 .93

15.55 Grand Ave. State Tod. 15.55 Grand Ave. 15.55 G	VULBB 5182	
and, CA 94612 10) 463-8484	LAB CONTACT	Afsaneh Salimpour (Pleasanton)
463-8484 E-Mul: singallai do@gsi-net.com, tzwicks@gs Eurofins Calscience Same Day □24 HR □48 HR □Same Day □24 HR □48 HR □Same Day □24 HR □48 HR □Same Day □24 HR □48 HR □27 HR □5 Days □35 FANDARD MPLE ID DATE TIME MATRIX NO. OF → 1-20 Cbc3 b(3/2 c c 3/2) 100 → 1	SAMPLERIS; (PRIN)	Howell + Josh Wess
Eurofins Calscience Same Day 24 нв Пав нв 172 нв Врамя Затамовио мистан Ворамя Затамовио мистан Ворамя Затамовио мистан Ворамя Затамовио мистан Ворамя Вола 1-20 свого сесто Сала 1-20 свого сесто сесто Сала 1-20 свого сесто Сала 1-20 свого сесто сесто Сала 1-20 свого сесто сесто сесто Сала 1-20 свого сесто сесто Сала 1-20 свого сесто сесто сесто Сала 1-20 свого сесто сесто Сала 1-20 свого сесто сесто сесто Сала 1-20 свого сесто сесто сесто сесто Сала 1-20 свого сесто	Dm, tzwicks@gsi-net.com REQUESTED ANALYSES	ES
Same Day 「24 HR 」 48 HR J72 HR 」 5 Days 図 STANDARD MPLE ID DATE TIME MATRIX NO. OF 1-20 66 02 6(22 6(2)20 10(5 5)20(1) 1-20 66 03 6(3/20 10(5)50(1) 5 (5 - 1 - 2) - 20 - 10(5)50(1) 0 - 1 - 2) - 20 - 10(5)50(1) 0 - 1 - 2) - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 20 - 10(1)50(1) 0 - 1 - 2) - 20 - 20 - 20 - 20 - 20 - 20 - 20	Please check box or fill in blank as needed	eded.
MPLE ID SAMPLING MATRIX NO. OF $1 - 20 \text{ (boz}$ $(2/2)$ 1015 300 (cont. $5567 - 1 - 206c3$ $b/2/22$ 1015 500 (cont. $5767 - 1 - 206c3$ $b/3/2c$ 1015 500 (cont. $5 - 1 - 206c3$ $b/3/2c$ 1015 500 (cont. $5 - 1 - 206c3$ $b/3/2c$ 1015 500 (cont. $5 - 1 - 206c3$ $b/3/2c$ 1015 500 (cont. $5 - 1 - 206c3$ $b/3/2c$ 1072 500 (cont. $5 - 1 - 200c3$ $b/3/2c$ 1015 500 (cont. $- 1 - 200c3$ $b/3/2c$ 1072 1022 1015 $1 - 200c3$ $b/3/2c$ 1022 1022 1000 1000 $1 - 200c3$ $b/2/2c$ 1026 1000 1000 1000 $1 - 200c3$ $b/3/2c$ 1026 1000 1000 1000 $1 - 200c3$ $b/3/2c$ 1000 1000 1000 1000		
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DATE TIME CONT $6bc2$ $6/2/2p$ $10(5)$ $5pt$ 1 $1 - 7usu2$ $bla/2p$ $10(5)$ $5pt$ 1 $22ubc3$ $bla/2p$ $10(5)$ $5pt$ 1 $22ubc3$ $bla/2p$ $c6Z55$ $5pt$ 1 $2ubc3$ $bla/2p$ $c5Z55$ $104pu$ 1 $2ubc3$ $bla/2p$ $1/3pc$ $1/3pc$ $1/3pc$ $1/3pc$ $2ubc3$ $bla/2pc$ $1/3pc$ $1/3pc$ $1/3pc$ $1/3pc$ $1/3pc$ $2ubc3$ $bla/2pc$ $1/3pc$ $1/3pc$ $1/3pc$ $1/3pc$ $2ubc3$ $bla/2pc$ $1/3pc$ $1/3pc$ $1/3pc$ $1/3pc$	S eld l	
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1-703-2012 1400 2006-3 6/3/22 1400 2006-3 6/3/22 6525 2006-3 6/3/22 1(30 0440 1(30 1(30 1(30 1(30 1(30 1(30 1)))		
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20003 6/3/20 1/20 1 2421 (130 1.270 1.270		
2010 3 ((3/20 (27))		
	720-98771 Chain of Custody	ain of Custody
		7
	Received by: (Signature)	: 6/4/20 Time. [U]
Relinquished by: (Signature)	Received by: (Signature)	: 6/4/20 Time: 160
Relinquished by: (Signature)	Received by: (Signature) PC-1 RU Date	Date: 14120 Time: 1605

CHAIN-OF-CUSTODY RECORD Date: 0/11/20 Page 1 of 1

6/26/2020 (Rev. 2)

0.610.8 12 .93

CA/4/3

Client: GSI Environmental, Inc Job Number: 720-98771-1 Login Number: 98771 List Source: Eurofins TestAmerica, Pleasanton List Number: 1 Creator: Arauz, Dennis Answer Comment Question Radioactivity wasn't checked or is </= background as measured by a survey meter. The cooler's custody seal, if present, is intact. Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or tampered with. Samples were received on ice. Cooler Temperature is acceptable. Cooler Temperature is recorded. COC is present. COC is filled out in ink and legible. COC is filled out with all pertinent information. Is the Field Sampler's name present on COC? There are no discrepancies between the containers received and the COC. Samples are received within Holding Time (excluding tests with immediate HTs) Sample containers have legible labels. Containers are not broken or leaking. Sample collection date/times are provided. Appropriate sample containers are used. Sample bottles are completely filled. Sample Preservation Verified. There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). Multiphasic samples are not present. Samples do not require splitting or compositing.

Residual Chlorine Checked.

Client: GSI Environmental, Inc

Login Number: 98771 List Number: 2 Creator: Bonta, Lucia F

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 720-98771-1

List Source: Eurofins Irvine





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 08, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512877

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512877 GEL Work Order: 512877

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

GEL LABORATORIES LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address :	155 Grand Suite 704	onmental Inc. Ave California 946	12					Rep	oort Date:	July	8, 2020
Contact:	Travis Wic	ks									
Project:	Near S SFI										
Client Samp Sample ID: Matrix: Collect Date Receive Date Collector: Moisture:	5128' Soil : 02-JU		2				oject: ient ID:	GSIE GSIE			
Parameter	Qualifie	r Result L	Incertainty	MDC	TPU	RL	Units	PF I	DF Analyst	Date Tim	e Batch Mtd.
Rad Gas Flow Prop GFPC, Sr90, Sola Strontium-90	id "Dry Weight U	Corrected" 0.0732	+/-0.0609	0.0994	+/-0.0623	0.100	pCi/g		MXS2	06/27/20 1243	3 2008958 1
The following Pre Method	p Methods wer Description	e performed			Analyst	Date	Tin	ne P	rep Batch		
	Dry Soil Prep GI	-RAD-A-021			LYT1	06/08/20	092		008720		
	•		,								
The following Ana Method	lytical Method Description	s were perior	rmed								
1	EPA 905.0 Modi	fied/DOE RP50	1 Rev. 1 Modi	fied							
Surrogate/Tracer	Recovery	Test					I	Batch II	Recovery	y% Accep	table Limits
Strontium Carrie	er	GFPC, Sr	90, Solid "Dr	y Weight Cor	rected"			2008958	101	1 (25%	6-125%)
Column headers	ting Uncertain	ty are calcul	ated at the 9	95% confide	ence level (1.96-sig	ma).					
DF: Dilution Fa DL: Detection I Lc/LC: Critical MDA: Minimu MDC: Minimu	ictor Limit Level n Detectable 1	Activity	PF: P RL: F TPU:	Method rep Factor Reporting Li Total Propa	mit agated Uncertainty						

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

155 Gr Suite 7	and Ave 04		12					F	Report	Date:		July 8,	2020
Travis	Wicks												
Near S	SFL												
51 So e: 02 te: 05 C	1287700 oil 2-JUN-2 5-JUN-2 lient	02 20	200602										
Qua	lifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Dat	e Time	Batch Mtd.
olid "Dry Wei U	ight Cori	rected" 0.0276	+/-0.0540	0.0948	+/-0.0542	0.100	pCi/g			MXS2	06/30/2	0 1352	2008958 1
					Analyst	Date	Ti	me	Prep	o Batch			
•	•				LYT1	06/08/20	09	929	2008	720			
		re perfor	med										
-			1. 1.1.1	C* 1									
EPA 905.0 N	lodified/l	JOE RP50	I Rev. I Modi	fied									
r Recovery	Те	st						Batch	ID 1	Recovery	y% A	Accepta	ble Limits
ier	C	GFPC, Sr9	00, Solid "Dr	y Weight Co	rrected"			20089	958	67.4	4	(25%-	125%)
			ated at the (95% confid	ence level (1.96-sig	ma).							
nting Uncer	tainty a	re calcul	ateu at the										
	155 Gr Suite 7 Oaklan Travis Near S ple ID: R 5 5 e: 02 te: 02 te	155 Grand Ave Suite 704 Oakland, Califo Travis Wicks Near S SFL ple ID: RRMDF- 51287700 Soil e: 02-JUN-2 Client 4.75% Qualifier oportional Counting olid "Dry Weight Corr U ep Methods were pe Description Dry Soil Prep GL-RA alytical Methods we Description EPA 905.0 Modified/I r Recovery Te ier C	Oakland, California 9461 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-2 Soil e: 02-JUN-20 te: 05-JUN-20 Client 4.75% Qualifier Result U oportional Counting olid "Dry Weight Corrected" U 0.0276 ep Methods were performed Description Dry Soil Prep GL-RAD-A-021 alytical Methods were perfor Description EPA 905.0 Modified/DOE RP50 r Recovery Test ier GFPC, Sr5 sample specific MDC.	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-200602 Soil e: 02-JUN-20 te: 05-JUN-20 te: 05-JUN-20 Client 4.75% Qualifier Result Uncertainty oportional Counting olid "Dry Weight Corrected" U 0.0276 +/-0.0540 ep Methods were performed Description Dry Soil Prep GL-RAD-A-021 alytical Methods were performed Description EPA 905.0 Modified/DOE RP501 Rev. 1 Modi r Recovery Test ier GFPC, Sr90, Solid "Dr sample specific MDC.	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-200602 Soil e: 02-JUN-20 te: 05-JUN-20 Client 4.75% Qualifier Result Uncertainty MDC oportional Counting olid "Dry Weight Corrected" U 0.0276 +/-0.0540 0.0948 ep Methods were performed Description Dry Soil Prep GL-RAD-A-021 alytical Methods were performed Description EPA 905.0 Modified/DOE RP501 Rev. 1 Modified r Recovery Test ier GFPC, Sr90, Solid "Dry Weight Corrected"	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-200602 Soil e: 02-JUN-20 tte: 05-JUN-20 client 4.75% Qualifier Result Uncertainty MDC PU 0.0276 +/-0.0540 0.0948 oportional Counting U 0.0276 +/-0.0542 ep Methods were performed Description Analyst Dry Soil Prep GL-RAD-A-021 LYT1 alytical Methods were performed Description EPA 905.0 Modified/DOE RP501 Rev. 1 Modified r Recovery r Recovery Test ier GFPC, Sr90, Solid "Dry Weight Corrected" sample specific MDC. Standard Corrected"	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-200602 Soil e: 02-JUN-20 tte: 05-JUN-20 Client 4.75% Qualifier Result Uncertainty MDC TPU RL oportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 ep Methods were performed U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 ep Methods were performed U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 ep Methods were performed Description LYT1 06/08/20 alytical Methods were performed EPA 905.0 Modified/DOE RP501 Rev. 1 Modified F r Recovery Test I GFPC, Sr90, Solid "Dry Weight Corrected"	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ple ID: RRMDF-SED-1-200602 Soil e: 02-JUN-20 te: 05-JUN-20 Client 4.75% Qualifier Result Uncertainty MDC TPU RL Units oportional Counting Old "Dry Weight Corrected" U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g ep Methods were performed Description Analyst Date Ti Dry Soil Prep GL-RAD-A-021 LYT1 06/08/20 05 alytical Methods were performed Description FePA 905.0 Modified/DOE RP501 Rev. 1 Modified FPA 905.0 Modified/DOE RP501 Rev. 1 Modified r Recovery Test ier GFPC, Sr90, Solid "Dry Weight Corrected" sample specific MDC.	155 Grand Ave Suite 704 F Oakland, California 94612 F Oakland, California 94612 F Travis Wicks Near S SFL Ple ID: RRMDF-SED-1-200602 Project: GS Soil S12877002 Client ID: GS Soil Soil Client ID: GS e: 02-JUN-20 Client 4.75% Qualifier Result Uncertainty MDC TPU RL Units PF oportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g ep Methods were performed U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g opy Soil Prep GL-RAD-A-021 LYT1 06/08/20 0929 alytical Methods were performed Description Analyst Date Time Dry Soil Prep GL-RAD-A-021 LYT1 06/08/20 0929 alytical Methods were performed E E P Description E P Statch ier GFPC, Sr90, Solid "Dry Weight Corrected" 20089 s	155 Grand Ave Suite 704 Oakland, California 94612 Report Travis Wicks Near S SFL Project:: GSIE00 ple ID: RRMDF-SED-1-200602 Project:: GSIE00 Soil Client ID: GSIE00 Client ID: GSIE00 Soil Client A Analyst Project:: GSIE00 Client 4.75% V RL Units PF DF oportional Counting old "Dry Weight Corrected" U 0.0276 +/-0.0542 0.100 pCi/g Project: GSIE00 ep Methods were performed Description Analyst Date Time Prej Dry Soil Prep GL-RAD-A-021 LYT1 06/08/20 0929 2008 alytical Methods were performed Description EPA 905.0 Modified/DOE RP501 Rev. 1 Modified T EPA 905.0 Modified/DOE RP501 Rev. 1 Modified T 2008958 sample specific MDC. Sidi "Dry Weight Corrected" 2008958 2008958	155 Grand Ave Suite 704 Oakland, California 94612 Report Date: Travis Wicks Near S SFL Project: GSIE00119 ple ID: RRMDF-SED-1-200602 Client ID: GSIE002 soil Client ID: GSIE002 e: 02-JUN-20 Client ID: GSIE002 te: 05-JUN-20 Client 4.75% NDC TPU RL Units Pf DF Analyst oportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 ep Methods were performed Date Time Prep Batch Dry Soil Prep GL-RAD-A-021 LYT1 06/08/20 0929 2008720 alytical Methods were performed EPA 905.0 Modified/DOE RP501 Rev. 1 Modified F Batch ID Recovery FPA 905.0 Modified/DOE RP501 Rev. 1 Modified 2008958 67. sample specific MDC. Step Step Corrected" 2008958 67.	155 Grand Ave Suite 704 Oakland, California 94612 Report Date: Travis Wicks Near S SFL Project: GSIE00119 Client ID: GSIE002 ple ID: RRMDF-SED-1-200602 S01 Project:: GSIE002 view 02-JUN-20 Client 4.75% Project:: GSIE002 view 05-JUN-20 Client 4.75% NDC TPU RL Units PF DF Analyst Date oportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 06/30/2 ep Methods were performed U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 06/30/2 ep Methods were performed U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 06/30/2 ory Soil Prep GL-RAD-A-021 LYT1 06/08/20 0929 2008720 E E EPA 905.0 Modified/DOE RP501 Rev. 1 Modified T E E E E E ier GFPC, Sr90, Solid "Dry Weight Corrected" 2008958 67.4 4 E </td <td>155 Grand Ave Suite 704 Oakland, California 94612 Report Date: July 8, Travis Wicks Near S SFL Project: GSIE00119 Client ID: GSIE002 ple ID: RRMDF-SED-1-200602 Soil Project: GSIE002 e: 02-JUN-20 Client Of JUN-20 Client Disconting e: 02-JUN-20 Client MDC TPU RL Units PF DF Analyst Date Time opportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 06/30/20 1352 ep Methods were performed Date Time Prep Batch </td>	155 Grand Ave Suite 704 Oakland, California 94612 Report Date: July 8, Travis Wicks Near S SFL Project: GSIE00119 Client ID: GSIE002 ple ID: RRMDF-SED-1-200602 Soil Project: GSIE002 e: 02-JUN-20 Client Of JUN-20 Client Disconting e: 02-JUN-20 Client MDC TPU RL Units PF DF Analyst Date Time opportional Counting U 0.0276 +/-0.0540 0.0948 +/-0.0542 0.100 pCi/g MXS2 06/30/20 1352 ep Methods were performed Date Time Prep Batch

MDC: Minimum Detectable Concentration

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company Address :	155 (Suite	Grand Av e 704	nental Inc. re fornia 9461	2					F	Report Date	:	July 8,	2020
Contact:	Trav	is Wicks											
Project:	Near	S SFL											
Client San Sample II Matrix: Collect D Receive I Collector: Moisture:	D: ate: Date:	SRE-SE 5128770 Soil 03-JUN- 05-JUN- Client 29.8%	-20	03				oject: ient ID:		IE00119 IE002			
Parameter	Q	ualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Ana	lyst I	Date Time	Batch Mtd.
Rad Gas Flow P GFPC, Sr90, S Strontium-90 The following F	Solid "Dry W	Veight Co U	<i>rrected"</i> 0.0327	+/-0.0538	0.0931	+/-0.0541	0.100	pCi/g		MXS	52 06/2	27/20 1243	2008958 1
Method	Descript					Analyst	Date	Ti	ime	Prep Bat	ch		
Dry Soil Prep	-	-	AD-A-021			LYT1	06/08/20	09	929	2008720			
The following A	•		ere perfor	med									
Method	Descripti												
1	EPA 905.0) Modified	/DOE RP50	1 Rev. 1 Modi	fied								
Surrogate/Trac	cer Recover	y T	'est						Batch	ID Reco	very%	Accepta	ble Limits
Strontium Ca	rrier		GFPC, Sr9	0, Solid "Dr	y Weight Co	prrected"			20089	958	96.6	(25%-	-125%)
Notes: The MDC is a TPU and Co				ated at the 9	95% confid	ence level (1.96-sig	ma).						
Column head DF: Dilution DL: Detection Lc/LC: Critice MDA: Minir	Factor on Limit cal Level	table Act	tivity	PF: P RL: F	Method rep Factor Reporting L Total Prop	imit agated Uncertainty							

MDC: Minimum Detectable Concentration

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company Address :	155 Grai Suite 704							F	Report	Date:	July	8, 2020
Contact:	Travis W	licks										
Project:	Near S S	FL										
Client Sar Sample II Matrix: Collect Da Receive E Collector: Moisture:	D: 512 Soi ate: 03- Date: 05-	JUN-20 JUN-20 ent	00603				oject: ient ID:		IE001 IE002			
Parameter	Quali	fier Resu	lt Uncertainty	MDC	TPU	RL	Units	PF	DF .	Analyst	Date Tir	ne Batch Mtd.
Rad Gas Flow P GFPC, Sr90, S Strontium-90 The following F	Solid "Dry Weig U	ht Corrected 0.02	16 +/-0.0366	0.0637	+/-0.0369	0.100	pCi/g			MXS2 0	06/30/20 135	2 2008958 1
Method	Description	ere periori			Analyst	Date	T	ime	Prep	Batch		
Dry Soil Prep	Dry Soil Prep				LYT1	06/08/20	0	929	20087	720		
The following A	•	ods were pe	rformed									
Method	Description											
1	EPA 905.0 Mc	dified/DOE R	RP501 Rev. 1 Mod	lified								
Surrogate/Trac	er Recovery	Test						Batch	ID F	Recovery	% Accep	table Limits
Strontium Ca	rrier	GFPC,	, Sr90, Solid "D	ry Weight Co	rrected"			20089	958	101	(25)	%-125%)
	a sample specifunction		lculated at the	95% confide	ence level (1.96-sig	ma).						
DF: Dilution DL: Detectio Lc/LC: Critic	n Limit cal Level num Detectabl	e Activity	Mtd. PF: I RL:	: Method Prep Factor Reporting Li : Total Propa	imit agated Uncertainty							

MDC: Minimum Detectable Concentration

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Certificate of Analysis

Company Address :	155 G Suite '	rand Av 704	nental Inc. e fornia 9461	2					F	Report	t Date:	J	uly 8,	2020
Contact:	Travis	Wicks												
Project:	Near S	S SFL												
Client Sat Sample II Matrix: Collect D Receive I Collector Moisture:	D: 5 Sate: 0 Date: 0 : 0	58-SEI 128770 oil 3-JUN- 5-JUN- Client 7.4%	-20)3				oject: ient ID:		IE00 IE00				
Parameter	Qua	alifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch Mtd.
Rad Gas Flow I GFPC, Sr90, Strontium-90 The following I	Solid "Dry We	eight Cor U	<i>rrected"</i> 0.000589	+/-0.0516	0.0962	+/-0.0516	0.100	pCi/g			MXS2 0	06/27/20	1243	2008958 1
Method	Descriptio					Analyst	Date	Ti	ime	Pre	p Batch			
Dry Soil Prep	Dry Soil Pr	-				LYT1	06/08/20	0	929	2008	3720			
The following A Method	•		ere perfor	med										
	Descriptio													
1	EPA 905.01	Modified	DOE RP50	l Rev. 1 Modi	fied									
Surrogate/Tra	cer Recovery	Т	est						Batch	ID	Recovery	% Ac	ceptal	ole Limits
Strontium Ca	arrier		GFPC, Sr9	0, Solid "Dr	y Weight Co	prrected"			20089	958	101		(25%-	125%)
Notes: The MDC is TPU and Co				ated at the 9	95% confid	ence level (1.96-sig	ma).							
DF: Dilution DL: Detection Lc/LC: Critic	on Limit			PF: P RL: F	Method rep Factor Reporting L Total Prop	imit agated Uncertainty								

MDC: Minimum Detectable Concentration

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Certificate of Analysis

Company Address :	155 Gra Suite 7	vironmental I and Ave 04 d, California 9						F	Report Date	:	July 8,	2020
Contact:	Travis	Wicks										
Project:	Near S	SFL										
Client San Sample II Matrix: Collect D Receive I Collector: Moisture:	D: 51 So bate: 03 Date: 05 : Cl	W-SED-1-24 2877006 bil 3-JUN-20 5-JUN-20 lient 2.7%	00603				oject: ient ID:		IE00119 IE002			
Parameter	Qua	lifier Resu	lt Uncertainty	MDC	TPU	RL	Units	PF	DF Ana	yst I	Date Time	Batch Mtd.
Rad Gas Flow H GFPC, Sr90, Strontium-90 The following I	Solid "Dry Wei U	ght Corrected 0 -0.019	+/-0.0535	0.0989	+/-0.0536	0.100	pCi/g		MXS	32 06/2	27/20 1244	2008958 1
Method	Description		licu		Analyst	Date	Ti	ime	Prep Bate	ch		
Dry Soil Prep	Dry Soil Prej	p GL-RAD-A-()21		LYT1	06/08/20	09	929	2008720			
The following A	•	-	rformed									
Method	Description											
1	EPA 905.0 M	Iodified/DOE F	RP501 Rev. 1 Mod	lified								
Surrogate/Tra	cer Recovery	Test						Batch	ID Recov	ery%	Accepta	ble Limits
Strontium Ca	arrier	GFPC	, Sr90, Solid "D	ry Weight Co	orrected"			20089	958	101	(25%-	125%)
	a sample spec ounting Uncer		lculated at the	95% confid	ence level (1.96-sig	ma).						
DF: Dilution DL: Detection Lc/LC: Critic MDA: Minin	on Limit	le Activity	Mtd. PF: I RL:	: Method Prep Factor Reporting L : Total Prop	imit agated Uncertainty							

MDC: Minimum Detectable Concentration

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OC Summary

			Q	CS	ummary	1	Report Date: July 8, 2020							
Client :	GSI Environmental Inc 155 Grand Ave Suite 704 Oakland, California								Page 1 of 2					
Contact:	Travis Wicks													
Workorder:	512877													
Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time				
Rad Gas Flow Batch	2008958													
QC1204574468	512876001 DUP													
Strontium-90		U	0.0454	U	0.0431	pCi/g	0		N/A MXS2	06/27/2012:42				
		Uncert:	+/-0.0581		+/-0.0570									
QC1204574469	LCS	TPU:	+/-0.0586		+/-0.0575									
Strontium-90		5.50			4.65	pCi/g		84.4	(75%-125%) MXS2	06/27/2012:42				
		Uncert:			+/-0.282									
		TPU:			+/-0.918									
QC1204574467	MB													
Strontium-90				U	-0.0425	pCi/g			MXS2	06/27/2012:42				
		Uncert: TPU:			+/-0.0429 +/-0.0429									

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- Result is less than value reported <
- Result is greater than value reported >
- Results are either below the MDC or tracer recovery is low BD
- FA Failed analysis.
- Н Analytical holding time was exceeded
- J See case narrative for an explanation
- Value is estimated J
- Analyte present. Reported value may be biased high. Actual value is expected to be lower. Κ
- Analyte present. Reported value may be biased low. Actual value is expected to be higher. L
- M if above MDC and less than LLD Μ
- Μ REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- See case narrative N1
- Analyte concentration is not detected above the detection limit ND
- Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER. Q
- Sample results are rejected R
- Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD. U
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.

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QC Summary

Worke	order:	512877			•	-			Page 2	2 of 2	
Parmn	ame		NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Х	Consu	lt Case Narrative	, Data Summary package, c	or Project Manager con	cerning thi	s qualifier					

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

 $^{\text{The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.$

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

FROM: GS 155 155 LABORATORY: LABORATORY: LURNAROUND TIME SPECIAL INSTRUCT	virionmental nd Ave. Suite and, CA 9461 0) 463-8484 463-8484 463-8484 35EL Laborat 5EL Laborat 5EL Laborat 172 HR 172 HR 172 HR 172 HR 172 HR 172 HR	average and a second	PROJECT NAME: A.							l	51287	5
155 155 C C CABORATORY: (* LURNAROUND TIMI SPECIAL INSTRUCT	31 Environmental Inc Grand Ave. Suite 7(Dakland, CA 94612 (510) 463-8484 (510) 463-8484 (510) 463-8484 (510) 463-8484 (510) 463-8484 GEL Laboratori GEL Laboratori (1) 212 HR 日本 (1) 20,000-96i/L 0,2 PC	MAIL:				The second s				1		NU NO
155 TEL: (5 LABORATORY: (5 LURNAROUND TIMI SPECIAL INSTRUCT SPECIAL INSTRUCT	Grand Ave. Suite 7(2)akland, CA 94612 (510) 463-8484 510) 463-8484 6EL Laboratori GEL Laboratori ^{1008:} ^{1008:} ^{1008:} 20,000-96i/L o.2 pC	Malt:		AJU-BB					PROJECT NO.:	^{NO.:} 5182		
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TEL: (E LABORATORY: TURNAROUND TIME SPECIAL INSTRUCT SPECIAL INSTRUCT	310) 463-8484 GEL Laboratori 高SaME DaY つてと コア2 HR のMS: のの5: 20,000-PGi(L 0,2 PC	E-MAIL: ies	 GLOBAL ID:						SAMPLER	SAMPLER(S): (PRINT) ++++++++++++++++++++++++++++++++++++	14	L.
LABORATORY: TURNAROUND TIME SPECIAL INSTRUCT	GEL Laboratori □ SaME DAY □ □ 72 HR □ 1005: 20,000-pGi(L 0,2 pC	ies	smgallardo@gsi-net.com; tzwicks@gsi-net.com	t.com; tzwicks@	gsi-net.coi	L FI			REOLIESTED /	VSEC	./251	ŝ
TURNAROUND TIME:	:: [same bay]]72 нк] ions: [or: pG/g 20,000-pGi/L 0,2 pC									n blank as needed.		
SPECIAL INSTRUCT	of 8-pCT/L 01 PC/A 20,000-pCi/L 0,2 PC	□24 HR □5 DAYS ⊠	☐ 48 HR ⊠STANDARD			(0.						
- H-3 MDC of		- Cs-137 MI		oilp Gilg	ved served	iltered Sr-90 (905	906) E-H					
LAB USE ONLY	SAMPLE ID	SA	5	MATRIX NO. OF CONT.			0					
BP-560-1-	2-1-200625	02/2/9	S ³	1)705		X						
TANK I	FRMDF-SED-1-20002	6/2/20	4 1406		×	×						
SEE-SED-1	ED-1-220603	6(3/20	4825		X	\times						
S-1-0	-SGD-1-200603		offo		×	X						
1-035-260-1	1		((30		X	X						
3-MD	En-SED-1-200603	4	(230	- <u>+</u>	X	\times						
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Relinquished by: (Signature)	(Signature)				Received by: (Signature)	y: (Signa	ture)			5		T

Laboratories

Client: GSIE	SAMPLE RECEIPT & REVIEW FORM
Received By: STACY BOO	SDG/AR/COC/Work Order: S12,917
CIALY BOO	and the state of the second state of the secon
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	3935 4669 0289 -4'c 3935 4669 0278 -21 2 2 *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
A)Shipped as a DOT Hazardous?	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes_ No_
B) Did the client designate the samples are to be eccived as radioactive?	EOC notation or radioactive stickers on containers equal client designation.
c) Did the RSO classify the samples as adioactive?	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
») Did the client designate samples are azardous?	COC notation or hazard labels on containers equal elient designation.
) Did the RSO identify possible hazards?	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	B E E Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed? Chain of custody documents included	And the sense of the Damaged container Leaking container Other (describe)
with shipment?	Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?* Daily check performed and passed on IR	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
temperature gun?	Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and scaled?	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	Sample ID's and Containers Affected:
Do any samples require Volatile Analysis?	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?	ID's and tests affected:
Sample ID's on COC match ID's on bottles?	ID's and containers affected:
Date & time on COC match date & time on bottles?	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided? COC form is properly signed in	
relinquished/received sections?	Circle Applicable: Not relinquished Other (describe)
58-W-200693 LOC	TIME ! 11:30 SAMPLE TIME : 11:40
	101010
PM (or PMA) r	review: Initials Date 200 Page of GL-CHL-SR-001 Rev 6

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
w asiniigton	C/80

List of current GEL Certifications as of 08 July 2020

Radiochemistry Technical Case Narrative GSI Environmental Inc. SDG #: 512877

Product: Dry Weight Preparation Method: Dry Soil Prep Preparation Procedure: GL-RAD-A-021 REV# 23 Preparation Batch: 2008720

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
512877001	BP-SED-1-200602
512877002	RRMDF-SED-1-200602
512877003	SRE-SED-2-200603
512877004	051-SED-1-200603
512877005	058-SED-1-200603
512877006	OW-SED-1-200603

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Sr90, Solid Analytical Method: EPA 905.0 Modified/DOE RP501 Rev. 1 Modified Analytical Procedure: GL-RAD-A-004 REV# 21 Analytical Batch: 2008958

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008720

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512877001	BP-SED-1-200602
512877002	RRMDF-SED-1-200602
512877003	SRE-SED-2-200603
512877004	051-SED-1-200603
512877005	058-SED-1-200603
512877006	OW-SED-1-200603
1204574467	Method Blank (MB)
1204574468	512876001(HV-1-200603) Sample Duplicate (DUP)

1204574469 Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples 512877002 (RRMDF-SED-1-200602) and 512877004 (051-SED-1-200603) were recounted due to a suspected false positive. The recounts are reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

email added to lab report by S.Gallardo on 14 July 2020 to document sample name record

Hi Brielle,

We just talked on the phone about possibly having these samples also analyzed for Cesium and Tritium. Thanks for holding onto them for us. If we go forth with these analyzes, you mentioned that the Cesium and Tritium would be on a new work order and arrive in a separate report, which is fine. We'll get back to you ASAP with a decision...

Meanwhile, can you please reissue the attached report to reflect the following modification:

- Change the name of sample SRE-SED-1-200603 to SRE-SED-2-200603
 - This sample was mislabeled on the COC, and we need the "1" changed to a "2"

Thanks!

-Kalin

From: GEL Data <data@gellaboratories.com>
Sent: Monday, July 6, 2020 7:53 AM
To: Travis Wicks <TZWicks@gsi-net.com>
Cc: brielle.luthman@gel.com <brielle.luthman@gel.com>; Brielle.Luthman@gel.com
<Brielle.Luthman@gel.com>; Susan Gallardo <SMGallardo@gsi-net.com>; Kalin Howell
<kjhowell@gsi-net.com>
Subject: GEL Analytical Report- SDG 512877

Attached are the results for the samples received on June 05, 2020. Please contact us if there are any questions.

Sincerely, Brielle Luthman

Do not reply to data@gellaboratories.com as this email address is not monitored. Please contact your project manager, Brielle Luthman, at Team.Luthman@gel.com regarding this message or its attachments.





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

August 03, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 515328

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 515328 GEL Work Order: 515328

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company Address :		SI Environn 5 Grand Av											
Address .		ite 704											
	Oa	kland, Cali	fornia 9461	2					F	Report Date:	August 3,	2020	
Contact:	Tr	avis Wicks											
Project:	Ne	ar S SFL											_
Client San Sample ID Matrix:):	515328 Soil		2				oject: ent ID:		IE00119 IE002			
Collect Da		02-JUN											
Receive D Collector:	ate:	05-JUN Client	-20										
Moisture:		29.3%											
Parameter		Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spe Gammaspec, C Cesium-137 Rad Liquid Scin	Gamma, S	olid (Standa	ard List) "D 0.110	0ry Weight C +/-0.0803	orrected" 0.0747	+/-0.0808	0.100	pCi/g		MXR1	07/17/20 0722	202021	0 1
LSC, Tritium L		•	Received"										
Tritium		U	-0.726	+/-1.79	3.14	+/-1.79	0.200	pCi/g		EW3	08/01/20 1243	202122	72
The following P			performed										
Method	Descri	-				Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soi	l Prep GL-R	AD-A-021			CXC1	06/08/20	092	29	2020164			
The following A			vere perfor	med									
Method	Descri	ption											
1	DOE H.	ASL 300, 4.5	5.2.3/Ga-01-H	ξ									
2	EPA 90	6.0 Modified	l										
Surrogate/Trac	er Recov	ery 7	ſest]	Batch	ID Recover	y% Accepta	ble Lin	nits
Notes:													
The MDC is a TPU and Cou				ated at the 9	95% confid	lence level (1.96-sig	ma).						

Column headers are defined as follows: DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

RL: Reporting Limit TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Address :	155 Grand Suite 704											
	<i>,</i>	California 946	12					F	Report Date:	August 3,	2020	
Contact:	Travis Wic	ks										
Project:	Near S SFI											
Client Sampl Sample ID: Matrix: Collect Date Receive Date Collector: Moisture:	5153 Soil : 02-JU		200602				oject: ient ID:		IE00119 IE002			
Parameter	Qualifie	r Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec . Gammaspec, Gar Cesium-137 Rad Liquid Scintill LSC, Tritium Dist Tritium The following Prep	nma, Solid (Sta lation Analysis tillation, Soil "2 U	0.198 As Received" -0.151	Dry Weight C +/-0.0892 +/-1.99	<i>Corrected"</i> 0.0601 3.45	+/-0.0906 +/-1.99	0.100 0.200	pCi/g pCi/g			07/17/20 0723 08/01/20 1548		
	Description	<u>e periornica</u>			Analyst	Date	Tin	ıe	Prep Batch			
	Dry Soil Prep GI				CXC1	06/08/20	092	.9	2020164			
The following Anal Method	lytical Method Description	s were perfo	rmed									
	DOE HASL 300,	4522/Ca01	D									
-	DOE HASL 300, EPA 906.0 Modi		К									
2 Surrogate/Tracer		Test					Т	Satch	ID Recover	y% Accepta	ble Limi	ts
Notes:	incovery	1031					1	Jaich	il Recover	J / Mecepta		
The MDC is a sa			ated at the (95% confid	ence level (196-sig	ma)						

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

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Certificate of Analysis

Company : Address :	155 Gran Suite 704							T			2020	
		California 946	012					ł	Report Date:	August 3,	2020	
Contact:	Travis W											
Project:	Near S S	FL										
Client Sample Sample ID: Matrix: Collect Date: Receive Date Collector: Moisture:	515 Soil : 03-J	IUN-20 IUN-20 ent	603				oject: ient ID:		IE00119 IE002			
Parameter	Qualif	ier Result	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec A Gammaspec, Gam Cesium-137 Rad Liquid Scintill LSC, Tritium Dist Tritium The following Prep	nma, Solid (Si ation Analys tillation, Soil U	0.0567 is "As Received" -1.20	+/-0.0402	<i>Corrected</i> " 0.0480 3.11	+/-0.0405 +/-1.76	0.100 0.200	pCi/g pCi/g			07/21/20 0944 08/01/20 1853		
	Description	-			Analyst	Date	Tiı	ne	Prep Batch			
, ,		GL-RAD-A-021			CXC1	06/08/20	092	29	2020164			
The following Anal	•	ds were perfo	rmed									
	Description											
1	DOE HASL 30	0, 4.5.2.3/Ga-01	-R									
2	EPA 906.0 Mo	dified										
Surrogate/Tracer	Recovery	Test]	Batch	ID Recover	y% Accepta	ble Limi	ts
Notes: The MDC is a sa			lated at the)5% confi	lence level (1.96-sig	m a)						

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

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Certificate of Analysis

Company : Address :	155 Grand Suite 704										2020	
		California 94	612					ŀ	Report Date:	August 3,	2020	
Contact:	Travis Wi											
Project:	Near S SF	FL										
Client Sampl Sample ID: Matrix: Collect Date: Receive Date Collector: Moisture:	5153 Soil 03-J		603				oject: ient ID:		IE00119 IE002			
Parameter	Qualifi	er Result	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec A Gammaspec, Gam Cesium-137 Rad Liquid Scintill LSC, Tritium Dist Tritium The following Prep	nma, Solid (Sta U ation Analysi iillation, Soil ' U	-0.00536 s 'As Received' 0.627	+/-0.0296	<i>orrected"</i> 0.0528 3.13	+/-0.0297 +/-1.84	0.100 0.200	pCi/g pCi/g			07/21/20 0945 08/01/20 2158		
	Description	are periorme	u		Analyst	Date	Tir	ne	Prep Batch			
	Dry Soil Prep G	L-RAD-A-021			CXC1	06/08/20	092		2020164			
The following AnalMethod	ytical Metho Description	ds were perf	ormed									
1	DOE HASL 300), 4.5.2.3/Ga-0	1-R									
	EPA 906.0 Mod	·										
Surrogate/Tracer	Recovery	Test]	Batch	ID Recover	y% Accepta	ble Limi	its
Notes: The MDC is a sa TPU and Count	1 1		ulated at the 9	95% confid	lence level (1.96-sig	ma)						

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

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Certificate of Analysis

Company : Address :	155 Grand Suite 704	nmental Inc. Ave alifornia 9461	2					R	eport Date:	August 3,	, 2020	
Contact:	Travis Wic	ks										
Project:	Near S SFL											
Client Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	51532 Soil e: 03-JU	N-20 N-20)3				oject: ient ID:		E00119 E002			
Parameter	Qualifie	r Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch I	Mtd.
Cesium-137 Rad Liquid Scinti	amma, Solid (Star U	0.0638	0ry Weight C +/-0.0475	orrected" 0.0989	+/-0.0558	0.100	pCi/g		MXR1	07/21/20 0945	2020210	1
Tritium	U	-1.13	+/-1.82	3.21	+/-1.82	0.200	pCi/g		EW3	08/02/20 0103	2021227	2
The following Pro	en Methods wer	e nerformed										
Method	Description	e periorineu			Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep GL	-RAD-A-021			CXC1	06/08/20	092	29	2020164			
The following An	alvtical Methods	were perfor	med									
Method	Description	ľ										
1	DOE HASL 300,	4.5.2.3/Ga-01-I	ર									
2	EPA 906.0 Modif	ied										
Surrogate/Trace	r Recovery	Test					J	Batch	ID Recover	y% Accepta	ble Limit	ts
Notes:												
The MDC is a s TPU and Cour			ated at the 9	95% confid	ence level (1.96-sig	ma).						

Column headers are defined as follows:

DF: Dilution FactorMtd.: MethoDL: Detection LimitPF: Prep FacLc/LC: Critical LevelRL: ReportiMDA: Minimum Detectable ActivityTPU: TotalMDC: Minimum Detectable ConcentrationPE

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Address :	155 Grand Suite 704							_				
		California 940	512					ŀ	Report Date:	August 3,	2020	
Contact:	Travis Wi	eks										
Project:	Near S SF	L										
Client Sample Sample ID: Matrix: Collect Date: Receive Date Collector: Moisture:	5153 Soil 03-J		603				oject: ient ID:		IE00119 IE002			
Parameter	Qualifi	er Result	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Gammaspec, Gam Cesium-137 Rad Liquid Scintilla LSC, Tritium Dist. Tritium The following Prep	ation Analysi illation, Soil " U	0.0720 5 As Received" -1.52	+/-0.0331 +/-1.85	Corrected" 0.0393 3.28	+/-0.0337 +/-1.85	0.100 0.200	pCi/g pCi/g			07/21/20 1003 08/02/20 0647		
Method 1	Description				Analyst	Date	Tir	ne	Prep Batch			
•	Dry Soil Prep G				CXC1	06/08/20	092	29	2020164			
The following AnalyMethod	ytical Methoo Description	ls were perfo	ormed									
1 I	DOE HASL 300	. 4.5.2.3/Ga-01	-R									
	EPA 906.0 Mod	, ,										
Surrogate/Tracer	Recovery	Test]	Batch	ID Recover	ry% Accepta	ıble Limi	its
Notes: The MDC is a sa TPU and Count	1 1		ilated at the 9	95% confid	lence level (1.96-sig	ma)						

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

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QC Summary

			<u>V</u>		ummary	<u>/</u>]	Report D	ate: August 3, 2020	
Client :	GSI Environmental Inc.								Page 1 of 2	
	155 Grand Ave									
	Suite 704 Oakland, California									
Contact:										
	Travis Wicks									
Workorder:	515328									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe	ec									
Batch	2020210									
OC1204597829	515328003 DUP									
Cesium-137			0.0567	U	0.0592	pCi/g	38.7		(0% - 100%) MXR1	07/21/2016:36
		Uncert:	+/-0.0402		+/-0.0751	* -			× .	
		TPU:	+/-0.0405		+/-0.0753					
QC1204597830	LCS									
Americium-24	1	486			515	pCi/g		106	(75%-125%) MXR1	07/21/2014:09
		Uncert:			+/-5.13					
		TPU:			+/-48.9					
Cobalt-60		98.8			95.9	pCi/g	,	97	(75%-125%)	
		Uncert:			+/-3.48					
		TPU:			+/-8.57	a :/		100		
Cesium-137		165 Un conto			165	pCi/g	,	100	(75%-125%)	
		Uncert:			+/-3.54					
001204507929	MD	TPU:			+/-14.1					
QC1204597828 Cesium-137	MB			U	0.0129	nCi/a	-		MXR1	07/17/2012:06
Cesiulii-157		Uncert:		U	+/-0.0129	pCi/g			MANI	0//1//2012.00
		TPU:			+/-0.0189					I
Rad Liquid Scin	tillation	11 U.			T/-0.0120					
Batch	2021227									
	515328005 DUP	TT	1 12	τī	0.245	-Ci/a	0		NI/A DIM2	00/00/0010.57
Tritium		U Uncert:	-1.13 +/-1.82	U	0.245 +/-1.85	pCi/g	g 0		N/A EW3	08/02/2012:57
		Uncert: TPU:	+/-1.82 +/-1.82		+/-1.85 +/-1.85					I
QC1204600122	LCS	IFU.	⊤/-1.0∠		⊤/-1.05					
Tritium	LCS	77.4			68.2	pCi/g	r	88.1	(75%-125%) EW3	08/02/2016:15
Titutii		Uncert:			+/-10.9	per s		00.1	$(15/0^{-1}25/0)$ Em5	00/02/2010.13
		TPU:			+/-18.9					
QC1204600119	MB	11.0.			.,					
Tritium				U	-0.296	pCi/g	[EW3	08/02/2009:52
		Uncert:			+/-1.79	1 -				
		TPU:			+/-1.79					
QC1204600121	515328005 MS									
Tritium		79.7 U	-1.13		70.2	pCi/g	5	88.1	(75%-125%) EW3	08/02/2015:59
		Uncert:	+/-1.82		+/-11.0					
		TPU:	+/-1.82		+/-19.4					

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

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QC Summary

	_		$\underline{\mathbf{v}}$	iiiiiai	<u>y</u>						
Worko	order: 515328							Page 2	2 of 2		
Parmn	ame	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<	Result is less than	value reported									
>	Result is greater the	han value reported									
BD	Results are either	below the MDC or tracer reco	overy is low								
FA	Failed analysis.										
Н	Analytical holding	g time was exceeded									
J	See case narrative	for an explanation									
J	Value is estimated	1									
Κ	Analyte present. F	Reported value may be biased	high. Actual value is exp	ected to be	lower.						
L	Analyte present. F	Reported value may be biased	low. Actual value is expe	ected to be	higher.						
М	M if above MDC	and less than LLD									
М	REMP Result > N	IDC/CL and < RDL									
N/A	RPD or %Recover	ry limits do not apply.									
N1	See case narrative										
ND	Analyte concentra	tion is not detected above the	detection limit								
NJ	Consult Case Narr	rative, Data Summary packag	e, or Project Manager cor	cerning th	is qualifier	ſ					
Q	One or more quali	ity control criteria have not be	en met. Refer to the appli	icable narra	ative or DI	ER.					
R	Sample results are	rejected									
U	Analyte was analy	zed for, but not detected above	ve the MDL, MDA, MDC	or LOD.							
UI	Gamma Spectrosc	opyUncertain identification									
UJ	Gamma Spectrosc	opyUncertain identification									
UL	Not considered de	tected. The associated numbe	r is the reported concentration	ation, whic	h may be	inaccurate o	due to a low	bias.			
Х	Consult Case Narr	rative, Data Summary packag	e, or Project Manager cor	cerning th	is qualifier						
Y	Other specific qua	lifiers were required to prope	rly define the results. Cor	nsult case r	arrative.						
۸	RPD of sample an	d duplicate evaluated using +	/-RL. Concentrations are	< 5X the F	RL. Qualif	ier Not App	plicable for I	Radiochemi	stry.		
h	Preparation or pre	servation holding time was ex	ceeded								
** Inc	dicates analyte is a s	ecovery limits do not apply w urrogate/tracer compound.	-		-	-					.1

 $^{\text{The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.$

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

FROM: TEL:) [
TEL:											N A	512871
TEL:	GSI Environmental Inc.			AJU-BB					PROJE	PROJECT NO.: 5182		
TEL:	155 Grand Ave. Suite 704	14	ONTACT:	Susan Gallardo					LAB CO	LAB CONTACT: Brielle Luthman	lan	
TEL:	Uakiang, UA 94612 (510) 463-8484		GLOBAL ID:						SAMPL	SAMPLER(S): (PRINT)	- 7 1	~ 1 (log
0000	(510) 463-8484	E-MAIL:	smgallardo@gsi-net.com; tzwicks@gsi-net.com	om; tzwicks@	isi-net.con				REOUESTED	ANAL VS	~	20 NEV)
LABURALURY	GEL Laboratories	es							Please check box or i			
TURNAROUND TIME:]SAME DAY]72 HR	□24 HR □ □5 DAYS ⊠	A8 HR Standard		······································	(0.						
SPECIAL INSTRUCTIONS: - Sr-90 MDC of 81 - H-3 MDC of 20,0	SPECIAL INSTRUCTIONS: - Sr-90 MDC of 8-PC/TC or ρ ⁽¹ /b] - Cs-137 MDC of 2000 PC/TC - H-3 MDC of 20,000 PC/HL 0.2 pc/ (b)	- Cs-137 M		oil pailo		iltered Sr-90 (905	906) E-H					
LAB USE ONLY	SAMPLE ID	SA	5	MATRIX NO. OF CONT.	Jnpres ^D reser		о С					
d'a	209002-1-025-26	6/2/20	S ³	1)?25		X	$\frac{1}{1}$					
位	FPMDF-SED-1-20402	6/2/20	4 1400		X	×						
SP	-292-	6(3/20	4825		X	\times						
5	1-560-1-2006ez		0940			\times						
Ϋ́	058-560-1-220603		(130		X	\times						
QV	EN-SED-1-200603	-	130	+	X	\times						
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	velinquished by: (Signature)	T/J	June		Received by: (Signature)	y: (Signa	ture)	th.	XX X	Date: $\frac{1}{2}\sqrt{Q}$	12 I	Time: 1442
teinquished	Kelinquished by: (Signature)				Received by: (Signature)	y: (Signa	ture)	141	6	Date: 2/0/	100	Time:
Relinquishec	Relinquished by: (Signature)		a a construction of the second s		Received by: (Signature)	/: (Signa	ture)	~ 1010		2	2	Timo:

Laboratories

lient: GSIE	SAMPLE RECEIPT & REVIEW FORM
Received By: STACY BOO	SDG/AR/COC/Work Order: S12,917
SIMLY PAD	and and a set of the Cold of the
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
spected Hazard Information	3935 4669 0289 - 4 ² 3935 4669 0278 - 21 ≤ ³ 2 *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigat
Shipped as a DOT Hazardous?	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
Did the client designate the samples are to be even as radioactive?	COC notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as lioactive?	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Did the client designate samples are ardous?	COC notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	第 差 差 Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: State bratem
Shipping containers received intact and scaled? Chain of custody documents included	Leaking container Damaged container Leaking container Other (describe)
with shipment?	Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?* Daily check performed and passed on IR	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
temperature gun?	Secondary Temperature Device Serial #: <u>IQ1-IQ</u> Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and scaled?	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	Sample ID's and Containers Affected: If Preservation added, Lot#
Do any samples require Volatile Analysis?	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?	ID's and tests affected:
Sample ID's on COC match ID's on pottles?	ID's and containers affected:
Date & time on COC match date & time on bottles?	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as Are sample contain	
ents (Use Continuation Form if needed):	Circle Applicable: Not relinquished Other (describe)
58-W-200693 CO	TIME : 11: 30 SAMPLE TIME : 11:40
PM (or PMA)	view: Initials Date 0/8/20 Page of

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 03 August 2020

Radiochemistry Technical Case Narrative GSI Environmental Inc. SDG #: 515328

Product: Dry Weight Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2020164

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
515328001	BP-SED-1-200602
515328002	RRMDF-SED-1-200602
515328003	SRE-SED-2-200603
515328004	051-SED-1-200603
515328005	058-SED-1-200603
515328006	OW-SED-1-200603

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

These samples are relogs. The data for this batch was transferred from batch 2008720.

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R Analytical Procedure: GL-RAD-A-013 REV# 27 Analytical Batch: 2020210

<u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2020164

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<u>Client Sample Identification</u>
515328001	BP-SED-1-200602
515328002	RRMDF-SED-1-200602
515328003	SRE-SED-2-200603

515328004	051-SED-1-200603
515328005	058-SED-1-200603
515328006	OW-SED-1-200603
1204597828	Method Blank (MB)
1204597829	515328003(SRE-SED-2-200603) Sample Duplicate (DUP)
1204597830	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Soil Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2021227

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
515328001	BP-SED-1-200602
515328002	RRMDF-SED-1-200602
515328003	SRE-SED-2-200603
515328004	051-SED-1-200603
515328005	058-SED-1-200603
515328006	OW-SED-1-200603
1204600119	Method Blank (MB)
1204600120	515328005(058-SED-1-200603) Sample Duplicate (DUP)
1204600121	515328005(058-SED-1-200603) Matrix Spike (MS)
1204600122	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

RDL Met

Samples (See Below) did not meet the detection limits. Samples were counted the maximum count time in order to achieve the lowest MDAs possible.

Sample	Analyte	Value
1204600119 (MB)	Tritium	Result -0.296 < MDA 3.11 > RDL 0.2 pCi/g
1204600120 (058-SED-1-200603DUP)	Tritium	Result 0.245 < MDA 3.18 > RDL 0.2 pCi/g

515328001 (BP-SED-1-200602)	Tritium	Result -0.726 < MDA 3.14 > RDL 0.2 pCi/g
515328002 (RRMDF-SED-1-200602)	Tritium	Result -0.151 < MDA 3.45 > RDL 0.2 pCi/g
515328003 (SRE-SED-2-200603)	Tritium	Result -1.2 < MDA 3.11 > RDL 0.2 pCi/g
515328004 (051-SED-1-200603)	Tritium	Result 0.627 < MDA 3.13 > RDL 0.2 pCi/g
515328005 (058-SED-1-200603)	Tritium	Result -1.13 < MDA 3.21 > RDL 0.2 pCi/g
515328006 (OW-SED-1-200603)	Tritium	Result -1.52 < MDA 3.28 > RDL 0.2 pCi/g

<u>Certification Statement</u>

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Hi Brielle –

I have attached a revised chain of custody form requesting additional analyses for sediment samples GSI collected on June 2nd and 3rd. To summarize, please add the following on a standard turnaround time:

	Sample	Requeste	d Analyses
Sample Designation	Collection Date	Tritium	Cesium 137
BP-SED-1-200602	2 June 2020	Х	Х
RRMDF-SED-1-200602	2 June 2020	Х	Х
SRE-SED-2-200603	3 June 2020	Х	Х
OS1-SED-1-200603	3 June 2020	Х	Х
OS8-SED-1-200603	3 June 2020	Х	Х
OW-SED-1-200603	3 June 2020	Х	Х

Thank you,

Susan

Susan Gallardo, PE | Principal Engineer | GSI Environmental Inc.

phone 510.463.8483 | cell 510.520.2363 smgallardo@gsi-net.com

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From: Brielle Luthman <Brielle.Luthman@gel.com>
Sent: Tuesday, July 14, 2020 8:37 AM
To: Kalin Howell <kjhowell@gsi-net.com>
Cc: Susan Gallardo <SMGallardo@gsi-net.com>
Subject: RE: GEL Analytical Report- SDG 512877

Kalin,

Any update on the samples you may want us to run for additional analysis? Brielle

From: Kalin Howell <<u>kjhowell@gsi-net.com</u>>
Sent: Wednesday, July 8, 2020 2:58 PM
To: Brielle Luthman <<u>Brielle.Luthman@gel.com</u>>
Cc: Susan Gallardo <<u>SMGallardo@gsi-net.com</u>>
Subject: Re: GEL Analytical Report- SDG 512877

Hi Brielle,

We just talked on the phone about possibly having these samples also analyzed for Cesium and Tritium. Thanks for holding onto them for us. If we go forth with these analyzes, you mentioned that the Cesium and Tritium would be on a new work order and arrive in a separate report, which is fine. We'll get back to you ASAP with a decision...

Meanwhile, can you please reissue the attached report to reflect the following modification:

• Change the name of sample SRE-SED-1-200603 to SRE-SED-2-200603

• This sample was mislabeled on the COC, and we need the "1" changed to a "2" Thanks!

-Kalin

From: GEL Data <<u>data@gellaboratories.com</u>>
Sent: Monday, July 6, 2020 7:53 AM
To: Travis Wicks <<u>TZWicks@gsi-net.com</u>>
Cc: brielle.luthman@gel.com <brielle.luthman@gel.com>; Brielle.Luthman@gel.com
<<u>Brielle.Luthman@gel.com</u>>; Susan Gallardo <<u>SMGallardo@gsi-net.com</u>>; Kalin Howell
<<u>kjhowell@gsi-net.com</u>>
Subject: GEL Analytical Report- SDG 512877

Attached are the results for the samples received on June 05, 2020. Please contact us if there are any questions.

Sincerely, Brielle Luthman

Do not reply to <u>data@gellaboratories.com</u> as this email address is not monitored. Please contact your project manager, Brielle Luthman, at <u>Team.Luthman@gel.com</u> regarding this message or its attachments.

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Picase analyze each of the sumples for the analyses 5. callardo, 1/14/2021	PROJECT NAME AJU-BB		GLOBAL ID: -	switt: smgallardo@gsi-net.com; tzwicks@gsi-net.com		[] 48 HR [X]STANDARD	pəviəs	Presei Field F		4	RIADO VEZZ XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		- 13% T T X X X X X X X X X X X X X X X X X					Received by (Signature)	Received by: (Signature)
ENVIRON MENTAL		4		(510) 463-8484 E-MAIL:	GEL Laboratories	JSAME DAY 24 HR]72 HR 5 DAYS	SPECIAL INSTRUCTIONS - Sr-90 MDC of 8-DCIT 0:1 pG/d - Cs-137 MDC of 200-DCIT 0:1 pG/d - H-3 MDC of 20,000 pGit 0.2 pC;)		6/2/20	05 6/2/20		101-XCD-1-200603	BW-SED-1-200603 -					Relinquished by: (Signature)	Relinquished by: (Signature)



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendix D

Analytical Laboratory Reports – Drainage Areas Water Samples

🔅 eurofins

Environment Testing America

1

ANALYTICAL REPORT

Eurofins TestAmerica, Pleasanton 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

Laboratory Job ID: 720-98770-1

Client Project/Site: AJU-BB Revision: 1

For:

LINKS

Review your project results through

Total Access

Have a Question?

Ask-

The

www.eurofinsus.com/Env

Visit us at:

Expert

GSI Environmental, Inc 155 Grand Avenue Suite 704 Oakland, California 94612

Attn: Susan Gallardo

Alsanch Sit

Authorized for release by: 6/24/2020 1:50:57 PM

Afsaneh Salimpour, Senior Project Manager (925)484-1919 afsaneh.salimpour@testamericainc.com

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	16
QC Sample Results	17
QC Association Summary	31
Lab Chronicle	33
Certification Summary	35
Method Summary	36
Sample Summary	37
Chain of Custody	38
Receipt Checklists	40

Definitions/Glossary

Client: GSI Environmental, Inc Project/Site: AJU-BB

-		
Glossary		3
Abbreviation	These commonly used abbreviations may or may not be present in this report.	J
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	Л
%R	Percent Recovery	
CFL	Contains Free Liquid	5
CFU	Colony Forming Unit	5
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	8
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	9
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	4.2
NC	Not Calculated	13
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	Negative / Absent	
POS	Positive / Present	
PQL	Practical Quantitation Limit	
PRES	Presumptive	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	
TNTO		

TNTC Too Numerous To Count

Eurofins TestAmerica, Pleasanton

Job ID: 720-98770-1

Laboratory: Eurofins TestAmerica, Pleasanton

Narrative

Job Narrative 720-98770-1

Case Narrative

Revised Report on 6/24/20 to report to RL. **Comments** No additional comments.

Receipt

The samples were received on 6/4/2020 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): OS8-W-200603 (720-98770-1). The time listed on the COC for sample # 1 was 11:30 and on the containers was listed 11:40

GC/MS VOA

Method 8260B: The continuing calibration verification (CCV) associated with batch 440-612382 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TB-200604 (720-98770-5) and (CCVIS 440-612382/2).

Method 8260B: Internal standard (ISTD) response for TBA-d9 for the following sample was outside acceptance criteria: (CCVIS 440-612382/2). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

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

HPLC/IC

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

Metals

Method 6010B: The method blank for preparation batch 440-611699 and analytical batch 440-611848 contained Zinc above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 6010B: The continuing calibration blank (CCB) for analytical batch 440-612023 contained <AffectedAnalytes> above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

VOA Prep

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

Detection Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB Job ID: 720-98770-1

lient Sample ID: OS8-W-200	603					Lab Sa	mple ID:	720-98770-
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Naphthalene	3.0		1.0		ug/L	1	8260B	Total/NA
Barium	0.046		0.010		mg/L	1	6010B	Total
					-			Recoverable
Client Sample ID: OS3-W-2000	602					Lab Sa	mple ID:	720-98770-
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Barium	0.038		0.010		mg/L	1	6010B	Total
					-			Recoverabl
lient Sample ID: OS357-W-20	00602					Lab Sa	mple ID:	720-98770-
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Barium	0.034		0.010		mg/L	1	6010B	Total
								Recoverabl
Zinc	0.048		0.020		mg/L	1	6010B	Total
								Recoverab
								Recoverabl
lient Sample ID: SRE-W-200	603					Lab Sa	mple ID:	
		Qualifier	RL	MDL	Unit	Lab Sa Dil Fac D	-	
Analyte		Qualifier	RL	MDL	Unit mg/L		-	720-98770-
Analyte	Result 0.13	Qualifier	0.010	MDL	mg/L	Dil Fac 1	Method 6010B	720-98770- Prep Type Total
Analyte Barium	Result	Qualifier		MDL		Dil Fac D	Method	720-98770- Total Recoverabl Total
Analyte Barium Chromium	Result 0.13 0.015	Qualifier	0.010	MDL	mg/L mg/L	<u>Dil Fac</u> D	Method 6010B 6010B	720-98770- Total Recoverabl Total Recoverabl Recoverabl
Analyte Barium Chromium	Result 0.13	Qualifier	0.010	MDL	mg/L	Dil Fac 1	Method 6010B	720-98770- Total Recoverabl Total Recoverabl Total Recoverabl Total
Analyte Barium Chromium Copper	Result 0.13 0.015 0.019	Qualifier	0.010 0.0050 0.010	MDL	mg/L mg/L mg/L	<u>Dil Fac</u> <u>D</u> 1 1	Method 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Recoverabl
Analyte Barium Chromium Copper	Result 0.13 0.015	Qualifier	0.010	MDL	mg/L mg/L	<u>Dil Fac</u> D	Method 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total
Analyte Barium Chromium Copper Lead	Result 0.13 0.015 0.019 0.012	Qualifier	0.010 0.0050 0.010 0.0050	MDL	mg/L mg/L mg/L mg/L	<u>Dil Fac</u> <u>D</u> 1 1 1 1	Method 6010B 6010B 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl
Analyte Barium Chromium Copper Lead	Result 0.13 0.015 0.019	Qualifier	0.010 0.0050 0.010	MDL	mg/L mg/L mg/L	<u>Dil Fac</u> <u>D</u> 1 1	Method 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total
Analyte Barium Chromium Copper Lead Vanadium	Result 0.13 0.015 0.019 0.012 0.031	Qualifier	0.010 0.0050 0.010 0.0050 0.010	MDL	mg/L mg/L mg/L mg/L mg/L	<u>Dil Fac</u> <u>D</u> 1 1 1 1 1 1	Method 6010B 6010B 6010B 6010B 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl
Analyte Barium Chromium Copper Lead Vanadium	Result 0.13 0.015 0.019 0.012	Qualifier	0.010 0.0050 0.010 0.0050	MDL	mg/L mg/L mg/L mg/L	<u>Dil Fac</u> <u>D</u> 1 1 1 1	Method 6010B 6010B 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total
Analyte Barium Chromium Copper Lead Vanadium Zinc	Result 0.13 0.015 0.019 0.012 0.031	Qualifier	0.010 0.0050 0.010 0.0050 0.010	MDL	mg/L mg/L mg/L mg/L mg/L	Dil Fac D 1 1 1 1 1 1 1 1 1	Method 6010B 6010B 6010B 6010B 6010B 6010B 6010B 6010B	720-98770- Prep Type Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl Total Recoverabl
Client Sample ID: SRE-W-2000 Analyte Barium Chromium Copper Lead Vanadium Zinc Client Sample ID: TB-200604 Analyte	Result 0.13 0.015 0.019 0.012 0.031 0.086	Qualifier	0.010 0.0050 0.010 0.0050 0.010	MDL	mg/L mg/L mg/L mg/L mg/L	Dil Fac D 1 1 1 1 1 1 1 1 1	Method 6010B 6010B	720-98770- Prep Type Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: OS8-W-200603 Date Collected: 06/03/20 11:30 Date Received: 06/04/20 16:05

Job	ID:	720-	-987	70-1

Lab Sample ID: 720-98770-1

Matrix: Water

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,1,1-Trichloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,1,2-Trichloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,1-Dichloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,1-Dichloroethene	ND	0.50	ug/L		06/09/20 18:19	1
1,1-Dichloropropene	ND	0.50	ug/L		06/09/20 18:19	1
1,2,3-Trichlorobenzene	ND	1.0	ug/L		06/09/20 18:19	1
1,2,3-Trichloropropane	ND	1.0	ug/L		06/09/20 18:19	1
1,2,4-Trichlorobenzene	ND	1.0	ug/L		06/09/20 18:19	1
1,2,4-Trimethylbenzene	ND	0.50	ug/L		06/09/20 18:19	1
1,2-Dibromo-3-Chloropropane	ND	1.0	ug/L		06/09/20 18:19	1
1,2-Dibromoethane (EDB)	ND	0.50	ug/L		06/09/20 18:19	1
1,2-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:19	1
1,2-Dichloroethane	ND	0.50	ug/L		06/09/20 18:19	1
1,2-Dichloropropane	ND	0.50	ug/L		06/09/20 18:19	1
1,3,5-Trimethylbenzene	ND	0.50	ug/L		06/09/20 18:19	1
1,3-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:19	1
1,3-Dichloropropane	ND	0.50	ug/L		06/09/20 18:19	1
1,4-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:19	1
2,2-Dichloropropane	ND	1.0	ug/L		06/09/20 18:19	1
2-Chlorotoluene	ND	0.50	ug/L		06/09/20 18:19	1
4-Chlorotoluene	ND	0.50	ug/L		06/09/20 18:19	1
Benzene	ND	0.50	ug/L		06/09/20 18:19	1
Bromobenzene	ND	0.50	ug/L		06/09/20 18:19	
Bromochloromethane	ND	0.50	ug/L		06/09/20 18:19	1
Bromodichloromethane	ND	0.50	ug/L		06/09/20 18:19	1
Bromoform	ND	1.0	ug/L		06/09/20 18:19	
Bromomethane	ND	0.50	ug/L		06/09/20 18:19	1
Carbon tetrachloride	ND	0.50	ug/L		06/09/20 18:19	1
Chlorobenzene	ND	0.50	ug/L		06/09/20 18:19	
Chloroethane	ND	1.0	ug/L		06/09/20 18:19	1
Chloroform	ND	0.50	ug/L		06/09/20 18:19	1
Chloromethane	ND	0.50	ug/L		06/09/20 18:19	
cis-1,2-Dichloroethene	ND	0.50	ug/L		06/09/20 18:19	1
cis-1,3-Dichloropropene	ND	0.50	ug/L		06/09/20 18:19	1
Dibromochloromethane	ND	0.50	ug/L		06/09/20 18:19	1
Dibromomethane	ND	0.50	ug/L		06/09/20 18:19	1
Dichlorodifluoromethane	ND	1.0	ug/L		06/09/20 18:19	1
Ethylbenzene	ND	0.50	ug/L		06/09/20 18:19	· · · · · · · · 1
Hexachlorobutadiene	ND	0.50	ug/L		06/09/20 18:19	1
sopropylbenzene	ND	0.50	ug/L		06/09/20 18:19	1
n,p-Xylene	ND	1.0			06/09/20 18:19	· · · · · · · · 1
Nethylene Chloride	ND	2.0	ug/L		06/09/20 18:19	1
•			ug/L			1
Naphthalene Putulbonzono	3.0	1.0	ug/L		06/09/20 18:19	ا م
n-Butylbenzene	ND	1.0	ug/L		06/09/20 18:19	1
N-Propylbenzene	ND	0.50	ug/L		06/09/20 18:19	1
o-Xylene p-Isopropyltoluene	ND ND	0.50 0.50	ug/L ug/L		06/09/20 18:19 06/09/20 18:19	1

Eurofins TestAmerica, Pleasanton

Client Sample ID: OS8-W-200603 Date Collected: 06/03/20 11:30 Date Received: 06/04/20 16:05

Lab Sample ID: 720-98770-1

Matrix: Water

5

6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50		ug/L			06/09/20 18:19	1
sec-Butylbenzene	ND		0.50		ug/L			06/09/20 18:19	1
tert-Butylbenzene	ND		0.50		ug/L			06/09/20 18:19	1
Tetrachloroethene	ND		0.50		ug/L			06/09/20 18:19	1
Toluene	ND		0.50		ug/L			06/09/20 18:19	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/09/20 18:19	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/09/20 18:19	1
Trichloroethene	ND		0.50		ug/L			06/09/20 18:19	1
Trichlorofluoromethane	ND		0.50		ug/L			06/09/20 18:19	1
Vinyl chloride	ND		0.50		ug/L			06/09/20 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120					06/09/20 18:19	1
Dibromofluoromethane (Surr)	93		76 - 132					06/09/20 18:19	1
Toluene-d8 (Surr)	103		80 - 128					06/09/20 18:19	1
Method: 314.0 - Perchlorate	e (IC)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0		ug/L			06/11/20 11:28	1
Analyte Antimony		Qualifier	RL	MDL	Unit ma/l	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		06/08/20 11:16	06/09/20 19:51	1
Arsenic	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Barium	0.046		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Beryllium	ND		0.0020		mg/L		06/08/20 11:16	06/08/20 19:00	1
Cadmium	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:00	1
Chromium	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:00	1
Cobalt	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Copper	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Lead	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:00	1
Molybdenum	ND		0.020		mg/L		06/08/20 11:16	06/08/20 19:00	1
Nickel	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Selenium	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Thallium	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Vanadium	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:00	1
Zinc	ND		0.020		mg/L		06/08/20 11:16	06/08/20 19:00	1
Silver	ND		0.010		mg/L		06/08/20 11:16	06/09/20 19:51	1
Method: 7470A - Mercury (
Method: 7470A - Mercury (Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: OS3-W-200602 Date Collected: 06/02/20 10:25 Date Received: 06/04/20 16:05

Job	ID:	720-98770-1

Lab Sample ID: 720-98770-2

Matrix: Water

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,1,1-Trichloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,1,2-Trichloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,1-Dichloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,1-Dichloroethene	ND	0.50	ug/L		06/09/20 18:47	1
1,1-Dichloropropene	ND	0.50	ug/L		06/09/20 18:47	1
1,2,3-Trichlorobenzene	ND	1.0	ug/L		06/09/20 18:47	1
1,2,3-Trichloropropane	ND	1.0	ug/L		06/09/20 18:47	1
1,2,4-Trichlorobenzene	ND	1.0	ug/L		06/09/20 18:47	1
1,2,4-Trimethylbenzene	ND	0.50	ug/L		06/09/20 18:47	1
1,2-Dibromo-3-Chloropropane	ND	1.0	ug/L		06/09/20 18:47	1
1,2-Dibromoethane (EDB)	ND	0.50	ug/L		06/09/20 18:47	1
1,2-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:47	1
1,2-Dichloroethane	ND	0.50	ug/L		06/09/20 18:47	1
1,2-Dichloropropane	ND	0.50	ug/L		06/09/20 18:47	
1,3,5-Trimethylbenzene	ND	0.50	ug/L		06/09/20 18:47	1
1,3-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:47	1
1,3-Dichloropropane	ND	0.50	ug/L		06/09/20 18:47	
1,4-Dichlorobenzene	ND	0.50	ug/L		06/09/20 18:47	1
2,2-Dichloropropane	ND	1.0	ug/L		06/09/20 18:47	1
2-Chlorotoluene	ND	0.50	ug/∟ ug/L		06/09/20 18:47	······ 1
I-Chlorotoluene	ND	0.50			06/09/20 18:47	1
4-Chiorotoluene Benzene	ND ND	0.50 0.50	ug/L		06/09/20 18:47	1
Benzene Bromobenzene	ND ND	0.50	ug/L		06/09/20 18:47	1
	ND ND	0.50 0.50	ug/L			1
Bromochloromethane		0.50 0.50	ug/L		06/09/20 18:47	1
Bromodichloromethane	ND		ug/L		06/09/20 18:47	
Bromoform	ND	1.0	ug/L		06/09/20 18:47	1
Bromomethane	ND	0.50	ug/L		06/09/20 18:47	1
Carbon tetrachloride	ND	0.50	ug/L		06/09/20 18:47	1
Chlorobenzene	ND	0.50	ug/L		06/09/20 18:47	1
Chloroethane	ND	1.0	ug/L		06/09/20 18:47	1
Chloroform	ND	0.50	ug/L		06/09/20 18:47	1
Chloromethane	ND	0.50	ug/L		06/09/20 18:47	1
cis-1,2-Dichloroethene	ND	0.50	ug/L		06/09/20 18:47	1
cis-1,3-Dichloropropene	ND	0.50	ug/L		06/09/20 18:47	1
Dibromochloromethane	ND	0.50	ug/L		06/09/20 18:47	1
Dibromomethane	ND	0.50	ug/L		06/09/20 18:47	1
Dichlorodifluoromethane	ND	1.0	ug/L		06/09/20 18:47	1
thylbenzene	ND	0.50	ug/L		06/09/20 18:47	1
lexachlorobutadiene	ND	0.50	ug/L		06/09/20 18:47	1
sopropylbenzene	ND	0.50	ug/L		06/09/20 18:47	1
n,p-Xylene	ND	1.0	ug/L		06/09/20 18:47	1
lethylene Chloride	ND	2.0	ug/L		06/09/20 18:47	1
laphthalene	ND	1.0	ug/L		06/09/20 18:47	1
-Butylbenzene	ND	1.0	ug/L		06/09/20 18:47	1
I-Propylbenzene	ND	0.50	ug/L		06/09/20 18:47	1
-Xylene	ND	0.50	ug/L		06/09/20 18:47	1
p-Typene p-Isopropyltoluene	ND	0.50	ug/∟ ug/L		06/09/20 18:47	1

Eurofins TestAmerica, Pleasanton

Client Sample ID: OS3-W-200602 Date Collected: 06/02/20 10:25 Date Received: 06/04/20 16:05

Lab Sample ID: 720-98770-2

Matrix: Water

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6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50		ug/L			06/09/20 18:47	1
sec-Butylbenzene	ND		0.50		ug/L			06/09/20 18:47	1
tert-Butylbenzene	ND		0.50		ug/L			06/09/20 18:47	1
Tetrachloroethene	ND		0.50		ug/L			06/09/20 18:47	1
Toluene	ND		0.50		ug/L			06/09/20 18:47	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/09/20 18:47	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/09/20 18:47	1
Trichloroethene	ND		0.50		ug/L			06/09/20 18:47	1
Trichlorofluoromethane	ND		0.50		ug/L			06/09/20 18:47	1
Vinyl chloride	ND		0.50		ug/L			06/09/20 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120					06/09/20 18:47	1
Dibromofluoromethane (Surr)	92		76 - 132					06/09/20 18:47	1
Toluene-d8 (Surr)	103		80 - 128					06/09/20 18:47	1
Method: 314.0 - Perchlorate	e (IC)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0		ug/L			06/11/20 11:45	1
Antimony		Qualifier			Unit mg/L	D	Prepared 06/08/20 11:16	Analyzed 06/11/20 14:31	1
Analyte							•		Dil Fac
Arsenic	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:02	1
Barium	0.038		0.010		mg/L		06/08/20 11:16	06/08/20 19:02	1
Beryllium	ND		0.0020		mg/L		06/08/20 11:16	06/08/20 19:02	1
Cadmium	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:02	1
Chromium					-				
	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:02	1
	ND ND		0.0050 0.010		mg/L mg/L			06/08/20 19:02 06/08/20 19:02	1
Cobalt							06/08/20 11:16		
Cobalt Copper	ND		0.010		mg/L		06/08/20 11:16 06/08/20 11:16	06/08/20 19:02	1
Cobalt Copper Lead	ND ND		0.010 0.010		mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02	1
Cobalt Copper Lead Molybdenum	ND ND ND		0.010 0.010 0.0050		mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1
Cobalt Copper Lead Molybdenum Nickel	ND ND ND		0.010 0.010 0.0050 0.020		mg/L mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium	ND ND ND ND		0.010 0.010 0.0050 0.020 0.010		mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium Thallium	ND ND ND ND ND		0.010 0.010 0.0050 0.020 0.010 0.010		mg/L mg/L mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium	ND ND ND ND ND ND		0.010 0.010 0.0050 0.020 0.010 0.010 0.010		mg/L mg/L mg/L mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc Silver	ND ND ND ND ND ND ND		0.010 0.010 0.0050 0.020 0.010 0.010 0.010 0.010		mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1 1 1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc Silver	ND ND ND ND ND ND ND ND		0.010 0.010 0.0050 0.020 0.010 0.010 0.010 0.010 0.020		mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L		06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1 1 1 1 1 1
Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc	ND ND ND ND ND ND ND ND ND	Qualifier	0.010 0.010 0.0050 0.020 0.010 0.010 0.010 0.010 0.020	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02 06/08/20 19:02	1 1 1 1 1 1 1 1 1

Client Sample ID: OS357-W-200602 Date Collected: 06/02/20 11:05 Date Received: 06/04/20 16:05

ND	0.50	ug/L		06/10/20 06:19	1
ND	0.50	ug/L		06/10/20 06:19	1
ND	0.50	ug/L		06/10/20 06:19	1
ND	0.50	ug/L		06/10/20 06:19	1
ND	0.50	ug/L		06/10/20 06:19	1
ND	0.50	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	••••••
ND	1.0	ug/L		06/10/20 06:19	
ND	1.0	ug/L		06/10/20 06:19	
ND	1.0	ug/L		06/10/20 06:19	
ND	0.50			06/10/20 06:19	
ND	1.0			06/10/20 06:19	
ND	0.50	-		06/10/20 06:19	
				06/10/20 06:19	
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ND	0.50	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	
	1.0	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	
ND	0.50	ug/L		06/10/20 06:19	
ND	1.0	ug/L		06/10/20 06:19	
ND	2.0	ug/L		06/10/20 06:19	
ND	1.0	ug/L		06/10/20 06:19	
ND	1.0	ug/L		06/10/20 06:19	
		•		06/10/20 06:19	
	ND ND	ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 0.50 ND 1.0 ND 0.50 ND	ND 0.50 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 0.50 ug/L ND 0.50	ND 0.50 ug/L ND 0.50 ug/L ND 0.50 ug/L ND 0.50 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 1.0 ug/L ND 0.50 ug/L ND 0.50	ND 0.50 ug/L 06/10/20 06:19 ND 1.0 ug/L 06/10/20 06:19 ND 0.50 ug/L 06/10/20

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6

Lab Sample ID: 720-98770-3 Matrix: Water

Client Sample ID: OS357-W-200602 Date Collected: 06/02/20 11:05 Date Received: 06/04/20 16:05

Lab Sample ID: 720-98770-3

Matrix: Water

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6

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50		ug/L			06/10/20 06:19	1
sec-Butylbenzene	ND		0.50		ug/L			06/10/20 06:19	1
tert-Butylbenzene	ND		0.50		ug/L			06/10/20 06:19	1
Tetrachloroethene	ND		0.50		ug/L			06/10/20 06:19	1
Toluene	ND		0.50		ug/L			06/10/20 06:19	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/10/20 06:19	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/10/20 06:19	1
Trichloroethene	ND		0.50		ug/L			06/10/20 06:19	1
Trichlorofluoromethane	ND		0.50		ug/L			06/10/20 06:19	1
Vinyl chloride	ND		0.50		ug/L			06/10/20 06:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120					06/10/20 06:19	1
Dibromofluoromethane (Surr)	90		76 - 132					06/10/20 06:19	1
Toluene-d8 (Surr)	103		80 - 128					06/10/20 06:19	1
Method: 314.0 - Perchlorat	e (IC)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0		ug/L			06/11/20 12:03	1
Antimony		Qualifier	RL 0.010	MDL	Unit mg/L	D	Prepared 06/08/20 11:16	Analyzed 06/09/20 19:56	Dil Fac
Analyte		Quaimer					· ·		
Arsenic	ND		0.010		mg/L			06/08/20 19:05	1
Barium	0.034		0.010		mg/L		06/08/20 11:16	06/08/20 19:05	1
Beryllium	ND		0.0020		mg/L		06/08/20 11:16	06/08/20 19:05	1
Cadmium	ND		0.0050		mg/L			06/08/20 19:05	1
Chromium	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:05	1
Cobalt	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:05	1
Copper	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:05	1
Lead	ND		0.0050		mg/L		06/08/20 11:16	06/08/20 19:05	1
Molybdenum	ND		0.020		mg/L		06/08/20 11:16	06/08/20 19:05	1
Nickel	ND		0.010		mg/L		06/08/20 11:16	06/08/20 19:05	1
Selenium	ND		0.010		mg/L			06/08/20 19:05	1
Thallium	ND		0.010		mg/L			06/08/20 19:05	1
	ND		0.010		mg/L			06/08/20 19:05	1
Vanadium	.10		0.020		mg/L			06/08/20 19:05	1
	0.048		0.020		5 -				
Vanadium <mark>Zinc</mark> Silver	0.048 ND		0.020		mg/L		06/08/20 11:16	06/09/20 19:56	1
Zinc Silver	ND				mg/L		06/08/20 11:16	06/09/20 19:56	1
Zinc	ND CVAA)	Qualifier		MDL	mg/L Unit	D	06/08/20 11:16 Prepared	06/09/20 19:56 Analyzed	1 Dil Fac

Client Sample ID: SRE-W-200603 Date Collected: 06/03/20 08:20 Date Received: 06/04/20 16:05

Method: 8260B - Volatile Orga Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,1,1-Trichloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,1,2-Trichloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,1-Dichloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,1-Dichloroethene	ND	0.50	ug/L		06/10/20 06:47	1
1,1-Dichloropropene	ND	0.50	ug/L		06/10/20 06:47	1
1,2,3-Trichlorobenzene	ND	1.0	ug/L		06/10/20 06:47	1
1,2,3-Trichloropropane	ND	1.0	ug/L		06/10/20 06:47	1
1,2,4-Trichlorobenzene	ND	1.0	ug/L		06/10/20 06:47	1
1,2,4-Trimethylbenzene	ND	0.50	ug/L		06/10/20 06:47	1
1,2-Dibromo-3-Chloropropane	ND	1.0	ug/L		06/10/20 06:47	1
1,2-Dibromoethane (EDB)	ND	0.50	ug/L		06/10/20 06:47	1
1,2-Dichlorobenzene	ND	0.50	ug/L		06/10/20 06:47	1
1,2-Dichloroethane	ND	0.50	ug/L		06/10/20 06:47	1
1,2-Dichloropropane	ND	0.50	ug/L		06/10/20 06:47	1
1,3,5-Trimethylbenzene	ND	0.50	ug/L		06/10/20 06:47	1
1,3-Dichlorobenzene	ND	0.50	ug/L		06/10/20 06:47	1
1,3-Dichloropropane	ND	0.50	ug/L		06/10/20 06:47	1
1,4-Dichlorobenzene	ND	0.50	ug/L		06/10/20 06:47	1
2,2-Dichloropropane	ND	1.0	ug/L		06/10/20 06:47	1
2-Chlorotoluene	ND	0.50	ug/L		06/10/20 06:47	
4-Chlorotoluene	ND	0.50	ug/L		06/10/20 06:47	1
Benzene	ND	0.50	ug/L		06/10/20 06:47	1
Bromobenzene	ND	0.50	ug/L		06/10/20 06:47	
Bromochloromethane	ND	0.50	ug/L		06/10/20 06:47	1
Bromodichloromethane	ND	0.50	ug/L		06/10/20 06:47	1
Bromoform	ND	1.0	ug/L		06/10/20 06:47	
Bromomethane	ND	0.50	ug/L		06/10/20 06:47	1
Carbon tetrachloride	ND	0.50	ug/L		06/10/20 06:47	1
Chlorobenzene	ND	0.50	ug/L		06/10/20 06:47	
Chloroethane	ND	1.0	ug/L		06/10/20 06:47	1
Chloroform	ND	0.50	ug/L		06/10/20 06:47	1
Chloromethane	ND	0.50	ug/L		06/10/20 06:47	
cis-1,2-Dichloroethene	ND	0.50	ug/L		06/10/20 06:47	1
cis-1,3-Dichloropropene	ND	0.50	ug/L		06/10/20 06:47	1
Dibromochloromethane	ND	0.50	ug/L		06/10/20 06:47	
Dibromomethane	ND	0.50	-		06/10/20 06:47	1
Dichlorodifluoromethane	ND	1.0	ug/L		06/10/20 06:47	1
Ethylbenzene	ND	0.50	ug/L		06/10/20 06:47	1
Hexachlorobutadiene	ND	0.50	ug/L		06/10/20 06:47	1
Isopropylbenzene	ND	0.50	ug/L		06/10/20 06:47	1
			ug/L			
m,p-Xylene	ND	1.0	ug/L		06/10/20 06:47	1
Methylene Chloride	ND	2.0	ug/L		06/10/20 06:47	T A
Naphthalene	ND	1.0	ug/L		06/10/20 06:47	·····
n-Butylbenzene	ND	1.0	ug/L		06/10/20 06:47	1
N-Propylbenzene	ND	0.50	ug/L		06/10/20 06:47	1
o-Xylene p-Isopropyltoluene	ND ND	0.50 0.50	ug/L ug/L		06/10/20 06:47 06/10/20 06:47	1

Lab Sample ID: 720-98770-4

Matrix: Water

5

6

Eurofins TestAmerica, Pleasanton

Client Sample ID: SRE-W-200603 Date Collected: 06/03/20 08:20 Date Received: 06/04/20 16:05

Lab Sample ID: 720-98770-4

Matrix: Water

5

	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50		ug/L			06/10/20 06:47	1
sec-Butylbenzene	ND		0.50		ug/L			06/10/20 06:47	1
tert-Butylbenzene	ND		0.50		ug/L			06/10/20 06:47	1
Tetrachloroethene	ND		0.50		ug/L			06/10/20 06:47	1
Toluene	ND		0.50		ug/L			06/10/20 06:47	1
rans-1,2-Dichloroethene	ND		0.50		ug/L			06/10/20 06:47	1
rans-1,3-Dichloropropene	ND		0.50		ug/L			06/10/20 06:47	1
Trichloroethene	ND		0.50		ug/L			06/10/20 06:47	1
Trichlorofluoromethane	ND		0.50		ug/L			06/10/20 06:47	1
Vinyl chloride	ND		0.50		ug/L			06/10/20 06:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120					06/10/20 06:47	1
Dibromofluoromethane (Surr)	93		76 - 132					06/10/20 06:47	1
Toluene-d8 (Surr)	102		80 - 128					06/10/20 06:47	1
Method: 314.0 - Perchlorate	e (IC)								
Analyte	· · ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0		ug/L			06/11/20 12:21	1
	Rosult	Qualifier	RI	МП	Unit	п	Prenared	Analyzod	Dil Eac
•									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	
Analyte Antimony	ND	Qualifier	0.010	MDL	mg/L	<u>D</u>	06/08/20 11:16	06/11/20 14:33	1
Analyte Antimony Arsenic	ND ND	Qualifier	0.010	MDL	mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07	1
Analyte Antimony Arsenic Barium	ND ND 0.13	Qualifier	0.010 0.010 0.010	MDL	mg/L mg/L mg/L	<u> </u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07	1 1 1
Analyte Antimony Arsenic Barium Beryllium	ND ND 0.13 ND	Qualifier	0.010 0.010 0.010 0.0020	MDL	mg/L mg/L mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium	ND ND 0.13 ND ND	Qualifier	0.010 0.010 0.010 0.0020 0.0050	MDL	mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium	ND ND 0.13 ND ND 0.015	Qualifier	0.010 0.010 0.010 0.0020 0.0050 0.0050	MDL	mg/L mg/L mg/L mg/L mg/L mg/L	<u> </u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt	ND ND 0.13 ND ND 0.015 ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L	<u> </u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper	ND ND 0.13 ND 0.015 ND 0.019	Qualifier	0.010 0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead	ND ND 0.13 ND 0.015 ND 0.019 0.012	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum	ND ND 0.13 ND 0.015 ND 0.019 0.012 ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.010 0.0050 0.020	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel	ND ND 0.13 ND 0.015 ND 0.019 0.012 ND ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050 0.020 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium	ND ND 0.13 ND 0.015 ND 0.019 0.012 ND ND ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050 0.020 0.020 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Thallium	ND ND 0.13 ND 0.015 ND 0.019 0.012 ND ND ND ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050 0.020 0.010 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Cadmium Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium	ND ND 0.13 ND ND 0.015 ND 0.019 0.012 ND ND ND ND ND ND	Qualifier	0.010 0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.020 0.010 0.010 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc	ND ND 0.13 ND 0.015 ND 0.019 0.019 0.012 ND ND ND ND ND ND 0.031 0.086	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.020 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.020	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Antimony Arsenic Barium Beryllium Cadmium Cadmium Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc Silver	ND ND 0.13 ND 0.015 ND 0.019 0.012 ND ND ND ND ND ND ND ND ND ND	Qualifier	0.010 0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.020 0.010 0.010 0.010 0.010	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	<u>D</u>	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Method: 6010B - Metals (IC Analyte Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel Selenium Thallium Vanadium Zinc Silver Method: 7470A - Mercury (C Analyte	ND ND 0.13 ND ND 0.015 ND 0.019 0.019 0.019 0.012 ND ND ND ND ND ND ND ND ND ND ND ND ND	Qualifier	0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.020 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.020	MDL	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	D	06/08/20 11:16 06/08/20 11:16	06/11/20 14:33 06/08/20 19:07 06/08/20 19:07	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Client Sample ID: TB-200604 Date Collected: 06/04/20 13:40 Date Received: 06/04/20 16:05

loh	١D·	720-98770-1
000	ю.	120-30110-1

Lab Sample ID: 720-98770-5

Matrix: Water

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6

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
,1,1,2-Tetrachloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,1,1-Trichloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,1,2,2-Tetrachloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,1,2-Trichloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,1-Dichloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,1-Dichloroethene	ND	0.50		ug/L			06/12/20 03:45	1
,1-Dichloropropene	ND	0.50		ug/L			06/12/20 03:45	1
,2,3-Trichlorobenzene	ND	1.0		ug/L			06/12/20 03:45	1
,2,3-Trichloropropane	ND	1.0		ug/L			06/12/20 03:45	1
,2,4-Trichlorobenzene	ND	1.0		ug/L			06/12/20 03:45	1
,2,4-Trimethylbenzene	ND	0.50		ug/L			06/12/20 03:45	1
,2-Dibromo-3-Chloropropane	ND	1.0		ug/L			06/12/20 03:45	1
,2-Dibromoethane (EDB)	ND	0.50		ug/L			06/12/20 03:45	1
,2-Dichlorobenzene	ND	0.50		ug/L			06/12/20 03:45	1
,2-Dichloroethane	ND	0.50		ug/L			06/12/20 03:45	1
,2-Dichloropropane	ND	0.50		ug/L			06/12/20 03:45	
,3,5-Trimethylbenzene	ND	0.50		ug/L			06/12/20 03:45	1
,3-Dichlorobenzene	ND	0.50		ug/L			06/12/20 03:45	1
,3-Dichloropropane	ND	0.50		ug/L			06/12/20 03:45	
,4-Dichlorobenzene	ND	0.50		ug/L			06/12/20 03:45	1
2,2-Dichloropropane	ND	1.0		ug/L			06/12/20 03:45	1
-Chlorotoluene	ND	0.50		ug/L			06/12/20 03:45	
Chlorotoluene	ND	0.50		ug/L			06/12/20 03:45	1
Benzene	ND	0.50		ug/L			06/12/20 03:45	1
Bromobenzene	ND	0.50		ug/L			06/12/20 03:45	· · · · · · · 1
Bromochloromethane	ND	0.50		ug/L			06/12/20 03:45	1
Bromodichloromethane	ND	0.50		ug/L			06/12/20 03:45	1
Bromoform	ND	1.0					06/12/20 03:45	1
Bromomethane	ND	0.50		ug/L			06/12/20 03:45	1
Carbon tetrachloride	ND	0.50		ug/L ug/L			06/12/20 03:45	1
Chlorobenzene	ND	0.50		ug/L			06/12/20 03:45	
Chloroethane	ND	1.0					06/12/20 03:45	1
Chloroform	ND	0.50		ug/L				-
Chloromethane	ND	0.50		ug/L			06/12/20 03:45 06/12/20 03:45	
	ND	0.50		ug/L			06/12/20 03:45	-
is-1,2-Dichloroethene	ND	0.50		ug/L			06/12/20 03:45	-
is-1,3-Dichloropropene	ND	0.50		ug/L				ا 1
Dibromochloromethane				ug/L			06/12/20 03:45	-
Dibromomethane Dichlorodifluoromethane	ND	0.50		ug/L			06/12/20 03:45	-
	ND	1.0		ug/L			06/12/20 03:45	ا م
thylbenzene	ND	0.50		ug/L			06/12/20 03:45	ا م
lexachlorobutadiene	ND	0.50		ug/L			06/12/20 03:45	1
sopropylbenzene	ND	0.50		ug/L			06/12/20 03:45	1 ر
n,p-Xylene	ND	1.0		ug/L			06/12/20 03:45	1
Nethylene Chloride	ND	2.0		ug/L			06/12/20 03:45	1
laphthalene	1.2	1.0		ug/L			06/12/20 03:45	1
-Butylbenzene	ND	1.0		ug/L			06/12/20 03:45	1
I-Propylbenzene	ND	0.50		ug/L			06/12/20 03:45	1
-Xylene -Isopropyltoluene	ND ND	0.50 0.50		ug/L			06/12/20 03:45 06/12/20 03:45	1

Toluene-d8 (Surr)

Client Sample ID: TB-200604 Date Collected: 06/04/20 13:40 Date Received: 06/04/20 16:05

Job ID: 720-98770-1

Lab Sample ID: 720-98770-5 Matrix: Water

06/12/20 03:45

1

Method: 8260B - Volatile O Analyte	· ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50	 ug/L			06/12/20 03:45	1
sec-Butylbenzene	ND		0.50	ug/L			06/12/20 03:45	1
tert-Butylbenzene	ND		0.50	ug/L			06/12/20 03:45	1
Tetrachloroethene	ND		0.50	ug/L			06/12/20 03:45	1
Toluene	ND		0.50	ug/L			06/12/20 03:45	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/12/20 03:45	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/12/20 03:45	1
Trichloroethene	ND		0.50	ug/L			06/12/20 03:45	1
Trichlorofluoromethane	ND		0.50	ug/L			06/12/20 03:45	1
Vinyl chloride	ND		0.50	ug/L			06/12/20 03:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120				06/12/20 03:45	1
Dibromofluoromethane (Surr)	90		76 - 132				06/12/20 03:45	1

80 - 128

Surrogate Summary

Method: 8260B - Volatile Organic Compounds (GC/MS) Matrix: Water

			Pe	ercent Surrog	ate Recovery (A	cceptan
		BFB	DBFM	TOL		
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)		
720-98770-1	OS8-W-200603	105	93	103		
720-98770-2	OS3-W-200602	104	92	103		
720-98770-3	OS357-W-200602	106	90	103		
720-98770-4	SRE-W-200603	105	93	102		
720-98770-5	TB-200604	106	90	106		
LCS 440-611577/2-A	Lab Control Sample	107	95	102		
LCS 440-611806/1002	Lab Control Sample	103	92	101		
LCS 440-611968/1002	Lab Control Sample	105	94	101		
LCS 440-612382/1002	Lab Control Sample	106	93	105		
MB 440-611577/1-A	Method Blank	104	97	104		
MB 440-611806/4	Method Blank	105	95	105		
MB 440-611968/4	Method Blank	108	92	106		
MB 440-612382/4	Method Blank	105	95	109		
Surrogato Logand						
Surrogate Legend BFB = 4-Bromofluorobe						

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Job ID: 720-98770-1

Prep Type: Total/NA

2 3 4 5 6 7 8 9 10 11 12 13 14 14

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

Lab Sample ID: MB 440-611577/1-A **Matrix: Water**

Analysis Batch: 611806

		MB						
Analyte		Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,1,1-Trichloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,1,2,2-Tetrachloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,1,2-Trichloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,1-Dichloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,1-Dichloroethene	ND		5.0	ug/L			06/09/20 09:04	1
1,1-Dichloropropene	ND		5.0	ug/L			06/09/20 09:04	1
1,2,3-Trichlorobenzene	ND		10	ug/L			06/09/20 09:04	1
1,2,3-Trichloropropane	ND		10	ug/L			06/09/20 09:04	1
1,2,4-Trichlorobenzene	ND		10	ug/L			06/09/20 09:04	1
1,2,4-Trimethylbenzene	ND		5.0	ug/L			06/09/20 09:04	1
1,2-Dibromo-3-Chloropropane	ND		10	ug/L			06/09/20 09:04	1
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			06/09/20 09:04	1
1,2-Dichlorobenzene	ND		5.0	ug/L			06/09/20 09:04	1
1,2-Dichloroethane	ND		5.0	ug/L			06/09/20 09:04	1
1,2-Dichloropropane	ND		5.0	ug/L			06/09/20 09:04	1
1,3,5-Trimethylbenzene	ND		5.0	ug/L			06/09/20 09:04	1
1,3-Dichlorobenzene	ND		5.0	ug/L			06/09/20 09:04	1
1,3-Dichloropropane	ND		5.0	ug/L			06/09/20 09:04	1
1,4-Dichlorobenzene	ND		5.0	ug/L			06/09/20 09:04	1
2,2-Dichloropropane	ND		10	ug/L			06/09/20 09:04	1
2-Chlorotoluene	ND		5.0	ug/L			06/09/20 09:04	1
4-Chlorotoluene	ND		5.0	ug/L			06/09/20 09:04	1
Benzene	ND		5.0	ug/L			06/09/20 09:04	1
Bromobenzene	ND		5.0	ug/L			06/09/20 09:04	1
Bromochloromethane	ND		5.0	ug/L			06/09/20 09:04	1
Bromodichloromethane	ND		5.0	ug/L			06/09/20 09:04	1
Bromoform	ND		10	ug/L			06/09/20 09:04	1
Bromomethane	ND		5.0	ug/L			06/09/20 09:04	1
Carbon tetrachloride	ND		5.0	ug/L			06/09/20 09:04	1
Chlorobenzene	ND		5.0	ug/L			06/09/20 09:04	1
Chloroethane	ND		10	ug/L			06/09/20 09:04	1
Chloroform	ND		5.0	ug/L			06/09/20 09:04	1
Chloromethane	ND		5.0	ug/L			06/09/20 09:04	1
cis-1,2-Dichloroethene	ND		5.0	ug/L			06/09/20 09:04	1
cis-1,3-Dichloropropene	ND		5.0	ug/L			06/09/20 09:04	1
Dibromochloromethane	ND		5.0	ug/L			06/09/20 09:04	1
Dibromomethane	ND		5.0	ug/L			06/09/20 09:04	1
Dichlorodifluoromethane	ND		10	ug/L			06/09/20 09:04	1
Ethylbenzene	ND		5.0	ug/L			06/09/20 09:04	1
Hexachlorobutadiene	ND		5.0	ug/L			06/09/20 09:04	1
Isopropylbenzene	ND		5.0	ug/L			06/09/20 09:04	1
m,p-Xylene	ND		10	ug/L			06/09/20 09:04	1
Methylene Chloride	ND		20	ug/L			06/09/20 09:04	1
Naphthalene	ND		10	ug/L			06/09/20 09:04	1
n-Butylbenzene	ND		10	ug/L			06/09/20 09:04	1
N-Propylbenzene	ND		5.0	ug/L			06/09/20 09:04	1
o-Xylene	ND		5.0	ug/L			06/09/20 09:04	1

8

Eurofins TestAmerica, Pleasanton

Job ID: 720-98770-1

Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Method Blank

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

97

104

Lab Sample ID: MB 440-611577/1-A Matrix: Water

Analysis Batch: 611806

	MB	мв							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		5.0		ug/L			06/09/20 09:04	1
Styrene	ND		5.0		ug/L			06/09/20 09:04	1
sec-Butylbenzene	ND		5.0		ug/L			06/09/20 09:04	1
tert-Butylbenzene	ND		5.0		ug/L			06/09/20 09:04	1
Tetrachloroethene	ND		5.0		ug/L			06/09/20 09:04	1
Toluene	ND		5.0		ug/L			06/09/20 09:04	1
trans-1,2-Dichloroethene	ND		5.0		ug/L			06/09/20 09:04	1
trans-1,3-Dichloropropene	ND		5.0		ug/L			06/09/20 09:04	1
Trichloroethene	ND		5.0		ug/L			06/09/20 09:04	1
Trichlorofluoromethane	ND		5.0		ug/L			06/09/20 09:04	1
Vinyl chloride	ND		5.0		ug/L			06/09/20 09:04	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120			-		06/09/20 09:04	1

76 - 132

80 - 128

Lab Sample ID: MB 440-611806/4 **Matrix: Water** Analysis Batch: 611806

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

MB MB **Result Qualifier** RL MDL Unit D Prepared Dil Fac Analyte Analyzed 0.50 ND ug/L 1,1,1,2-Tetrachloroethane 06/09/20 08:37 1 1,1,1-Trichloroethane ND 0.50 ug/L 06/09/20 08:37 1 1.1.2.2-Tetrachloroethane ND 0.50 ug/L 06/09/20 08:37 1 1,1,2-Trichloroethane ND 0.50 ug/L 06/09/20 08:37 1 ND 1,1-Dichloroethane 0.50 ug/L 06/09/20 08:37 1 1,1-Dichloroethene ND 0.50 ug/L 06/09/20 08:37 1 ND 0.50 ug/L 06/09/20 08:37 1,1-Dichloropropene 1 1,2,3-Trichlorobenzene ND 1.0 ug/L 06/09/20 08:37 1 1,2,3-Trichloropropane ND 1.0 ug/L 06/09/20 08:37 1 ND 1,2,4-Trichlorobenzene 1.0 ug/L 06/09/20 08:37 1 1,2,4-Trimethylbenzene ND 0.50 ug/L 06/09/20 08:37 1 1,2-Dibromo-3-Chloropropane ND 1.0 ug/L 06/09/20 08:37 1 1,2-Dibromoethane (EDB) ND 0.50 06/09/20 08:37 ug/L 1 ND 0.50 1,2-Dichlorobenzene ug/L 06/09/20 08:37 1 1,2-Dichloroethane ND 0.50 06/09/20 08:37 ug/L 1 ND 0.50 1,2-Dichloropropane ug/L 06/09/20 08:37 1 1,3,5-Trimethylbenzene ND 0.50 ug/L 06/09/20 08:37 1 ND 0.50 1,3-Dichlorobenzene ug/L 06/09/20 08:37 1 1,3-Dichloropropane ND 0.50 ug/L 06/09/20 08:37 1 1,4-Dichlorobenzene ND 0.50 06/09/20 08:37 ug/L 1 2,2-Dichloropropane ND 1.0 ug/L 06/09/20 08:37 1 2-Chlorotoluene ND 0.50 ug/L 06/09/20 08:37 1 ug/L 4-Chlorotoluene ND 0.50 06/09/20 08:37 1 Benzene ND 0.50 ug/L 06/09/20 08:37 1 ND 0.50 ug/L 06/09/20 08:37 Bromobenzene 1 Bromochloromethane ND 0.50 ug/L 06/09/20 08:37

Eurofins TestAmerica, Pleasanton

6/24/2020 (Rev. 1)

06/09/20 09:04

06/09/20 09:04

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

1

5

8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-611806/4

Matrix: Water Α

Analysis Batch: 611806							
-	MB	МВ					
Analyte	Result	Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		0.50	ug/L		06/09/20 08:37	1
Bromoform	ND		1.0	ug/L		06/09/20 08:37	1
Bromomethane	ND		0.50	ug/L		06/09/20 08:37	1
Carbon tetrachloride	ND		0.50	ug/L		06/09/20 08:37	1
Chlorobenzene	ND		0.50	ug/L		06/09/20 08:37	1
Chloroethane	ND		1.0	ug/L		06/09/20 08:37	1
Chloroform	ND		0.50	ug/L		06/09/20 08:37	1
Chloromethane	ND		0.50	ug/L		06/09/20 08:37	1
cis-1,2-Dichloroethene	ND		0.50	ug/L		06/09/20 08:37	1
cis-1,3-Dichloropropene	ND		0.50	ug/L		06/09/20 08:37	1
Dibromochloromethane	ND		0.50	ug/L		06/09/20 08:37	1
Dibromomethane	ND		0.50	ug/L		06/09/20 08:37	1
Dichlorodifluoromethane	ND		1.0	ug/L		06/09/20 08:37	1
Ethylbenzene	ND		0.50	ug/L		06/09/20 08:37	1
Hexachlorobutadiene	ND		0.50	ug/L		06/09/20 08:37	1
Isopropylbenzene	ND		0.50	ug/L		06/09/20 08:37	1
m,p-Xylene	ND		1.0	ug/L		06/09/20 08:37	1
Methylene Chloride	ND		2.0	ug/L		06/09/20 08:37	1
Naphthalene	ND		1.0	ug/L		06/09/20 08:37	1
n-Butylbenzene	ND		1.0	ug/L		06/09/20 08:37	1
N-Propylbenzene	ND		0.50	ug/L		06/09/20 08:37	1
o-Xylene	ND		0.50	ug/L		06/09/20 08:37	1
p-Isopropyltoluene	ND		0.50	ug/L		06/09/20 08:37	1
Styrene	ND		0.50	ug/L		06/09/20 08:37	1
sec-Butylbenzene	ND		0.50	ug/L		06/09/20 08:37	1
tert-Butylbenzene	ND		0.50	ug/L		06/09/20 08:37	1
Tetrachloroethene	ND		0.50	ug/L		06/09/20 08:37	1
Toluene	ND		0.50	ug/L		06/09/20 08:37	1
trans-1,2-Dichloroethene	ND		0.50	ug/L		06/09/20 08:37	1
trans-1,3-Dichloropropene	ND		0.50	ug/L		06/09/20 08:37	1
Trichloroethene	ND		0.50	ug/L		06/09/20 08:37	1
Trichlorofluoromethane	ND		0.50	ug/L		06/09/20 08:37	1
Vinyl chloride	ND		0.50	ug/L		06/09/20 08:37	1

	MB	MB	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	95		76 - 132
Toluene-d8 (Surr)	105		80 - 128

Lab Sample ID: LCS 440-611577/2-A **Matrix: Water** Analysis Batch: 611806

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	100	93.5		ug/L		94	60 - 141	
1,1,1-Trichloroethane	100	74.1		ug/L		74	70 - 130	
1,1,2,2-Tetrachloroethane	100	110		ug/L		110	63 - 130	
1,1,2-Trichloroethane	100	114		ug/L		114	70 - 130	

Eurofins TestAmerica, Pleasanton

Analyzed

06/09/20 08:37

06/09/20 08:37

06/09/20 08:37

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Prepared

1

1

1

Dil Fac

Client Sample ID: Lab Control Sample

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-611577/2-A Matrix: Water

Analysis Batch: 611806

Spike Added 100 100 100 100 100 100 100 10		LCS Qualifier	Unit ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	<u> </u>	%Rec 98 85 97 89 94 97 111 81 96 107 90 106 110 107	%Rec. Limits 64 - 130 70 - 130 70 - 130 60 - 140 63 - 130 60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130
100 100 100 100 100 100 100 100 100 100	85.0 96.7 89.3 94.3 96.5 111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		85 97 89 94 97 111 81 96 107 90 106 110 107	70 - 130 70 - 130 60 - 140 63 - 130 60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	96.7 89.3 94.3 96.5 111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		97 89 94 97 111 81 96 107 90 106 110 107	70 - 130 60 - 140 63 - 130 60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	89.3 94.3 96.5 111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		89 94 97 111 81 96 107 90 106 110 107	60 - 140 63 - 130 60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	94.3 96.5 111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		94 97 111 81 96 107 90 106 110 107	63 - 130 60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	96.5 111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		97 111 81 96 107 90 106 110 107	60 - 140 70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	111 81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		111 81 96 107 90 106 110 107	70 - 135 52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	81.0 96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L		81 96 107 90 106 110 107	52 - 140 70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	96.3 107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L		96 107 90 106 110 107	70 - 130 70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100 100	107 89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L ug/L		107 90 106 110 107	70 - 130 57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100 100	89.7 106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L ug/L		90 106 110 107	57 - 138 67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100 100	106 110 107 100 110 93.6		ug/L ug/L ug/L ug/L ug/L		106 110 107	67 - 130 70 - 136 70 - 130
100 100 100 100 100 100 100	110 107 100 110 93.6		ug/L ug/L ug/L ug/L		110 107	70 - 136 70 - 130
100 100 100 100 100 100	107 100 110 93.6		ug/L ug/L ug/L		107	70 - 130
100 100 100 100 100	100 110 93.6		ug/L ug/L			
100 100 100 100	110 93.6		ug/L		100	70 120
100 100 100 100	110 93.6		-			70 - 130
100 100			ug/L		110	70 - 130
100 100			ug/L		94	68 - 141
			ug/L		104	70 - 130
100	103		ug/L		103	70 - 130
100	106		-		106	68 - 130
100	99.8				100	70 - 130
			-		99	70 - 130
			-			70 - 132
					75	60 - 148
			-		91	64 - 139
			-			60 - 150
						70 - 130
			-			64 - 135
	83.6		-		84	70 ₋ 130
					114	47 - 140
			-			70 - 133
100			-		102	70 - 133
100					86	69 - 145
					94	70 - 130
			•		81	29 - 150
						70 - 130
					91	10 - 150
100			-			70 - 136
						70 - 130
						52 - 130
						60 - 140
						65 - 150
						67 - 139
			-			70 - 130
						70 - 132
			-			70 - 132
			-			70 - 138
						70 - 130 70 - 130
			-			70 - 130
	100 100 100 100 100 100 100 100 100 100	10010610099.810098.910090.110074.710091.310075.410010210083.610010210083.610010210086.210094.410099.110090.6100103100106100103100106100104100109100101100108100101100103	100 106 100 99.8 100 98.9 100 90.1 100 91.3 100 74.7 100 91.3 100 75.4 100 106 100 102 100 83.6 100 114 100 94.9 100 102 100 86.2 100 94.4 100 99.1 100 90.6 100 103 100 106 100 104 100 92.3 100 109 100 101 100 108 100 101 100 103	100 106 ug/L 100 99.8 ug/L 100 98.9 ug/L 100 90.1 ug/L 100 91.3 ug/L 100 91.3 ug/L 100 75.4 ug/L 100 106 ug/L 100 102 ug/L 100 102 ug/L 100 114 ug/L 100 94.9 ug/L 100 94.9 ug/L 100 102 ug/L 100 94.9 ug/L 100 94.4 ug/L 100 90.6 ug/L 100 90.6 ug/L 100 103 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 108 ug/L 100 <t< td=""><td>100 106 ug/L 100 99.8 ug/L 100 98.9 ug/L 100 90.1 ug/L 100 91.3 ug/L 100 91.3 ug/L 100 74.7 ug/L 100 91.3 ug/L 100 75.4 ug/L 100 102 ug/L 100 102 ug/L 100 114 ug/L 100 12 ug/L 100 102 ug/L 100 94.9 ug/L 100 94.9 ug/L 100 94.4 ug/L 100 90.6 ug/L 100 90.6 ug/L 100 103 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 <t< td=""><td>100$106$$ug/L$$106$$100$$99.8$$ug/L$$99$$100$$90.1$$ug/L$$90$$100$$74.7$$ug/L$$75$$100$$91.3$$ug/L$$91$$100$$75.4$$ug/L$$75$$100$$106$$ug/L$$106$$100$$106$$ug/L$$106$$100$$102$$ug/L$$102$$100$$83.6$$ug/L$$84$$100$$114$$ug/L$$95$$100$$102$$ug/L$$95$$100$$102$$ug/L$$95$$100$$102$$ug/L$$94$$100$$86.2$$ug/L$$94$$100$$94.4$$ug/L$$94$$100$$90.6$$ug/L$$91$$100$$90.6$$ug/L$$91$$100$$103$$ug/L$$106$$100$$104$$ug/L$$104$$100$$92.3$$ug/L$$106$$100$$104$$ug/L$$106$$100$$106$$ug/L$$108$$100$$108$$ug/L$$108$$100$$101$$ug/L$$101$$100$$103$$ug/L$$108$</td></t<></td></t<>	100 106 ug/L 100 99.8 ug/L 100 98.9 ug/L 100 90.1 ug/L 100 91.3 ug/L 100 91.3 ug/L 100 74.7 ug/L 100 91.3 ug/L 100 75.4 ug/L 100 102 ug/L 100 102 ug/L 100 114 ug/L 100 12 ug/L 100 102 ug/L 100 94.9 ug/L 100 94.9 ug/L 100 94.4 ug/L 100 90.6 ug/L 100 90.6 ug/L 100 103 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 104 ug/L 100 <t< td=""><td>100$106$$ug/L$$106$$100$$99.8$$ug/L$$99$$100$$90.1$$ug/L$$90$$100$$74.7$$ug/L$$75$$100$$91.3$$ug/L$$91$$100$$75.4$$ug/L$$75$$100$$106$$ug/L$$106$$100$$106$$ug/L$$106$$100$$102$$ug/L$$102$$100$$83.6$$ug/L$$84$$100$$114$$ug/L$$95$$100$$102$$ug/L$$95$$100$$102$$ug/L$$95$$100$$102$$ug/L$$94$$100$$86.2$$ug/L$$94$$100$$94.4$$ug/L$$94$$100$$90.6$$ug/L$$91$$100$$90.6$$ug/L$$91$$100$$103$$ug/L$$106$$100$$104$$ug/L$$104$$100$$92.3$$ug/L$$106$$100$$104$$ug/L$$106$$100$$106$$ug/L$$108$$100$$108$$ug/L$$108$$100$$101$$ug/L$$101$$100$$103$$ug/L$$108$</td></t<>	100 106 ug/L 106 100 99.8 ug/L 99 100 90.1 ug/L 90 100 74.7 ug/L 75 100 91.3 ug/L 91 100 75.4 ug/L 75 100 106 ug/L 106 100 106 ug/L 106 100 102 ug/L 102 100 83.6 ug/L 84 100 114 ug/L 95 100 102 ug/L 95 100 102 ug/L 95 100 102 ug/L 94 100 86.2 ug/L 94 100 94.4 ug/L 94 100 90.6 ug/L 91 100 90.6 ug/L 91 100 103 ug/L 106 100 104 ug/L 104 100 92.3 ug/L 106 100 104 ug/L 106 100 106 ug/L 108 100 108 ug/L 108 100 101 ug/L 101 100 103 ug/L 108

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-611577/2-A **Matrix: Water**

Analysis Batch: 611806

-	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Toluene	100	102		ug/L		102	70 - 130
trans-1,2-Dichloroethene	100	97.4		ug/L		97	70 - 130
trans-1,3-Dichloropropene	100	95.6		ug/L		96	70 - 132
Trichloroethene	100	97.8		ug/L		98	70 - 130
Trichlorofluoromethane	100	74.2		ug/L		74	60 - 150
Vinyl chloride	100	104		ug/L		104	59 ₋ 133

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	95		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Lab Sample ID: LCS 440-611806/1002 Matrix: Water Analysis Batch: 611806

Analysis Baton. of Tooo	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	25.0	24.0		ug/L		96	60 - 141
1,1,1-Trichloroethane	25.0	20.2		ug/L		81	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.1		ug/L		113	63 - 130
1,1,2-Trichloroethane	25.0	27.6		ug/L		110	70 - 130
1,1-Dichloroethane	25.0	26.1		ug/L		104	64 - 130
1,1-Dichloroethene	25.0	23.9		ug/L		95	70 - 130
1,1-Dichloropropene	25.0	26.6		ug/L		106	70 - 130
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	60 - 140
1,2,3-Trichloropropane	25.0	24.3		ug/L		97	63 - 130
1,2,4-Trichlorobenzene	25.0	25.2		ug/L		101	60 - 140
1,2,4-Trimethylbenzene	25.0	28.8		ug/L		115	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.4		ug/L		89	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.7		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	27.6		ug/L		110	70 - 130
1,2-Dichloroethane	25.0	22.3		ug/L		89	57 - 138
1,2-Dichloropropane	25.0	26.8		ug/L		107	67 - 130
1,3,5-Trimethylbenzene	25.0	29.5		ug/L		118	70 - 136
1,3-Dichlorobenzene	25.0	27.6		ug/L		110	70 - 130
1,3-Dichloropropane	25.0	26.0		ug/L		104	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	24.9		ug/L		100	68 - 141
2-Chlorotoluene	25.0	27.0		ug/L		108	70 - 130
4-Chlorotoluene	25.0	26.9		ug/L		108	70 - 130
Benzene	25.0	27.6		ug/L		110	68 - 130
Bromobenzene	25.0	24.8		ug/L		99	70 - 130
Bromochloromethane	25.0	25.2		ug/L		101	70 - 130
Bromodichloromethane	25.0	23.1		ug/L		92	70 - 132
Bromoform	25.0	19.6		ug/L		78	60 - 148
Bromomethane	25.0	24.4		ug/L		98	64 - 139
Carbon tetrachloride	25.0	21.3		ug/L		85	60 - 150
Chlorobenzene	25.0	26.5		ug/L		106	70 - 130

Client Sample ID: Lab Control Sample

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

Client Sample ID: Lab Control Sample

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-611806/1002 Matrix: Water

Analysis Batch: 611806

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloroethane	25.0	27.2		ug/L		109	64 - 135	
Chloroform	25.0	21.4		ug/L		86	70 - 130	
Chloromethane	25.0	30.4		ug/L		122	47 - 140	
cis-1,2-Dichloroethene	25.0	24.3		ug/L		97	70 - 133	
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	70 - 133	
Dibromochloromethane	25.0	22.7		ug/L		91	69 - 145	
Dibromomethane	25.0	24.1		ug/L		96	70 - 130	
Dichlorodifluoromethane	25.0	23.6		ug/L		94	29 - 150	
Ethylbenzene	25.0	25.9		ug/L		104	70 - 130	
Hexachlorobutadiene	25.0	23.8		ug/L		95	10 - 150	
sopropylbenzene	25.0	27.3		ug/L		109	70 - 136	
m,p-Xylene	25.0	27.5		ug/L		110	70 - 130	
Methylene Chloride	25.0	24.1		ug/L		96	52 - 130	
Naphthalene	25.0	25.9		ug/L		104	60 - 140	
n-Butylbenzene	25.0	29.2		ug/L		117	65 - 150	
N-Propylbenzene	25.0	29.2		ug/L		117	67 - 139	
o-Xylene	25.0	27.8		ug/L		111	70 - 130	
p-Isopropyltoluene	25.0	29.7		ug/L		119	70 - 132	
Styrene	25.0	27.3		ug/L		109	70 - 134	
sec-Butylbenzene	25.0	29.9		ug/L		119	70 - 138	
ert-Butylbenzene	25.0	28.9		ug/L		116	70 - 130	
Tetrachloroethene	25.0	25.4		ug/L		102	70 - 130	
Foluene	25.0	26.7		ug/L		107	70 - 130	
rans-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 130	
rans-1,3-Dichloropropene	25.0	25.7		ug/L		103	70 - 132	
Frichloroethene	25.0	26.5		ug/L		106	70 - 130	
Trichlorofluoromethane	25.0	20.8		ug/L		83	60 - 150	
Vinyl chloride	25.0	27.9		ug/L		112	59 - 133	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	92		76 - 132
Toluene-d8 (Surr)	101		80 - 128

Lab Sample ID: MB 440-611968/4 Matrix: Water Analysis Batch: 611968

	MB	мв								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/09/20 21:05	1	
1,1,1-Trichloroethane	ND		0.50		ug/L			06/09/20 21:05	1	
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/09/20 21:05	1	
1,1,2-Trichloroethane	ND		0.50		ug/L			06/09/20 21:05	1	
1,1-Dichloroethane	ND		0.50		ug/L			06/09/20 21:05	1	
1,1-Dichloroethene	ND		0.50		ug/L			06/09/20 21:05	1	
1,1-Dichloropropene	ND		0.50		ug/L			06/09/20 21:05	1	
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/09/20 21:05	1	
1,2,3-Trichloropropane	ND		1.0		ug/L			06/09/20 21:05	1	

Eurofins TestAmerica, Pleasanton

Client Sample ID: Method Blank

Prep Type: Total/NA

5

8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-611968/4 Matrix: Water

Analysis Batch: 611968

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

-	MB	MB						
Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0	ug/L			06/09/20 21:05	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	ug/L			06/09/20 21:05	1
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/09/20 21:05	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/09/20 21:05	1
1,2-Dichloroethane	ND		0.50	ug/L			06/09/20 21:05	1
1,2-Dichloropropane	ND		0.50	ug/L			06/09/20 21:05	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/09/20 21:05	1
1,3-Dichloropropane	ND		0.50	ug/L			06/09/20 21:05	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/09/20 21:05	1
2,2-Dichloropropane	ND		1.0	ug/L			06/09/20 21:05	1
2-Chlorotoluene	ND		0.50	ug/L			06/09/20 21:05	1
4-Chlorotoluene	ND		0.50	ug/L			06/09/20 21:05	1
Benzene	ND		0.50	ug/L			06/09/20 21:05	1
Bromobenzene	ND		0.50	ug/L			06/09/20 21:05	
Bromochloromethane	ND		0.50	ug/L			06/09/20 21:05	1
Bromodichloromethane	ND		0.50	ug/L			06/09/20 21:05	1
Bromoform	ND		1.0	ug/L			06/09/20 21:05	
Bromomethane	ND		0.50	ug/L			06/09/20 21:05	1
Carbon tetrachloride	ND		0.50	ug/L			06/09/20 21:05	1
Chlorobenzene	ND		0.50	· · · · · · · · · · · · · · · · · · ·			06/09/20 21:05	1
Chloroethane	ND		1.0	ug/L			06/09/20 21:05	1
Chloroform	ND		0.50	ug/L			06/09/20 21:05	1
Chloromethane			0.50	ug/L			06/09/20 21:05	1
	ND ND		0.50	ug/L			06/09/20 21:05	
cis-1,2-Dichloroethene	ND			ug/L				1
cis-1,3-Dichloropropene Dibromochloromethane			0.50	ug/L			06/09/20 21:05	1
	ND		0.50	ug/L			06/09/20 21:05	1
Dibromomethane	ND		0.50	ug/L			06/09/20 21:05	1
Dichlorodifluoromethane	ND		1.0	ug/L			06/09/20 21:05	1
Ethylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
Hexachlorobutadiene	ND		0.50	ug/L			06/09/20 21:05	1
Isopropylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
m,p-Xylene	ND		1.0	ug/L			06/09/20 21:05	1
Methylene Chloride	ND		2.0	ug/L			06/09/20 21:05	1
Naphthalene	ND		1.0	ug/L			06/09/20 21:05	1
n-Butylbenzene	ND		1.0	ug/L			06/09/20 21:05	1
N-Propylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
o-Xylene	ND		0.50	ug/L			06/09/20 21:05	1
p-Isopropyltoluene	ND		0.50	ug/L			06/09/20 21:05	1
Styrene	ND		0.50	ug/L			06/09/20 21:05	1
sec-Butylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
tert-Butylbenzene	ND		0.50	ug/L			06/09/20 21:05	1
Tetrachloroethene	ND		0.50	ug/L			06/09/20 21:05	1
Toluene	ND		0.50	ug/L			06/09/20 21:05	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/09/20 21:05	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/09/20 21:05	1
Trichloroethene	ND		0.50	ug/L			06/09/20 21:05	1
Trichlorofluoromethane	ND		0.50	ug/L			06/09/20 21:05	1

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

QC Sample Results

06/09/20 21:05

06/09/20 21:05

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

1

1

8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

92

106

Lab Sample ID: MB 440-611968/4 **Client Sample ID: Method Blank Matrix: Water** Prep Type: Total/NA Analysis Batch: 611968 MB MB MDL Unit Analyte **Result Qualifier** Dil Fac RL D Prepared Analyzed Vinyl chloride ND 0.50 ug/L 06/09/20 21:05 1 MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 108 80 - 120 4-Bromofluorobenzene (Surr) 06/09/20 21:05 1

76 - 132

80 - 128

Lab Sample ID: LCS 440-611968/1002 **Matrix: Water** Analysis Batch: 611968

Analysis Batch: 611968	Spike	LCS	LCS				%Rec.
Analyte	Added	-	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	25.0	22.3		ug/L		89	60 - 141
1,1,1-Trichloroethane	25.0	18.7		ug/L		75	70 - 130
1,1,2,2-Tetrachloroethane	25.0	30.6		ug/L		122	63 - 130
1,1,2-Trichloroethane	25.0	28.3		ug/L		113	70 - 130
1,1-Dichloroethane	25.0	24.6		ug/L		98	64 - 130
1,1-Dichloroethene	25.0	22.5		ug/L		90	70 - 130
1,1-Dichloropropene	25.0	25.3		ug/L		101	70 - 130
1,2,3-Trichlorobenzene	25.0	23.8		ug/L		95	60 - 140
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	63 - 130
1,2,4-Trichlorobenzene	25.0	24.5		ug/L		98	60 - 140
1,2,4-Trimethylbenzene	25.0	28.3		ug/L		113	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	24.9		ug/L		99	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.6		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	27.6		ug/L		110	70 - 130
1,2-Dichloroethane	25.0	21.7		ug/L		87	57 - 138
1,2-Dichloropropane	25.0	28.0		ug/L		112	67 - 130
1,3,5-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 136
1,3-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130
1,3-Dichloropropane	25.0	27.1		ug/L		109	70 - 130
1,4-Dichlorobenzene	25.0	26.9		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	22.4		ug/L		90	68 - 141
2-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
4-Chlorotoluene	25.0	26.1		ug/L		104	70 - 130
Benzene	25.0	27.5		ug/L		110	68 - 130
Bromobenzene	25.0	24.7		ug/L		99	70 - 130
Bromochloromethane	25.0	26.6		ug/L		106	70 - 130
Bromodichloromethane	25.0	22.9		ug/L		92	70 - 132
Bromoform	25.0	20.1		ug/L		80	60 - 148
Bromomethane	25.0	23.2		ug/L		93	64 - 139
Carbon tetrachloride	25.0	19.1		ug/L		76	60 - 150
Chlorobenzene	25.0	25.6		ug/L		103	70 - 130
Chloroethane	25.0	25.3		ug/L		101	64 - 135
Chloroform	25.0	21.1		ug/L		84	70 - 130
Chloromethane	25.0	27.3		ug/L		109	47 - 140
cis-1,2-Dichloroethene	25.0	24.1		ug/L		96	70 - 133
cis-1,3-Dichloropropene	25.0	25.8		ug/L		103	70 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-611968/1002 Matrix: Water

Analysis Batch: 611968

Analysis Datch. 011900	Spike	LCS	LCS				%Rec.	5
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Dibromochloromethane	25.0	21.9		ug/L		88	69 - 145	6
Dibromomethane	25.0	25.2		ug/L		101	70 - 130	
Dichlorodifluoromethane	25.0	19.7		ug/L		79	29 - 150	
Ethylbenzene	25.0	24.5		ug/L		98	70 - 130	
Hexachlorobutadiene	25.0	21.7		ug/L		87	10 - 150	0
Isopropylbenzene	25.0	25.6		ug/L		102	70 - 136	8
m,p-Xylene	25.0	26.2		ug/L		105	70 - 130	
Methylene Chloride	25.0	23.4		ug/L		94	52 - 130	9
Naphthalene	25.0	27.3		ug/L		109	60 - 140	
n-Butylbenzene	25.0	27.4		ug/L		109	65 ₋ 150	
N-Propylbenzene	25.0	27.8		ug/L		111	67 - 139	
o-Xylene	25.0	26.3		ug/L		105	70 - 130	
p-Isopropyltoluene	25.0	27.9		ug/L		112	70 - 132	
Styrene	25.0	26.4		ug/L		105	70 - 134	
sec-Butylbenzene	25.0	28.2		ug/L		113	70 - 138	_
tert-Butylbenzene	25.0	26.8		ug/L		107	70 - 130	13
Tetrachloroethene	25.0	23.5		ug/L		94	70 - 130	
Toluene	25.0	25.5		ug/L		102	70 - 130	
trans-1,2-Dichloroethene	25.0	25.1		ug/L		100	70 - 130	
trans-1,3-Dichloropropene	25.0	25.5		ug/L		102	70 - 132	
Trichloroethene	25.0	24.8		ug/L		99	70 - 130	
Trichlorofluoromethane	25.0	18.4		ug/L		73	60 - 150	
Vinyl chloride	25.0	26.0		ug/L		104	59 ₋ 133	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132
Toluene-d8 (Surr)	101		80 - 128

Lab Sample ID: MB 440-612382/4 **Matrix: Water** Analysis Batch: 612382

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/11/20 21:17	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/11/20 21:17	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/11/20 21:17	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/11/20 21:17	1
1,1-Dichloroethane	ND		0.50		ug/L			06/11/20 21:17	1
1,1-Dichloroethene	ND		0.50		ug/L			06/11/20 21:17	1
1,1-Dichloropropene	ND		0.50		ug/L			06/11/20 21:17	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/11/20 21:17	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/11/20 21:17	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/11/20 21:17	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/11/20 21:17	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			06/11/20 21:17	1
1,2-Dibromoethane (EDB)	ND		0.50		ug/L			06/11/20 21:17	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/11/20 21:17	1

Eurofins TestAmerica, Pleasanton

Client Sample ID: Method Blank

Prep Type: Total/NA

5

8

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-612382/4 Matrix: Water

Analysis Batch: 612382

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

Analyte		MB Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane		Quaimer	0.50			Fiepaleu	- <u>06/11/20 21:17</u>	1
1,2-Dichloropropane	ND		0.50	ug/L			06/11/20 21:17	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/11/20 21:17	1
1,3-Dichloropropane	ND		0.50	ug/L			06/11/20 21:17	
1,4-Dichlorobenzene	ND		0.50	ug/L			06/11/20 21:17	1
2,2-Dichloropropane	ND		1.0	ug/L			06/11/20 21:17	1
2-Chlorotoluene	ND		0.50	ug/L			06/11/20 21:17	
4-Chlorotoluene	ND		0.50	ug/L			06/11/20 21:17	1
Benzene	ND		0.50	ug/L			06/11/20 21:17	1
Bromobenzene	ND		0.50	ug/L			06/11/20 21:17	1
Bromochloromethane	ND		0.50	ug/L			06/11/20 21:17	י 1
Bromodichloromethane	ND		0.50	ug/L			06/11/20 21:17	1
Bromoform	ND		1.0	ug/L			06/11/20 21:17	1
Bromomethane	ND		0.50	ug/L			06/11/20 21:17	1
Carbon tetrachloride	ND		0.50				06/11/20 21:17	1
Chlorobenzene	ND		0.50	ug/L			06/11/20 21:17	ı 1
Chloroethane	ND		1.0	ug/L			06/11/20 21:17	1
Chloroform	ND		0.50	ug/L ug/L			06/11/20 21:17	1
Chloromethane	ND		0.50	-			06/11/20 21:17	ا 1
	ND		0.50	ug/L			06/11/20 21:17	1
cis-1,2-Dichloroethene	ND		0.50	ug/L				
cis-1,3-Dichloropropene				ug/L			06/11/20 21:17	1
Dibromochloromethane	ND		0.50	ug/L			06/11/20 21:17	1
Dibromomethane	ND		0.50	ug/L			06/11/20 21:17	1
Dichlorodifluoromethane	ND		1.0	ug/L			06/11/20 21:17	1
Ethylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
Hexachlorobutadiene	ND		0.50	ug/L			06/11/20 21:17	1
Isopropylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
m,p-Xylene	ND		1.0	ug/L			06/11/20 21:17	1
Methylene Chloride	ND		2.0	ug/L			06/11/20 21:17	1
Naphthalene	ND		1.0	ug/L			06/11/20 21:17	1
n-Butylbenzene	ND		1.0	ug/L			06/11/20 21:17	1
N-Propylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
o-Xylene	ND		0.50	ug/L			06/11/20 21:17	1
p-Isopropyltoluene	ND		0.50	ug/L			06/11/20 21:17	1
Styrene	ND		0.50	ug/L			06/11/20 21:17	1
sec-Butylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
tert-Butylbenzene	ND		0.50	ug/L			06/11/20 21:17	1
Tetrachloroethene	ND		0.50	ug/L			06/11/20 21:17	1
Toluene	ND		0.50	ug/L			06/11/20 21:17	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/11/20 21:17	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/11/20 21:17	1
Trichloroethene	ND		0.50	ug/L			06/11/20 21:17	1
Trichlorofluoromethane	ND		0.50	ug/L			06/11/20 21:17	1
Vinyl chloride	ND		0.50	ug/L			06/11/20 21:17	1
	МВ	MB						
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			80 - 120		_		06/11/20 21:17	1

QC Sample Results

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

8

Lab Sample ID: MB 440-612382/4

Matrix: Water Analysis Batch: 612382

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		76 - 132		06/11/20 21:17	1
Toluene-d8 (Surr)	109		80 - 128		06/11/20 21:17	1

Lab Sample ID: LCS 440-612382/1002 Matrix: Water Analysis Batch: 612382

Analysis Batch: 612382	Spike	1.05	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane		24.1		ug/L		96	60 - 141
1,1,1-Trichloroethane	25.0	21.4		ug/L		86	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.1		ug/L		108	63 - 130
1,1,2-Trichloroethane	25.0	27.3		ug/L		109	70 ₋ 130
1,1-Dichloroethane	25.0	26.7		ug/L		107	64 - 130
1,1-Dichloroethene	25.0	24.4		ug/L		98	70 - 130
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	22.8		ug/L		91	60 - 140
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	60 - 140
1,2,4-Trimethylbenzene	25.0	29.9		ug/L		120	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.8		ug/L		91	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.2		ug/L		97	70 - 130
1,2-Dichlorobenzene	25.0	27.8		ug/L		111	70 - 130
1,2-Dichloroethane	25.0	22.4		ug/L		90	57 - 138
1,2-Dichloropropane	25.0	27.7		ug/L		111	67 - 130
1,3,5-Trimethylbenzene	25.0	29.9		ug/L		120	70 - 136
1,3-Dichlorobenzene	25.0	27.8		ug/L		111	70 - 130
1,3-Dichloropropane	25.0	24.5		ug/L		98	70 - 130
1,4-Dichlorobenzene	25.0	27.5		ug/L		110	70 - 130
2,2-Dichloropropane	25.0	24.9		ug/L		100	68 - 141
2-Chlorotoluene	25.0	28.2		ug/L		113	70 - 130
4-Chlorotoluene	25.0	27.4		ug/L		110	70 - 130
Benzene	25.0	28.3		ug/L		113	68 - 130
Bromobenzene	25.0	25.7		ug/L		103	70 - 130
Bromochloromethane	25.0	24.4		ug/L		98	70 - 130
Bromodichloromethane	25.0	22.8		ug/L		91	70 - 132
Bromoform	25.0	19.5		ug/L		78	60 - 148
Bromomethane	25.0	25.5		ug/L		102	64 - 139
Carbon tetrachloride	25.0	22.2		ug/L		89	60 - 150
Chlorobenzene	25.0	27.2		ug/L		109	70 - 130
Chloroethane	25.0	28.3		ug/L		113	64 - 135
Chloroform	25.0	21.8		ug/L		87	70 - 130
Chloromethane	25.0	32.8		ug/L		131	47 - 140
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	70 - 133
cis-1,3-Dichloropropene	25.0	26.3		ug/L		105	70 - 133
Dibromochloromethane	25.0	22.6		ug/L		91	69 - 145
Dibromomethane	25.0	24.0		ug/L		96	70 - 130
Dichlorodifluoromethane	25.0	26.8		ug/L		107	29 - 150
Ethylbenzene	25.0	26.6		ug/L		106	70 - 130

Client Sample ID: Lab Control Sample

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-612382/1002 Matrix: Water

Analysis Batch: 612382

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Hexachlorobutadiene	25.0	23.0		ug/L		92	10 - 150	
Isopropylbenzene	25.0	27.9		ug/L		112	70 - 136	
m,p-Xylene	25.0	28.7		ug/L		115	70 - 130	
Methylene Chloride	25.0	24.2		ug/L		97	52 - 130	
Naphthalene	25.0	24.4		ug/L		98	60 - 140	
n-Butylbenzene	25.0	29.4		ug/L		117	65 - 150	
N-Propylbenzene	25.0	29.8		ug/L		119	67 - 139	
o-Xylene	25.0	28.2		ug/L		113	70 - 130	
p-Isopropyltoluene	25.0	30.4		ug/L		122	70 - 132	
Styrene	25.0	27.1		ug/L		108	70 - 134	
sec-Butylbenzene	25.0	30.6		ug/L		122	70 - 138	
tert-Butylbenzene	25.0	29.6		ug/L		118	70 - 130	
Tetrachloroethene	25.0	26.6		ug/L		107	70 - 130	
Toluene	25.0	27.8		ug/L		111	70 - 130	
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	70 ₋ 130	
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 132	
Trichloroethene	25.0	27.2		ug/L		109	70 - 130	
Trichlorofluoromethane	25.0	22.4		ug/L		89	60 ₋ 150	
Vinyl chloride	25.0	31.2		ug/L		125	59 - 133	

LUS	LUS	
%Recovery	Qualifier	Limits
106		80 - 120
93		76 - 132
105		80 - 128
	%Recovery 106 93	93

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 440-612254/6 Matrix: Water									Clie	ent Sam	ple ID: Metho Prep Type: 1	
Analysis Batch: 612254	MB	МВ										
Analyte	Result	Qualifier		RL		MDL	Unit		D P	repared	Analyzed	Dil Fac
Perchlorate	ND			4.0			ug/L				06/11/20 09:59	1
Lab Sample ID: LCS 440-612254/5								Clie	ent Sai	nple ID	: Lab Control	Sample
Matrix: Water											Prep Type: 1	
Analysis Batch: 612254												
			Spike		LCS	LCS	6				%Rec.	
Analyte			Added		Result	Qua	alifier	Unit	D	%Rec	Limits	
Perchlorate			10.0		9.75			ug/L		97	85 - 115	
Lab Sample ID: MRL 440-612254/4 Matrix: Water								Clie	ent Sai	mple ID	: Lab Control Prep Type: 1	
Analysis Batch: 612254			Spike		MRL	MRI					%Rec.	
Analyte			Added		Result		_	Unit	D	%Rec	Limits	
Perchlorate			1.00		ND			ug/L		111	75 - 125	

MRL MRL

Result Qualifier Unit

Spike

Added

Analysis Batch: 612254

Matrix: Water

Analyte

Lab Sample ID: MRL 440-612254/8

Method: 314.0 - Perchlorate (IC) (Continued)

Client Sample ID: Lab Control Sample Prep Type: Total/NA 5

8

%Rec.

Limits

D %Rec

Perchlorate				4.00	4.05		ug/L			101	75 - 125		
Lab Sample ID: 720-98770-	4 MS							Cli	ient S	Sampl	le ID: SRI	E-W-2	0060
Matrix: Water								•			Prep Typ		
Analysis Batch: 612254											1100 136		
Analysis Baten. 012204	Sample	Samp	ple	Spike	MS	MS					%Rec.		
Analyte	Result	-	-	Added	Result	Qualifie	r Unit		D %	Rec	Limits		
Perchlorate	ND			10.0	10.4		ug/L			104	80 - 120		
Lab Sample ID: 720-98770-	4 MSD							Cli	ient S	Sampl	le ID: SRI	E-W-2	00603
Matrix: Water											Prep Typ	e: Tot	tal/NA
Analysis Batch: 612254													
-	Sample	Samp	ple	Spike	MSD	MSD					%Rec.		RPD
Analyte	Result	Quali	ifier	Added	Result	Qualifie	r Unit	I	D %	Rec	Limits	RPD	Limi
Perchlorate	ND			10.0	10.5		ug/L			105	80 - 120	1	15
Lab Sample ID: MB 440-611								С			ole ID: Me e: Total F		
Aethod: 6010B - Metals Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848	1699/1-A							C			ole ID: Me e: Total F Prep Ba	Recove	erable
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848	1699/1-A	MB I							Prej	р Туре	e: Total F Prep Ba	Recove tch: 6	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte	1699/1-A Res	sult (MB Qualifier	RL	1	MDL Uni		D	Pre Prep	p Type	e: Total F Prep Ba Analyz	Recove tch: 6 ed	erable
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic	1699/1-A	sult (0.010	1	mg	L	– <u>D</u> — <u>D</u>	Prep Prep 5/08/20	p Type ared 0 11:16	e: Total F Prep Ba Analyz 06/08/20	ed 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium	1699/1-A	sult ND ND		0.010	1	mg. mg.	Ľ Ľ	– <u>D</u> — <u>O6</u> 06	Prep 5/08/20 5/08/20	p Type ared 0 11:16 0 11:16	e: Total F Prep Ba Analyz 06/08/20	ed 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium	1699/1-A	sult ND ND ND		0.010 0.010 0.0020	1	mg, mg, mg,	L L L	D 000 000	Prep 5/08/20 5/08/20 5/08/20	p Type ared 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba Analyz 06/08/20 06/08/20	ed 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium	1699/1-A 	sult ND ND ND ND		0.010 0.010 0.0020 0.0050		mg, mg, mg, mg,	և Ն Ն	D 06 06 06	Prep 5/08/20 5/08/20 5/08/20 5/08/20	p Type ared 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba <u>Analyz</u> 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium	1699/1-A	sult ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050		mg, mg, mg,	և Ն Ն	D 000 000 000 000	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	p Type ared 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium	1699/1-A	sult ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010		mg, mg, mg, mg,	և Լ Լ Լ	D 00 00 00 00 00 00 00	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	ared 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium Cobalt	1699/1-A	sult ND ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050	1	mg, mg, mg, mg, mg,	L L L L L	D 00 00 00 00 00 00 00	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	ared 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-614 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper	1699/1-A	sult ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010	1	mg, mg, mg, mg, mg, mg,	L L L L L	D 00 00 00 00 00 00 00 00	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	ared 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-614 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead	1699/1-A Res	sult ND ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010	1	mg, mg, mg, mg, mg, mg, mg,	L L L L L L	D 000 000 000 000 000 000 000 000 000	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	p Type 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-614 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum	1699/1-A Res	sult ND ND ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050		mg, mg, mg, mg, mg, mg, mg,	L L L L L L L	D 000 000 000 000 000 000 000 000 000 0	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	p Type 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-611 Matrix: Water	1699/1-A Re:	sult (ND ND ND ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050 0.020	I	mg, mg, mg, mg, mg, mg, mg, mg,	L L L L L L L L	D 000 000 000 000 000 000 000 000 000 0	Prep 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	p Type 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699
Lab Sample ID: MB 440-614 Matrix: Water Analysis Batch: 611848 Analyte Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Molybdenum Nickel	1699/1-A Re:	sult 0 ND ND ND ND ND ND ND ND ND ND ND		0.010 0.010 0.0020 0.0050 0.0050 0.010 0.010 0.0050 0.020 0.010		mg, mg, mg, mg, mg, mg, mg, mg, mg,	L L L L L L L L L	D 000 000 000 000 000 000 000 000 000 0	Prep. 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20 5/08/20	p Type ared 0 11:16 0 11:16	e: Total F Prep Ba 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20 06/08/20	ed ed 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34 18:34	erable 11699

Lab Sample ID: MB 440-611699/1-A **Matrix: Water** Analysis Batch: 612023

Vanadium

Zinc

	МВ	МВ						Top Datom	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		06/08/20 11:16	06/09/20 19:22	1
Silver	ND		0.010		mg/L		06/08/20 11:16	06/09/20 19:22	1

0.010

0.020

mg/L

mg/L

ND

ND

Eurofins TestAmerica, Pleasanton

06/08/20 11:16 06/08/20 18:34

06/08/20 11:16 06/08/20 18:34

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 611699

1

5

8 9

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

Lab Sample ID: LCS 440-611699/2-A Matrix: Water Analysis Batch: 611848				Client Sample ID: Lab Control Sam Prep Type: Total Recovera Prep Batch: 6116					
	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result (Qualifier	Unit	D	%Rec	Limits		
Arsenic	1.00	0.933		mg/L		93	80 - 120		
Barium	1.00	0.908		mg/L		91	80 - 120		
Beryllium	1.00	0.921		mg/L		92	80 - 120		
Cadmium	1.00	0.918		mg/L		92	80 - 120		
Chromium	1.00	0.930		mg/L		93	80 - 120		
Cobalt	1.00	0.928		mg/L		93	80 - 120		
Copper	1.00	0.949		mg/L		95	80 - 120		
Lead	1.00	0.932		mg/L		93	80 - 120		
Molybdenum	1.00	1.00		mg/L		100	80 - 120		
Nickel	1.00	0.928		mg/L		93	80 - 120		
Selenium	1.00	0.909		mg/L		91	80 - 120		
Thallium	1.00	0.903		mg/L		90	80 - 120		
Vanadium	1.00	0.932		mg/L		93	80 - 120		
Zinc	1.00	0.937		mg/L		94	80 - 120		
Lab Sample ID: LCS 440-611699/2-A				Clie	nt Sar	nple ID	: Lab Control Sample		

Lab Sample ID: LCS 440-611699/2-A				Clie	ent Sai	mple ID	: Lab Control Sample
Matrix: Water					P	rep Ty	pe: Total Recoverable
Analysis Batch: 612023							Prep Batch: 611699
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	0.985		mg/L		99	80 - 120
Silver	0.500	0.456		mg/L		91	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-61140 Matrix: Water Analysis Batch: 611745	62/1-А МВ	МВ					Client Sa	mple ID: Method Blank Prep Type: Total/NA Prep Batch: 611462
Analyte	Result	Qualifier	RL	1	MDL Unit	D	Prepared	Analyzed Dil Fac
Mercury	ND		0.00020		mg/L		06/05/20 08	57 06/08/20 11:44 1
Lab Sample ID: LCS 440-6114 Matrix: Water Analysis Batch: 611745	162/2-A					Clien	t Sample I	D: Lab Control Sample Prep Type: Total/NA Prep Batch: 611462
			Spike	LCS	LCS			%Rec.
Analyte Mercury			Added 0.00400	Result 0.00432	Qualifier	Unit mg/L	D <u>%Rec</u> 108	Limits

QC Association Summary

Job ID: 720-98770-1

9

	-
Batch	

Leach Batch: 611577

GC/MS VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
1B 440-611577/1-A	Method Blank	Total/NA	Water	1311	
CS 440-611577/2-A	Lab Control Sample	Total/NA	Water	1311	
n <mark>alysis Batch: 611</mark> 8	06				
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
20-98770-1	OS8-W-200603	Total/NA	Water	8260B	
20-98770-2	OS3-W-200602	Total/NA	Water	8260B	
MB 440-611577/1-A	Method Blank	Total/NA	Water	8260B	61157
VIB 440-611806/4	Method Blank	Total/NA	Water	8260B	
_CS 440-611577/2-A	Lab Control Sample	Total/NA	Water	8260B	61157
_CS 440-611806/1002	Lab Control Sample	Total/NA	Water	8260B	
nalysis Batch: 6119	68				
_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
720-98770-3	OS357-W-200602	Total/NA	Water	8260B	
720-98770-4	SRE-W-200603	Total/NA	Water	8260B	
VB 440-611968/4	Method Blank	Total/NA	Water	8260B	
_CS 440-611968/1002	Lab Control Sample	Total/NA	Water	8260B	
nalysis Batch: 6123	82				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Bato
720-98770-5	TB-200604	Total/NA	Water	8260B	
VB 440-612382/4	Method Blank	Total/NA	Water	8260B	
	Lab Control Sample	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 612254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98770-1	OS8-W-200603	Total/NA	Water	314.0	
720-98770-2	OS3-W-200602	Total/NA	Water	314.0	
720-98770-3	OS357-W-200602	Total/NA	Water	314.0	
720-98770-4	SRE-W-200603	Total/NA	Water	314.0	
MB 440-612254/6	Method Blank	Total/NA	Water	314.0	
LCS 440-612254/5	Lab Control Sample	Total/NA	Water	314.0	
MRL 440-612254/4	Lab Control Sample	Total/NA	Water	314.0	
MRL 440-612254/8	Lab Control Sample	Total/NA	Water	314.0	
720-98770-4 MS	SRE-W-200603	Total/NA	Water	314.0	
720-98770-4 MSD	SRE-W-200603	Total/NA	Water	314.0	

Metals

Prep Batch: 611462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98770-1	OS8-W-200603	Total/NA	Water	7470A	
720-98770-2	OS3-W-200602	Total/NA	Water	7470A	
720-98770-3	OS357-W-200602	Total/NA	Water	7470A	
720-98770-4	SRE-W-200603	Total/NA	Water	7470A	
MB 440-611462/1-A	Method Blank	Total/NA	Water	7470A	
LCS 440-611462/2-A	Lab Control Sample	Total/NA	Water	7470A	

1 2 3 4 5 6 7 8

611699 611699 611699

Metals Prep Batch: 611699

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
720-98770-1	OS8-W-200603	Total Recoverable	Water	3005A	
720-98770-2	OS3-W-200602	Total Recoverable	Water	3005A	
720-98770-3	OS357-W-200602	Total Recoverable	Water	3005A	
720-98770-4	SRE-W-200603	Total Recoverable	Water	3005A	
MB 440-611699/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-611699/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
nalysis Batch: 611	745				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
720-98770-1	OS8-W-200603	Total/NA	Water	7470A	61146
720-98770-2	OS3-W-200602	Total/NA	Water	7470A	61146
720-98770-3	OS357-W-200602	Total/NA	Water	7470A	61146
720-98770-4	SRE-W-200603	Total/NA	Water	7470A	61146
MB 440-611462/1-A	Method Blank	Total/NA	Water	7470A	61146
LCS 440-611462/2-A	Lab Control Sample	Total/NA	Water	7470A	61146
Analysis Batch: 611	848				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
720-98770-1	OS8-W-200603	Total Recoverable	Water	6010B	61169
720-98770-2	OS3-W-200602	Total Recoverable	Water	6010B	61169
720-98770-3	OS357-W-200602	Total Recoverable	Water	6010B	61169
720-98770-4	SRE-W-200603	Total Recoverable	Water	6010B	61169
MB 440-611699/1-A	Method Blank	Total Recoverable	Water	6010B	61169
LCS 440-611699/2-A	Lab Control Sample	Total Recoverable	Water	6010B	61169
analysis Batch: 612	023				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
720-98770-1	OS8-W-200603	Total Recoverable	Water	6010B	61169
720-98770-2	OS3-W-200602	Total Recoverable	Water	6010B	61169
720-98770-3	OS357-W-200602	Total Recoverable	Water	6010B	61169

	120 00110 2	200002		viator	00100
	720-98770-3	OS357-W-200602	Total Recoverable	Water	6010B
	720-98770-4	SRE-W-200603	Total Recoverable	Water	6010B
	MB 440-611699/1-A	Method Blank	Total Recoverable	Water	6010B
	LCS 440-611699/2-A	Lab Control Sample	Total Recoverable	Water	6010B
1					

Analysis Batch: 612346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-98770-2	OS3-W-200602	Total Recoverable	Water	6010B	611699
720-98770-4	SRE-W-200603	Total Recoverable	Water	6010B	611699

Dil

1

1

1

1

1

Factor

Run

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total Recoverable

Total Recoverable

Total Recoverable

Total Recoverable

Client Sample ID: OS8-W-200603 Date Collected: 06/03/20 11:30 Date Received: 06/04/20 16:05

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Prep

Prep

Batch

8260B

314.0

3005A

6010B

3005A

6010B

7470A

7470A

Method

Lab Sample ID: 720-98770-1 Matrix: Water

Analyst

Lab

TAL IRV

Matrix: Water

Matrix: Water

Prepared

or Analyzed

06/09/20 18:19 MML

06/08/20 11:16 M1G

06/08/20 19:00 TQN

06/08/20 11:16 M1G

06/05/20 08:57 MEM

06/08/20 12:13 MEM

Lab Sample ID: 720-98770-2

Lab Sample ID: 720-98770-3

06/09/20 19:51 KE

06/11/20 11:28 PS

10

Client Sample ID: OS3-W-200602 Date Collected: 06/02/20 10:25

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	611806	06/09/20 18:47	MML	TAL IRV
Total/NA	Analysis	314.0		1			612254	06/11/20 11:45	PS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	611699	06/08/20 11:16	M1G	TAL IRV
Total Recoverable	Analysis	6010B		1			612346	06/11/20 14:31	TQN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	611699	06/08/20 11:16	M1G	TAL IRV
Total Recoverable	Analysis	6010B		1			611848	06/08/20 19:02	TQN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	611699	06/08/20 11:16	M1G	TAL IRV
Total Recoverable	Analysis	6010B		1			612023	06/09/20 19:53	KE	TAL IRV
Total/NA	Prep	7470A			20 mL	20 mL	611462	06/05/20 08:57	MEM	TAL IRV
Total/NA	Analysis	7470A		1			611745	06/08/20 12:15	MEM	TAL IRV

Client Sample ID: OS357-W-200602 Date Collected: 06/02/20 11:05 Date Received: 06/04/20 16:05

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	611968	06/10/20 06:19	WC	TAL IRV
Total/NA	Analysis	314.0		1			612254	06/11/20 12:03	PS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	611699	06/08/20 11:16	M1G	TAL IRV
Total Recoverable	Analysis	6010B		1			611848	06/08/20 19:05	TQN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	611699	06/08/20 11:16	M1G	TAL IRV
Total Recoverable	Analysis	6010B		1			612023	06/09/20 19:56	KE	TAL IRV
Total/NA	Prep	7470A			20 mL	20 mL	611462	06/05/20 08:57	MEM	TAL IRV
Total/NA	Analysis	7470A		1			611745	06/08/20 12:17	MEM	TAL IRV

Client Sample ID: SRE-W-200603

Date Collected: 06/03/20 08:20 Date Received: 06/04/20 16:05

—	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	611968	06/10/20 06:47	WC	TAL IRV

Eurofins TestAmerica, Pleasanton

Lab Sample ID: 720-98770-4

Initial

Amount

10 mL

25 mL

25 mL

20 mL

Batch

Number

611806

612254

611699

611848

611699

612023

611462

611745

Final

Amount

10 mL

25 mL

25 mL

20 mL

Date Received: 06/04/20 16:05

Matrix: Water

Initial

Amount

25 mL

25 mL

25 mL

20 mL

Final

Amount

25 mL

25 mL

25 mL

20 mL

Batch

Number

612254

611699

612346

611699

611848

611699

612023

611462

611745

Dil

1

1

1

1

1

Factor

Run

Prep Type

Total Recoverable

Total Recoverable

Total Recoverable

Total Recoverable

Total Recoverable

Total Recoverable

Total/NA

Total/NA

Total/NA

Client Sample ID: SRE-W-200603 Date Collected: 06/03/20 08:20 Date Received: 06/04/20 16:05

Batch

Туре

Prep

Prep

Prep

Prep

Client Sample ID: TB-200604

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 16:05

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

314.0

3005A

6010B

3005A

6010B

3005A

6010B

7470A

7470A

Method

Lab

TAL IRV

Matrix: Water

Lab Sample ID: 720-98770-4 Matrix: Water

Analyst

Prepared

or Analyzed

06/11/20 12:21 PS

06/08/20 11:16 M1G

06/11/20 14:33 TQN

06/08/20 11:16 M1G

06/08/20 19:07 TQN

06/08/20 11:16 M1G

06/05/20 08:57 MEM

06/08/20 12:19 MEM

Lab Sample ID: 720-98770-5

06/09/20 19:58 KE

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	612382	06/12/20 03:45	GMA	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

6/24/2020 (Rev. 1)

Accreditation/Certification Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Job ID: 720-98770-1

Laboratory: Eurofins TestAmerica, Pleasanton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2496	01-31-20 *
USDA	US Federal Programs	P330-18-00328	11-06-21

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-20
Arizona	State	AZ0671	10-14-20
California	Los Angeles County Sanitation Districts	10256	06-30-20
California	State	2706	06-30-20
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20
Nevada	State	CA015312020-9	06-16-20
Oregon	NELAP	4028 - 008	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

/lethod	Method Description	Protocol	Laboratory
260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
314.0	Perchlorate (IC)	EPA	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
470A	Mercury (CVAA)	SW846	TAL IRV
005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL IRV
030B	Purge and Trap	SW846	TAL IRV
470A	Preparation, Mercury	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: GSI Environmental, Inc Project/Site: AJU-BB

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-98770-1	OS8-W-200603	Water	06/03/20 11:30	06/04/20 16:05
720-98770-2	OS3-W-200602	Water	06/02/20 10:25	06/04/20 16:05
720-98770-3	OS357-W-200602	Water	06/02/20 11:05	06/04/20 16:05
720-98770-4	SRE-W-200603	Water	06/03/20 08:20	06/04/20 16:05
720-98770-5	TB-200604	Water	06/04/20 13:40	06/04/20 16:05

720-18170

CHAIN-OF-CUSTODY RECORD Date: UN1/22 Page _____ of ____

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	GSI Environmental Inc.	lnc.		AJU-66							5182	
	155 Grand Ave. Suite 704	B 704	PROJECT CONTACT.	Susan Gallardo	llardo					ILAB CON	LAB CONTACT: Afsaneh Salimpour (Pleasanton)	Pleasanton)
	Oakland, CA 94612 (510) 463-8484		GLOBAL ID:	ł						SAMPLEF	SAMPLER(S) (PRINT) Howell + J. 54 Ung	5,4 Wys
7EL:	(510	E-MAIL	smgailardo@gsi-net.com; tzwicks@gsi-net.com	-net.com; tzi	vicks@gsi-i	let com	L			REQUESTED ANALYSES	ANALYSES	
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CHAIN-OF-CUSTODY RECORD Date: (1/22) Page _____ of ____ . .

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Client: GSI Environmental, Inc Job Number: 720-98770-1 Login Number: 98770 List Source: Eurofins TestAmerica, Pleasanton List Number: 1 Creator: Arauz, Dennis Answer Comment Question Radioactivity wasn't checked or is </= background as measured by a survey meter. The cooler's custody seal, if present, is intact. Sample custody seals, if present, are intact. The cooler or samples do not appear to have been compromised or tampered with. Samples were received on ice. Cooler Temperature is acceptable. Cooler Temperature is recorded. COC is present. COC is filled out in ink and legible. COC is filled out with all pertinent information. Is the Field Sampler's name present on COC? There are no discrepancies between the containers received and the COC. Samples are received within Holding Time (excluding tests with immediate HTs) Sample containers have legible labels. Containers are not broken or leaking. Sample collection date/times are provided. Appropriate sample containers are used. Sample bottles are completely filled. Sample Preservation Verified. There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). Multiphasic samples are not present. Samples do not require splitting or compositing.

Residual Chlorine Checked.

5

Client: GSI Environmental, Inc

Login Number: 98770 List Number: 2 Creator: Bonta, Lucia F

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 720-98770-1

List Source: Eurofins Irvine

Client: GSI Environmental, Inc

Login Number: 98770 List Number: 3 Creator: Bonta, Lucia F

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 720-98770-1

List Source: Eurofins Irvine

List Creation: 06/04/20 08:31 PM





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

June 26, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512873

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512873 GEL Work Order: 512873

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address :	GSI Environ 155 Grand A Suite 704 Oakland, Cal	ve	2					Rep	ort Date:	June 26	, 2020	
Contact:	Travis Wicks	i						-				
Project:	Near S SFL											
Client Sam Sample ID Matrix: Collect Dat Receive Da Collector:	: 512873 Water te: 03-JUN	001 J-20					oject: lent ID:	GSIE(GSIE(_
Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF I	OF Analyst I	Date Time	Batch I	Mtd.
Cesium-137	amma, Liquid (Stan U	1.04	As Received' +/-4.78	8.20	+/-4.80	10.0	pCi/L		RYH1 06/0	06/20 1151	2008751	1
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Strontium-90	U	0.535	+/-0.794	1.37	+/-0.799	2.00	pCi/L		MXS2 06/1	8/20 1100	2008948	2
Rad Liquid Scint	•											
	oistillation, Liquid "A			200	. (205	700	C ' I			0/00 0512	2000072	2
Tritium	U	40.6	+/-205	360	+/-205	700	pCi/L		EW3 06/1	0/20 0513	2009073	3
	nalytical Methods v	vere perform	med									
Method	Description											
1	EPA 901.1											
2	EPA 905.0 Modified	J/DOE RP501	Rev. 1 Modif	ied								
3	EPA 906.0 Modified	t										
Surrogate/Trace	er Recovery	Test						Batch ID	Recovery%	Accepta	able Limit	ts
Strontium Cari	rier	GFPC, Sr9	0, Liquid "A	s Received"				2008948	92.1	(25%	-125%)	
	sample specific N Inting Uncertainty		ated at the 9	5% confiden	ace level (1.96-sigma	a).						
Column heade DF: Dilution I DL: Detection	n Limit	follows:	PF: Pi	Method rep Factor	.,							

Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

RL: Reporting Limit TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Address :	GSI Environm 155 Grand Av Suite 704 Oakland, Calif	ve	2					Reŗ	port Date:	June 26	5, 2020	
Contact:	Travis Wicks											
Project:	Near S SFL											l
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	5128730 Water 02-JUN- 05-JUN- Client	002 -20 -20					oject: ient ID:		00119 002			
Parameter	Qualifier	Result Un	certainty	MDC	TPU	RL	Units	PF I	DF Analyst	Date Time	e Batch N	Mtd.
Rad Gamma Spec An												i
Gammaspec, Gamm												
Cesium-137	U	2.46	+/-4.15	8.15	+/-4.30	10.0	pCi/L		RYH1 0	06/06/20 1152	2008751	1
Rad Gas Flow Propor GFPC, Sr90, Liquid		g										
Strontium-90	U	0.348	+/-0.719	1.28	+/-0.721	2.00	pCi/L		MXS2 (06/18/20 1100	2008948	2
Rad Liquid Scintillati												
LSC, Tritium Distill	-											
Tritium	U	82.2	+/-212	368	+/-213	700	pCi/L		EW3 0	06/10/20 0544	2009073	3
The following Analyt	ical Methods w	ere perforr	ned									
Method De	escription											
1 EP.	A 901.1											
2 EP.	A 905.0 Modified	/DOE RP501	Rev. 1 Modif	ied								
3 EP.	A 906.0 Modified	I										
Surrogate/Tracer Re	T vouces	ſest						Rotch II	D Recovery	.0/. Accent	able Limit	ta
	•			D ' 1"					•			<u> </u>
Strontium Carrier		GFPC, Sr90	0, Liquid "As	Received				2008948	8 106	(25%)	5-125%)	
Notes: The MDC is a sam TPU and Countin			ted at the 9	5% confide	nce level (1.96-sigma).						
Column headers an DF: Dilution Facto DL: Detection Lin Lc/LC: Critical Le MDA: Minimum I MDC: Minimum I	or nit evel Detectable Act	tivity	PF: Pre RL: Re TPU: 7	Method ep Factor eporting Lir Total Propa	mit agated Uncertainty							

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Certificate of Analysis

Company : Address :	GSI Environm 155 Grand Av Suite 704 Oakland, Cali	ve	2					Re	port Date:	Jun	e 26, 2	2020	
Contact:	Travis Wicks												l
Project:	Near S SFL												l
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	5128730 Water 02-JUN- 05-JUN- Client	[-20 [-20					oject: ient ID:	GSIE					
Parameter	Qualifier	Result Un	certainty	MDC	TPU	RL	Units	PF	DF Analyst	Date 7	ſime	Batch N	Atd.
Rad Gamma Spec An													i
Gammaspec, Gamm							~ ~						
Cesium-137	U	0.524	+/-3.69	6.86	+/-3.70	10.0	pCi/L		RYH1	06/06/20 1	.152 2	2008751	1
Rad Gas Flow Propor GFPC, Sr90, Liquid													
Strontium-90	U	0.150	+/-0.705	1.32	+/-0.705	2.00	pCi/L		MXS2	06/18/20 1	100 2	2008948	2
Rad Liquid Scintillati	•												
LSC, Tritium Distill													
Tritium	U	12.5	+/-205	362	+/-205	700	pCi/L		EW3	06/10/20 0)616 2	2009073	3
The following Analyt	ical Methods w	vere perforr	ned										
	escription												
1 EP.	A 901.1												
2 EP.	A 905.0 Modified	J/DOE RP501	Rev. 1 Modif	ied									
3 EP.	A 906.0 Modified	1											
Surrogate/Tracer Re	ecovery 7	ſest						Batch I	D Recovery	y% Acc	eptab	le Limit	s
Strontium Carrier		GFPC, Sr90), Liquid "As	Received"				200894	8 87.0	6 (25%-1	25%)	
Notes: The MDC is a sam TPU and Countin	ple specific M	ÍDC.			nce level (1.96-sigma)).							
Column headers an DF: Dilution Facto DL: Detection Lin Lc/LC: Critical Le MDA: Minimum I MDC: Minimum I	or nit evel Detectable Act	tivity	PF: Pr RL: Re TPU: 7	Method ep Factor eporting Lim Total Propag	nit gated Uncertainty								

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Certificate of Analysis

Company : Address :	GSI Environm 155 Grand Av Suite 704 Oakland, Cali:	ve	2					Rep	ort Date:	June 26	, 2020	
Contact:	Travis Wicks											
Project:	Near S SFL											
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	5128730 Water 03-JUN- 05-JUN- Client	004 [-20 [-20					oject: ient ID:		002			
Parameter	Qualifier	Result Un	icertainty	MDC	TPU	RL	Units	PF D	F Analyst	Date Time	Batch M	Mtd.
Rad Gamma Spec An												
Gammaspec, Gamm												
Cesium-137	U	4.44	+/-3.14	6.76	+/-3.75	10.0	pCi/L		RYH1 0	06/06/20 1153	2008751	1
Rad Gas Flow Propor GFPC, Sr90, Liquid												
Strontium-90	U	-0.615	+/-0.673	1.54	+/-0.673	2.00	pCi/L		MXS2 C	06/18/20 1100	2008948	2
Rad Liquid Scintillati	•											
LSC, Tritium Distille	-		<i>i</i>									
Tritium	U	92.9	+/-208	360	+/-209	700	pCi/L		EW3 0	06/10/20 0648	2009073	3
The following Analyt	ical Methods w	vere perforr	ned									
	escription	<u> </u>										
1 EP.	A 901.1											
	A 905.0 Modified	I/DOE RP501	Rev. 1 Modif	ñed								
	A 906.0 Modified	1										
									-			
Surrogate/Tracer Re	covery 1	Fest						Batch ID	Recovery	% Accepta	able Limit	S
Strontium Carrier		GFPC, Sr90	0, Liquid "As	s Received"				2008948	74.2	(25%)	-125%)	
Notes: The MDC is a sam TPU and Counting			ited at the 9	5% confider	nce level (1.96-sigma	l).						
Column headers an DF: Dilution Facto DL: Detection Lin Lc/LC: Critical Le MDA: Minimum I MDC: Minimum I	or nit evel Detectable Act	tivity	PF: Pr RL: R TPU: 7	Method rep Factor eporting Lin Total Propag	nit gated Uncertainty							

OC Summary

			Q	C Si	ummary	7	-	D		
Client :	GSI Environment a	al Inc.		<i>.</i>	• /	-]	Report Da	ate: June 26, 2020	
	155 Grand Ave								Page 1 of 3	
	Suite 704 Oakland, Californ	ia								
Contact:	Travis Wicks	lla								
Workorder:	512873									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe										
Batch	2008751									
	512873001 DUP									
Cesium-137		U	1.04	U	5.84	pCi/L	0		N/A RYH1	06/06/2018:18
		Uncert:	+/-4.78		+/-4.59					
		TPU:	+/-4.80		+/-5.31					
QC1204573900	LCS									
Americium-241	_	1.09E+05			1.22E+05	pCi/L		112	(75%-125%) RYH1	06/06/2011:54
		Uncert:			+/-3300					
		TPU:			+/-14200					
Cobalt-60		25700			27100	pCi/L		105	(75%-125%)	
		Uncert:			+/-830					
		TPU:			+/-2700					
Cesium-137		39300			39900	pCi/L		102	(75%-125%)	
		Uncert:			+/-842					
		TPU:			+/-3420					
QC1204573898	MB									
Cesium-137				U	-1.19	pCi/L			RYH1	06/07/2009:52
		Uncert:			+/-4.37					
		TPU:			+/-4.41					
Rad Gas Flow Batch	2008948									
•	512873001 DUP			•••	2 20 4	C ' T	0			
Strontium-90		U	0.535	U	-0.394	pCi/L	0		N/A MXS2	06/18/2011:00
		Uncert:	+/-0.794		+/-0.681					
		TPU:	+/-0.799		+/-0.681					
QC1204574436	LCS									
Strontium-90		74.4			60.4	pCi/L		81.2	(75%-125%) MXS2	06/18/2011:00
		Uncert:			+/-4.43					
		TPU:			+/-10.5					
QC1204574434	MB									
Strontium-90				U	0.248	pCi/L			MXS2	06/18/2011:00
		Uncert:			+/-0.622					
		TPU:			+/-0.623					
Rad Liquid Scint Batch	tillation									
001204574766	512898001 DUP									
	312696001 DUF	II	40.0	τŢ	272	⊐Ci/I	0		N/A = W/2	06/10/2012:54
Tritium		U	40.9	U	-273	pCi/L	0		N/A EW3	06/10/2012:54
		Uncert:	+/-505		+/-496					
2 21 22 152 152 15 10		TPU:	+/-505		+/-496					
QC1204574768	LCS					C 1.7				
Tritium		5770			4400	pCi/L		76.2	(75%-125%) EW3	06/10/2009:26
		Uncert:			+/-389					

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QC Summary

Workorder:	512873							Page 2	of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid ScintiBatch2	llation 2009073									
0.0100.157.17.5		TPU:		+/-935						
QC1204574765	MB									
Tritium			U	-28.1	pCi/L				EW3	06/10/2007:51
		Uncert:		+/-203						
		TPU:		+/-203						
QC1204574767	512898001 MS									
Tritium		19300 U	40.9	16200	pCi/L		84.4	(75%-125%) EW3	06/10/2008:54
		Uncert:	+/-505	+/-1380	-					
		TPU:	+/-505	+/-3430						

Notes:

Wenleender

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

=100=0

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512873							Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

FROM: GSI Environmental Inc.	i	PROJECT NAME:	AJU-BB								PROJE	PROJECT NO.: 5182	5	20	12.873
155 Grand Ave. Suite 704	04	PROJECT CONTACT:	Susan G	isan Gallardo							LAB C	DNTACT: Bri	LAB CONTACT: Brielle Luthman	2	
		GLOBAL ID:	J								SAMPI	SAMPLER(S); (PRINT)		1	
(510)	E-MAIL:	smgallardo@gsi-net.		com; tzwicks@gsi-net.com	i-net.co) and) v	~ + _	1054 U655
LABORATORY: GEL Laboratories	ies					L 	F	ŀ		REQUES IED Please check box or fill	ck box or		ANALYSES in blank as needed.		
TURNAROUND TIME: SAME DAY	24 HR											4 <u>1</u> 1			
SPECIAL INSTRUCTIONS: - Sr-90 MDC of 0.3-PCHg 8 PCI /L - H-3 MDC of 0-3-PCH				c;/L			.106) 75 706) 75	(906) E							
The second secon	-11-	in the	6[H]2)					-H							
USE SAMPLE ID		SAMPLING	MATRIX	NO. OF	ə.dı	i bla)								
20900C-M-250	UAIE 6 12/20	TIME 1/30	1. 14015	t, CONI.		- E		1							
C0900Z - M- 20060Z	61010	1075		-13		1									
05352-140-Jana	000	121		;,		\rightarrow	\times	×.							
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daining nd. (oigliginic)				1								-	I JU HOUSE		

CHAIN-OF-CUSTODY RECORD

Laboratories

Client: GSIE			SAMPLE RECEIPT & REVIEW FORM
Received By: STACY BOC	10 0000		SDG/AR/COC/Work Order:
CIMU Y MAA	DATE		Date Received: JUNE 5, 2020
Carrier and Tracking Number			Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
uspected Hazard Information	Yes	No	3935 4669 0289 - 4'c 3935 4669 0278 - 21
)Shipped as a DOT Hazardous?			Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
) Did the client designate the samples are to be ceived as radioactive?			COC notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as dioactive?			Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr
Did the client designate samples are zardous?		1	OC notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?	<u> </u>	· []	f D or E is yes, select Hazards below. CB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria Shipping containers received intact and sealed?	Yes NA		Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Chain of custody documents included with shipment?			Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius
Daily check performed and passed on IR temperature gun?			Temperature Device Serial #: TRI-14 Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	1		Sample ID's and Containers Affected; If Preservation added, Lot#-
Do any samples require Volatile Analysis?		/	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?			ID's and tests affected:
Sample ID's on COC match ID's on pottles?			ID's and containers affected:
Date & time on COC match date & time on bottles?		1	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Aumber of containers received match umber indicated on COC?			Circle Applicable: No container count on COC Other (describe)
OC form is properly signed in		-	Circle Applicable: Not relinquished Other (describe)
ellinquished/received sections? B ents (Use Continuation Form if needed): B - W - ZOG (0 2		И	
	. T [1	ME	E: 11: 30 SAMPLE TIME : 11:40
PM (or PMA) n			1/2/2/12/1

Clare Drennen

From:	Travis Wicks <tzwicks@gsi-net.com></tzwicks@gsi-net.com>
Sent:	Monday, June 08, 2020 4:41 PM
То:	Clare Drennen; team.luthman
Subject:	RE: GEL Sample Receipt 512873 for Near S SFL

Hi Clare,

11:30 is the correct time. Thanks!

Travis Wicks | Staff Geologist | GSI Environmental Inc. phone 510.463.8494 | cell 510.468.6940

tzwicks@gsi-net.com

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From: Clare Drennen <Clare.Drennen@gel.com>
Sent: Monday, June 8, 2020 1:32 PM
To: Travis Wicks <TZWicks@gsi-net.com>; team.luthman <team.luthman@gel.com>
Subject: RE: GEL Sample Receipt 512873 for Near S SFL

Hi Travis,

I can make those changes for you.

One other thing- it was noted that 058-W-200603 has a time discrepancy. COC says 11:30 but the sample time on the bottle says 11:40. Please confirm which is the correct time.

Thank you,

Clare Drennen Assistant Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417 Office Direct: 843.769.7376 X4705 | Office Main: 843.556.8171 | Fax: 843.766.1178 E-Mail: <u>clare.drennen@gel.com</u> | Website: <u>www.gel.com</u>

Analytical Testing



GEL Laboratories is an Essential Business and remains open to support your analytical needs.

From: Travis Wicks <TZWicks@gsi-net.com>
Sent: Monday, June 08, 2020 3:50 PM
To: team.luthman <<u>team.luthman@gel.com</u>>
Subject: RE: GEL Sample Receipt 512873 for Near S SFL

Hi Brielle,

For the sample names beginning with "05" can we have that changed to "OS". For example, 058-W-200603 would become OS8-W-200603.

Thanks,

Travis Wicks | Staff Geologist | GSI Environmental Inc. phone 510.463.8494 | cell 510.468.6940 tzwicks@gsi-net.com

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From: GEL Data <<u>data@gellaboratories.com</u>> Sent: Monday, June 8, 2020 12:34 PM To: Travis Wicks <<u>TZWicks@gsi-net.com</u>> Subject: GEL Sample Receipt 512873 for Near S SFL

GEL Laboratories, LLC received sample(s) on June 05, 2020. The final data is due to report on July 06, 2020. Please review the attached PDF. Should you find any discrepancies within the document, please call or email your project manager Brielle Luthman.

Do not reply to <u>data@gellaboratories.com</u> as this email address is not monitored. Please contact your project manager, Brielle Luthman, at <u>Team.Luthman@gel.com</u> regarding this message or its attachments.

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State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 26 June 2020

Radiochemistry Technical Case Narrative GSI Environmental Inc. SDG #: 512873

Product: Gammaspec, Gamma, Liquid (Standard List) Analytical Method: EPA 901.1 Analytical Procedure: GL-RAD-A-013 REV# 27 Analytical Batch: 2008751

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512873001	0S8-W-200603
512873002	0S3-W-200602
512873003	0S357-W-200602
512873004	SRE-W-200603
1204573898	Method Blank (MB)
1204573899	512873001(0S8-W-200603) Sample Duplicate (DUP)
1204573900	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Sr90, Liquid Analytical Method: EPA 905.0 Modified/DOE RP501 Rev. 1 Modified Analytical Procedure: GL-RAD-A-004 REV# 21 Analytical Batch: 2008948

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512873001	0S8-W-200603
512873002	0S3-W-200602
512873003	0S357-W-200602
512873004	SRE-W-200603
1204574434	Method Blank (MB)
1204574435	512873001(0S8-W-200603) Sample Duplicate (DUP)
1204574436	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Liquid Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2009073

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512873001	0S8-W-200603
512873002	0S3-W-200602
512873003	0S357-W-200602
512873004	SRE-W-200603
1204574765	Method Blank (MB)
1204574766	512898001(NonSDG) Sample Duplicate (DUP)
1204574767	512898001(NonSDG) Matrix Spike (MS)
1204574768	Laboratory Control Sample (LCS)
	_

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Sample 1204574766 (Non SDG 512898001DUP) was recounted due to high MDC. The recount is reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.



2020 Monitoring Report

American Jewish University, Brandeis-Bardin Campus 1101 Peppertree Lane Brandeis, California

Appendix E

Analytical Laboratory Reports – Fruit Samples





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512859

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

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Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512859 GEL Work Order: 512859

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

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Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: A-1-200604 Project: GSIE00119 Sample ID: 512859001 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 10:40 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	Time Batch	Method
LC-MS/MS Perchlora	te									
Perchlorate by LC-MS	S/MS "As Rece	eived"								
Perchlorate	U	ND	0.455	1.82	ug/kg	9.09	1	CWW 06/19/20	1459 201111:	5 1
Mercury Analysis-CV	AA									
7471 Cold Vapor Mer	curv. Solid "A	s Received"								
Mercury	U	ND	7.73	23.1	ug/kg	115	1	MTM1 06/17/20	1044 201184	8 2
Metals Analysis-ICP										
SW846 3050B/6010D	Metals, Solid	"As Received"								
Antimony	U	ND	330	2000	ug/kg	100	1	JWJ 06/09/20	1926 200885	7 3
Arsenic	U	ND	500	3000	ug/kg	100	1			
Barium	J	225	100	500	ug/kg	100	1			
Beryllium	U	ND	100	500	ug/kg	100	1			
Cadmium	U	ND	100	500	ug/kg	100	1			
Chromium	U	ND	150	1000	ug/kg	100	1			
Cobalt	U	ND	150	500	ug/kg	100	1			
Copper	J	563	300	2000	ug/kg	100	1			
Lead	J	397	330	2000	ug/kg	100	1			
Molybdenum	U	ND	200	1000	ug/kg	100	1			
Nickel	U	ND	150	500	ug/kg	100	1			
Selenium	U	ND	500	3000	ug/kg	100	1			
Silver	U	ND	100	500	ug/kg	100	1			
Thallium	U	ND	500	2000	ug/kg	100	1			
Vanadium	U	ND	100	500	ug/kg	100	1			
Zinc	J	1480	400	2000	ug/kg	100	1			
The following Prep M	ethods were pe	erformed:								
Method	Description	n	1	Analyst	Date	r	Time	e Prep Batch	l	
GEL Prep Method	Laboratory C	omposite						2008703		
SW846 3050B	SW846 3050	B Prep	S	SM1	06/09/20	(0900	2008854		
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids	(CWW	06/18/20		1839	2011114		
SW846 7471A Prep	EPA 7471A I	Mercury Prep Soil	1	AXS5	06/16/20		1334	2011847		
The following Analyt	ical Methods v	were performed:								
Method	Description	*			A	Analyst	Cor	nments		
1	SW846 6850									
2	SW846 7471A	A								
3	SW846 3050E									

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Certificate of Analysis

		_	Report Date:	July 2, 2020
Company :	GSI Environmental Inc.			
Address :	155 Grand Ave			
	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	A-1-200604	Project:	GSIE00119	
Sample ID:	512859001	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are of DF: Dilution Factor DL: Detection Limit MDA: Minimum Det MDC: Minimum Det	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitation	on Limit					

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Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: A-2-200604 Project: GSIE00119 Sample ID: 512859002 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 13:20 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst 1	Date	Time	e Batch	Method
LC-MS/MS Perchlorat	te											
Perchlorate by LC-MS	MS "As Rece	eived"										
Perchlorate	U	ND	0.459	1.83	ug/kg	9.17	1	CWW 06	/19/20	1508	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer	curv. Solid "A	s Received"										
Mercury	U	ND	7.31	21.8	ug/kg	109	1	MTM1 06	/17/20	1045	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D	Metals, Solid	"As Received"										
Antimony	J	460	317	1920	ug/kg	96.0	1	JWJ 06	/09/20	1929	2008857	3
Arsenic	U	ND	480	2880	ug/kg	96.0	1					
Barium	J	343	96.0	480	ug/kg	96.0	1					
Beryllium	U	ND	96.0	480	ug/kg	96.0	1					
Cadmium	U	ND	96.0	480	ug/kg	96.0	1					
Chromium	U	ND	144	960	ug/kg	96.0	1					
Cobalt	U	ND	144	480	ug/kg	96.0	1					
Copper	J	426	288	1920	ug/kg	96.0	1					
Lead	U	ND	317	1920	ug/kg	96.0	1					
Molybdenum	U	ND	192	960	ug/kg	96.0	1					
Nickel	J	151	144	480	ug/kg	96.0	1					
Selenium	U	ND	480	2880	ug/kg	96.0	1					
Silver	U	ND	96.0	480	ug/kg	96.0	1					
Thallium	U	ND	480	1920	ug/kg	96.0	1					
Vanadium	U	ND	96.0	480	ug/kg	96.0	1					
Zinc		2270	384	1920	ug/kg	96.0	1					
The following Prep M	ethods were pe	erformed:										
Method	Description		1	Analyst	Date		Гiте	Prep	Batch			
GEL Prep Method	Laboratory C	omposite						200870	03			
SW846 3050B	SW846 3050		S	SM1	06/09/20	()900	200885	54			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids	(CWW	06/18/20		1839	201111	14			
SW846 7471A Prep	EPA 7471A N	Mercury Prep Soil	A	AXS5	06/16/20		1334	201184	47			
The following Analyt	ical Methods v	vere performed:										
Method	Description	l			A	nalyst	Cor	nments				
1	SW846 6850											
2	SW846 7471A	Α										
3	SW846 3050E	3/6010D										

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Certificate of Analysis

			Report Date:	July 2, 2020
Company : Address :	GSI Environmental Inc. 155 Grand Ave Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	A-2-200604	Project:	GSIE00119	
Sample ID:	512859002	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are of DF: Dilution Factor DL: Detection Limit MDA: Minimum Det MDC: Minimum Det	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitation	on Limit					

Certificate of Analysis

Contact: Project:	Suite 704 Oakland, Cal											
		110rn1a 946	12					Re	eport Date:	July 2	, 2020	
Project:	Travis Wicks	5							•	·		
	Near S SFL											
Client Sample Sample ID: Matrix: Collect Date: Receive Date Collector:	512859 Vegeta 04-JUN	0001 tion N-20					oject: ient ID:		E00119 E002			
Moisture:	85.8%											
Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec A Gammaspec, Gam	ma, Solid (Stand			0.0115	. / 0.00000	0.100			DVF2	06/11/20 1011	200000	- 1
Cesium-137	U	-0.00323	+/-0.00680	0.0115	+/-0.00696	0.100	pCi/g		RXF2	06/11/20 1011	2009006	· 1
Rad Gas Flow Prop GFPC, Sr90, Vege												
Strontium-90	U	0.0187	+/-0.0259	0.0447	+/-0.0263	0.240	pCi/g		MXS2	06/26/20 0648	2008956	2
Rad Liquid Scintilla												
LSC, Tritium Disti	8											
Tritium	U	-2.36	+/-2.71	4.90	+/-2.71	5.00	pCi/g		EW3	06/22/20 1916	2011631	3
Solid Preparation Laboratory Compo	osite "As Receive	ed"										
The following Prep	Methods were	performed										
Method I	Description				Analyst	Date	Tin	ne	Prep Batch			
Dry Soil Prep I	Dry Soil Prep GL-H	RAD-A-021			LYT1	06/08/20	093	37	2008811			
GEL Prep Method I	Laboratory Compos	site							2008703			
The following Analy	ytical Methods	were perfor	med									
Method D	Description											
1 E	OOE HASL 300, 4.	.5.2.3/Ga-01-	R									
2 E	PA 905.0 Modifie	d/DOE RP50	1 Rev. 1 Modif	ïed								
3 E	PA 906.0 Modifie	d										
4 0	EL Prep Method											
Surrogate/Tracer I	Recovery	Test					I	Batch I	D Recover	y% Accepta	ble Limi	its
Strontium Carrier	•	GFPC, Sr	0, Vegetation	"As Received"				200895	56 10	6 (25%	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample I Sample ID:	ID: A-1-200604 512859001			Project: Client ID:	GSIE00119 GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Parameter	Qualifier	Result Uncertainty	MDC	TPU	RL	Units	PF	DF	' Analyst	Date Time Batch M	Mtd.
Surrogate/Tracer Recovery		Fest					Batch	ID	Recovery	% Acceptable Limits	ts

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	155 (Suite	Grand A 704	mental Inc. ve ifornia 946	12					P	eport Date:		July 2,	2020	
Contact:		is Wicks		12					K	eport Date.		July 2,	2020	
Project:		S SFL												
Client Sam		A-2-20	0604				Dre	oject:	CSI	E00119				
Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	te: ate:	A-2-20 512859 Vegetat 04-JUN 05-JUN Client 87.3%	002 tion 1-20					ent ID:		E00119 E002				
Parameter	Q	ualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	st Dat	e Time	Batch	Mtd.
Rad Gamma Spe	c Analysis													
Gammaspec, G	amma, Soli	d (Stand	lard List) "A	s Received"										
Cesium-137		U	0.00183	+/-0.00628	0.0123	+/-0.00634	0.100	pCi/g		RXF2	06/11/2	0 1011	2009006	5 1
Rad Gas Flow Pr GFPC, Sr90, Va														
Strontium-90		U	0.00387	+/-0.0351	0.0634	+/-0.0351	0.240	pCi/g		MXS2	06/27/2	20 1250	2008956	5 2
Rad Liquid Scint			"A D	. 1//										
LSC, Tritium D	istillation,	Vegetatio U	on "As Rece -0.224	+/-1.73	3.28	+/-1.73	5.00	nCi/a		EW/2	06/21/	0 0202	2011631	2
Solid Preparation		U	-0.224	+/-1./3	3.28	+/-1./3	5.00	pCi/g		EWS	00/24/2	.0 0502	2011051	
Laboratory Con		Receive	ed"											
The following Pr Method	Descript		periorineu			Analyst	Date	Tir	ne	Prep Batch	1			
Dry Soil Prep	-		RAD-A-021			LYT1	06/08/20	093		2008811				
GEL Prep Method	Laborator	-				LIII	00/08/20	09.	57	2008703				
OEL TTep Method	Laborator	y compos	site							2008703				
The following An			were perfor	med										
Method	Descript	ion												
1	DOE HAS	L 300, 4.	5.2.3/Ga-01-	R										
2	EPA 905.0) Modifie	d/DOE RP50	1 Rev. 1 Modi	fied									
3	EPA 906.0) Modifie	d											
4	GEL Prep	Method												
Surrogate/Trace	r Recover	y i	Test]	Batch	ID Recove	ry%	Accepta	ble Lim	its
Strontium Carr	rier		GFPC, Sr	00, Vegetatio	n "As Received"				20089	56 94	1.4	(25%-	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: A-2-200604			Project:	GSIE00119	
Sample ID:	512859002			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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QC Summary

Report Date: July 2, 2020

Page 1 of 8

155 Grand Ave Suite 704 Oakland, California Contact: Travis Wicks

GSI Environmental Inc.

Workorder: 512859

Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range A	nlst	Date Time
LC-MS/MS Perchlorate Batch 2011115 —									
QC1204578057 ICS Perchlorate	1.95		2.02	ug/kg		104	(70%-130%) (CWW	06/19/20 14:05
QC1204578054 LCS Perchlorate	1.91	J	1.89	ug/kg		99	(70%-130%)		06/19/20 13:56
QC1204578053 MB Perchlorate		U	ND	ug/kg					06/19/20 13:47
QC1204578055 512856001 MS Perchlorate	1.88 U	ND	1.95	ug/kg		104	(75%-125%)		06/19/20 14:32
QC1204578056 512856001 MSD Perchlorate	1.73 U	ND	1.82	ug/kg	7	105	(0%-30%)		06/19/20 14:41
Metals Analysis-ICP Batch 2008857 ——									
QC1204574160 LCS Antimony	45400		44700	ug/kg		98.4	(80%-120%)	JWJ	06/09/20 19:00
Arsenic	45400		42000	ug/kg		92.5	(80%-120%)		
Barium	45400		43200	ug/kg		95.3	(80%-120%)		
Beryllium	45400		46500	ug/kg		102	(80%-120%)		
Cadmium	45400		42100	ug/kg		92.8	(80%-120%)		
Chromium	45400		42700	ug/kg		94.1	(80%-120%)		

Workorder: 512859		<u><u>v</u> e b i</u>	ummu						
	NOM	Sample Qual	<u> </u>	Unita		DEC0/		Anlat	Page 2 of 8
Parmname Metals Analysis-ICP Batch 2008857	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Cobalt	45400		44800	ug/kg		98.7	(80%-120%)) JWJ	06/09/20 19:00
Copper	45400		42800	ug/kg		94.4	(80%-120%))	
Lead	45400		43100	ug/kg		95	(80%-120%))	
Molybdenum	45400		46200	ug/kg		102	(80%-120%))	
Nickel	45400		42500	ug/kg		93.7	(80%-120%))	
Selenium	45400		41900	ug/kg		92.4	(80%-120%))	
Silver	9070		8480	ug/kg		93.5	(80%-120%))	
Thallium	45400		44100	ug/kg		97.2	(80%-120%))	
Vanadium	45400		42700	ug/kg		94.2	(80%-120%))	
Zinc	45400		42500	ug/kg		93.6	(80%-120%))	
QC1204574159 MB Antimony		J	820	ug/kg					06/09/20 18:56
Arsenic		U	ND	ug/kg					
Barium		U	ND	ug/kg					
Beryllium		U	ND	ug/kg					
Cadmium		U	ND	ug/kg					

Workorder:	512859			-	<u>×</u>		*					Pag	ge 3 of 8
Parmname		NON	Л	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst		Time
Metals Analysis-IC Batch 2	ICP 2008857												
Chromium					J	198	ug/kg				JWJ	06/09/2	20 18:56
Cobalt					U	ND	ug/kg						
Copper					U	ND	ug/kg						
Lead					J	780	ug/kg						
Molybdenum					U	ND	ug/kg						
Nickel					U	ND	ug/kg						
Selenium					U	ND	ug/kg						
Silver					U	ND	ug/kg						
Thallium					U	ND	ug/kg						
Vanadium					U	ND	ug/kg						
Zinc					U	ND	ug/kg						
QC120457416 Antimony	51 512856001 M	MS 46100	J	1450		44300	ug/kg		93	(75%-125%))	06/09//	/20 19:06
Arsenic		46100	U	ND		44600	ug/kg		96.8	(75%-125%	,)		
Barium		46100	J	214		45400	ug/kg		98	(75%-125%	,)		
Beryllium		46100	U	ND		49100	ug/kg		107	(75%-125%))		

Workorder: 512859		$\underline{\mathbf{v}}$	ummu	<u></u>					Der	4 -6 9
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	6 Range	Anlst		ge 4 of 8 Time
Metals Analysis-ICP Batch 2008857		Quinpic Quin	<u> </u>	Omus	KI DID IV	MEC /v	Munge	Amor	Dur	<u></u>
Cadmium	46100 U	ND	43900	ug/kg		95.2	(75%-125%)) JWJ	06/09/2	20 19:06
Chromium	46100 U	ND	44500	ug/kg		96.4	(75%-125%))		
Cobalt	46100 U	ND	48700	ug/kg		106	(75%-125%))		
Copper	46100	4500	47700	ug/kg		93.6	(75%-125%))		
Lead	46100 U	ND	45100	ug/kg		97.3	(75%-125%))		
Molybdenum	46100 U	ND	49500	ug/kg		107	(75%-125%))		
Nickel	46100 U	ND	44600	ug/kg		96.3	(75%-125%))		
Selenium	46100 U	ND	43900	ug/kg		95.1	(75%-125%))		
Silver	9230 U	ND	8720	ug/kg		94.5	(75%-125%))		
Thallium	46100 U	ND	43100	ug/kg		93.5	(75%-125%))		
Vanadium	46100 U	ND	44900	ug/kg		97.3	(75%-125%))		
Zinc	46100	5610	48200	ug/kg		92.3	(75%-125%))		
QC1204574162 512856001 MSD Antimony	47500 J	1450	46200	ug/kg	; 4	94.1	(0%-20%))	06/09//	20 19:08
Arsenic	47500 U	ND	44300	ug/kg	0.779	93.2	(0%-20%))		
Barium	47500 J	214	45500	ug/kg	0.195	95.3	(0%-20%))		

Workorder: 512859		<u>v</u> v s		<u></u>				
								Page 5 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-ICP Batch 2008857								
Beryllium	47500 U	ND	49200	ug/kg	0.0435	103	(0%-20%) JWJ	J 06/09/20 19:08
Cadmium	47500 U	ND	44100	ug/kg	0.474	92.8	(0%-20%)	
Chromium	47500 U	ND	44700	ug/kg	0.402	93.9	(0%-20%)	
Cobalt	47500 U	ND	48200	ug/kg	0.98	101	(0%-20%)	
Copper	47500	4500	47900	ug/kg	0.432	91.3	(0%-20%)	
Lead	47500 U	ND	44900	ug/kg	0.472	94	(0%-20%)	
Molybdenum	47500 U	ND	49500	ug/kg	0.168	104	(0%-20%)	
Nickel	47500 U	ND	44400	ug/kg	0.415	93.1	(0%-20%)	
Selenium	47500 U	ND	41600	ug/kg	5.34	87.5	(0%-20%)	
Silver	9510 U	ND	8660	ug/kg	0.595	91.2	(0%-20%)	
Thallium	47500 U	ND	43200	ug/kg	0.0556	90.8	(0%-20%)	
Vanadium	47500 U	ND	45300	ug/kg	0.851	95.3	(0%-20%)	
Zinc	47500	5610	49300	ug/kg	2.29	91.9	(0%-20%)	
QC1204574163 512856001 SDILT Antimony	J	15.2 U	ND	ug/L	N/A		(0%-20%)	06/09/20 19:13
Arsenic	U	ND U	ND	ug/L	N/A		(0%-20%)	

Workorder: 512859			-	<u></u>				Page 6 of 8
Parmname	NOM	Sample Qual	QC	Units 1	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-ICPBatch2008857								
Barium	J	2.25 U	ND	ug/L	N/A		(0%-20%) JW.	ZJ 06/09/20 19:13
Beryllium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Cadmium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Chromium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Cobalt	U	ND U	ND	ug/L	N/A		(0%-20%)	
Copper		47.3 J	9.21	ug/L	2.69		(0%-20%)	
Lead	U	ND U	ND	ug/L	N/A		(0%-20%)	
Molybdenum	U	ND U	ND	ug/L	N/A		(0%-20%)	
Nickel	U	ND U	ND	ug/L	N/A		(0%-20%)	
Selenium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Silver	U	ND U	ND	ug/L	N/A		(0%-20%)	
Thallium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Vanadium	U	ND U	ND	ug/L	N/A		(0%-20%)	
Zinc		59.0 J	14.1	ug/L	19.8		(0%-20%)	

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QC Summary

Workorder: 512859								Page 7 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-MercuryBatch2011848								
QC1204579697 LCS Mercury	238		191	ug/kg		80.2	(80%-120%) MTM1	06/17/20 10:32
QC1204579696 MB Mercury		U	ND	ug/kg				06/17/20 10:30
QC1204579699 513320001 MS Mercury	345	47.6	363	ug/kg		91.5	(80%-120%)	06/17/20 11:02
QC1204579701 513320001 MSD Mercury	305	47.6	323	ug/kg	11.8	90.2	(0%-20%)	06/17/20 11:04
QC1204579702 513320001 SDILT Mercury		0.311 U	ND	ug/L	N/A		(0%-10%)	06/17/20 11:05

Notes:

The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- JNX Non Calibrated Compound
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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QC Summary

Parmnaı	me NOM Sample Qual QC Units RPD/D% REC% Range Anlst Date Time
N N/A	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Р	OrganicsThe concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UJ	Compound cannot be extracted
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded
^ The Re five time	dicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than les (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the

RL is used to evaluate the DUP result.

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* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

OC Summary

			Q	CS	ummary	Y	,	Damant D	- 4 I 2 2020	
Client :	GSI Environmental Inc.				_ _		_	Report Da	ate: July 2, 2020 Page 1 of 3	
	155 Grand Ave								Page 1 01 5	
	Suite 704									
C to ata	Oakland, California									
Contact:	Travis Wicks									
Workorder:	512859									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe Batch	2009006									
QC1204574617	512856001 DUP									
Cesium-137		U	0.00577	U	0.00416	pCi/g	0		N/A RXF2	06/11/2013:12
		Uncert:	+/-0.0149		+/-0.0150					
		TPU:	+/-0.0151		+/-0.0151					
QC1204574618	LCS									
Americium-241		486			572	pCi/g		118	(75%-125%) RXF2	06/11/2013:26
		Uncert:			+/-12.4					
		TPU:			+/-54.5	C :/		100	(======================================	
Cobalt-60		98.8			99.2	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.30					
0 . 127		TPU:			+/-8.79	-C:/-		100	(750/ 1050/)	
Cesium-137		165 Uncerti			165	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.54					
0.01204574616	MD	TPU:			+/-14.1					
QC1204574616 Cesium-137	MB			U	0.000724	nCi/a			RXF2	06/11/2010:16
Cesium-157		Uncert:		U	+/-0.00567	pCi/g			KAI ⁺ 2	00/11/2010.10
		TPU:			+/-0.00567					
Rad Gas Flow		IFU.			+/-0.00500					
Batch	2008956									
-	512856001 DUP									
Strontium-90		U	-0.271	U	-0.0524	pCi/g	0		N/A MXS2	06/26/2006:57
		Uncert:	+/-0.105		+/-0.0909					
		TPU:	+/-0.105		+/-0.0909					
QC1204574466	LCS									
Strontium-90		1.45			1.27	pCi/g		87.6	(75%-125%) MXS2	06/26/2006:57
		Uncert:			+/-0.0762					
		TPU:			+/-0.299					
QC1204574464	MB			• •	2 22 60 4	a :/				2 - 12 - 10 0 0 C ET
Strontium-90				U	0.00694	pCi/g			MXS2	06/26/2006:57
		Uncert:			+/-0.0169					
	····	TPU:			+/-0.0170					
Rad Liquid Scint Batch	2011631									
QC1204579192	512856001 DUP									
Tritium		U	0.335	U	0.898	pCi/g	0		N/A EW3	06/24/2011:03
		Uncert:	+/-1.80		+/-1.87					
		TPU:	+/-1.80		+/-1.88					
QC1204579194	LCS									
Tritium		85.0			66.2	pCi/g		77.9	(75%-125%) EW3	06/23/2007:11
		Uncert:			+/-9.01					

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QC Summary

Workorder: 512859							Page 2	2 of 3	
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid ScintillationBatch2011631									
	TPU:		+/-17.5						
QC1204579191 MB									
Tritium		U	-1.17	pCi/g				EW3	06/23/2004:45
	Uncert:		+/-2.70						
	TPU:		+/-2.70						
QC1204579193 512856001 MS									
Tritium	90.9 U	0.335	73.2	pCi/g		80.5	(75%-125%	6) EW3	06/23/2006:48
	Uncert:	+/-1.80	+/-8.21						
	TPU:	+/-1.80	+/-18.5						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512859				-			Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

															CH	CHAIN-OF-CUSTODY RECORD Date: <u> </u>	DF-CUST e: 6/4 Page		
																5		5128	p.
FROM: GSI Environmental Inc		PROJECT NAME:	AJU-BB										PROJE	PROJECT NO.:	5182				
155 Grand Ave. Suite 704	04	PROJECT CONTACT:	Susan Gallardo	lardo									LAB C	ONTACT:	Brielle I	LAB CONTACT: Brielle Luthman			
(510) 463-8484 (510) 463-8484		GLOBAL ID:	I										SAMPI	SAMPLER(S): (PRIN	RINT	H	· // +	Tick	1.50
(510)	E-MAIL:	smgallardo@gsi-ne	net.com; tzwicks@gsi-net.com	ricks@gsi-	net.co	E					R	OUE	REQUESTED	AN	ANALYSES	ES		2	N
LABORATORY: GEL Laboratories	ies						-	-		-	Pleas	e check	box or	ll in bl	Please check box or fill in blank as needed	eded.	F		F
]SAME DAY]72 HR	□24 HR □5 DAYS	☐ 48 HR ⊠STANDARD								(0.418								·····	
SPECIAL INSTRUCTIONS: - Sr-90 MDC of 0.5 pCi/g - H-3 MDC of 5 pCi/g	Cs-137 MD Include skii	- Cs-137 MDC of 1 pCi/g - Include skin and flesh, but not	ot seeds or stem	T	лөд зөглөд	iltered	06) 06-1S	906) E-H) 22 Metals () eteroldo		······							
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Laboratories

Received By: STACY PACONE Dure Received: JUINE 5, 2.020 Contained Carrier and Tracking Number Felix Express FedEx Grand UPS Field Services Courier Other 393.55 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 44.669 O289 - 4'. 393.55 44.669 O278 - 21'. 393.67 45.60 Chash's he stabilized in advigatilized. Common US 393.67 45.60 Chash's he stabilized in advigatilized. Common US 393.68 Detailify he samples as COM matches failuated backer. COM matches failuated backer. 101 due detail detaignane samples as COM failuate samples as COM failuated backer. Common US 102 due detail detaignane samples as COM failuate samples as COM failuated backer. Common US Common US Com failuated samples failuate. Common U	Client: GSIE			SAMPLE RECEIPT & REVIEW FORM
Carrier and Tracking Number Pedix Express Fedix Ground UPS Field Services Courier Other 3sepected Hazard Infernation ¹ / ₂ 2 ¹ / ₂ Pedix Ground VPS Field Services Courier Other 3sepected Hazard Infernation ¹ / ₂ 2 ¹ / ₂ Pedix Ground VPS Field Services Courier Other NShipped as a DOT Hazardous? ¹ / ₂ Pedix Ground Class Shipped: ¹ / ₂ Pedix Ground Class Pedix Ground Class Pedix Factors Pedix Pedix Ground Class Pedix ¹ / ₂ Pedix Ground Class Pedix Factors Pedix P	Received By: STACY BOIC	<u>) nie</u>	2 2 2	
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Did we find and marked in marked	uspected Hazard Information		T	3935 4669 0289-4' 3935 4669 0278-21
Shinped as a DOT Hexardour? Hexard Class Shipped: UNS: Did the client designate the samples are to be certived as rule octation or nulcostive sites on containers equal client designation. Did the client designate the samples are to be containers and the samples are to be containers equal client designation. Did the client designate the samples are to be containers and the control control control. CCC notation or nulcostive sites on containers equal client designation. Did the client designate samples are targets of the control control. CCC notation or nulcostive sites on containers equal client designation. Did the RSO identify possible hazeds? CCC notation or hazerd labels on containers equal client designation. Did the RSO identify possible hazeds? If Ore E is yes, when Hozards below. COS F is yes, when Hozards Labels. Control containers are control in CRCA. Adsestos Beryllium Other:		~ ~	Ž	"If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
0) Did the client designate the samples are to be client designation: CC notation or radioactive stickers on containers equal client designation. 0) Did the RSO classify the samples as client designates analytics as client designates analytics as client designate samples are client designates analytics as client designates analytics are client designates are client)Shipped as a DOT Hazardous?		-	Hazard Class Shipped
dialogicality? Classified as: Rad 1 Rad 2 Rad 3 Classified as: Rad 1 Rad 2 Rad 3 Classified as: Rad 1 Rad 2 Rad 3 Did the cliwit designate samples are azardows? Clossified as: Rad 1 Rad 2 Rad 3 Did the cliwit designate samples are azardows? Clossified as: Rad 1 Rad 2 Rad 3 Did the RSO identify possible hazards? If D or is yes, select Hazards below. PCBs Flammable Foreign Soil RCRA Shipping containers received intact and select? Contract/Qualifiers (Regifiered for Non-Conforming Items) Some Chain of custody documents included Cricle Applicable: Seals backen Damaged container Leaking containers TEMP? Samples requiring cold preservation Preservation Method. Wei [se tee Paeks Dry ice: Name Other: TEMP? Vithin (04 5 dec; C)? Preservation Method. Wei [se tee Paeks Dry ice: Name Other: TEMP? Daily check performed and passed on IR Secondary Temperature Device Serial #: TELE TEMP? Sample containers intact and scaled? Circle Applicable: Secondary Temperature Device Serial #: TELE Do any samples require Volatile If Preservation and ice despace? Yes_No_NA_(If yes, take to VOA Freezer) Do any samples require Volatile If Preservation acid preservation? Yes_Na_NA_(If yes, take to VOA Freezer)) Did the client designate the samples are to be ceived as radioactive?		-	
Didde RSO identify possible hazards? If D or E is yes, select Hazards below. PCDS Flammable For E is yes, select Hazards below. Sample Receipt Criteria B E E Shipping containers received intact and sealed? E E Commentational Control (describe) Chain of custody documents included Circle Applicable: Seals lavken. Damaged container Loking containers Other (describe) Samples require Valatile Circle Applicable: Circle Applicable: Seals lavken. Damaged containers Net (describe) Samples require Valatile If D or E is yes, select Hazards below. Commentations of mazards? TEMP: Samples require Valatile If D or E is yes, select Hazards below. Carele Applicable: Circle Applicable: Seals lavken. Damaged container Loking containers Samples require Valatile If D or E is yes, select Hazards below. Circle Applicable: Seals lavken. Damaged container Loking containers Samples require Valatile If D or E is yes, select Hazards below. Damaged container Loking containers Samples require Valatile If Seandary Temperature Device Serial # (If Applicable): If D or NA	dioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3-
Data the RSO identify possible hazards? PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: Sample Receipt Criteria 2 2 Comments/Qualifiers (Régüred for Non-Conforming tiems) Solutions Shipping containers received intact and vith shipment? 2 2 Comments/Qualifiers (Régüred for Non-Conforming tiems) Chain of custody documents included with shipment? Circle Applicable: Sample containers included Circle Applicable: Circle Applicable: Circle Applicable: Circle Applicable: Circle Applicable: TEMP:) Did the client designate samples are zardous?			
Shipping containers received intact and sealed? Circle Applicable: Seals broken Danaged container Leaking container Other (describe) Chain of custody documents included Circle Applicable: Seals broken Danaged container Leaking container Other (describe) Chain of custody documents included Circle Applicable: Seals broken Danaged container Leaking container Other (describe) Samples requiring cold preservation within (0 ≤ 6 deg. C)? Preservation Method. Well be tee Packs Dry ice None Other: TEMP: Jaily check performed and passed on IR Preservation Method. Well be tee Packs Dry ice None Other: TEMP: Samples requiring chemical preservation at provided COC Core reased upon receipt Sample containers intact and sealed? Circle Applicable: Seals broken Danaged container Leaking container Other (describe) Sample requiring chemical preservation at proservation at proservation at proper pH? Sample ID's and Containers Affected: Do any samples require Volatile Analysis? Sample ID's and containers affected: Analysis? ID's and containers affected: Sample ID's on COC match ID's on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Number of containers received match number indicated on COC? Circle Applicable: No dates on containers No times on containers COC missing info Outers? Circle Applicable: No telinquished Other (describe) Circle Applicable: No t			1	PCB's Flammable Family C the party
sealed? Data of custody documents included Circle Applicable: Client container Leaking container Leaking container Other (describe) Chain of custody documents included Circle Applicable: Client contacted and provided COC COC created upon receipt Samples requiring cold preservation Preservation Method. Wet lee lee Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:		Yes	Z	
with shipment? Preservation Preservation Method. Weil lee tee Packs Dry ice None Other: Samples requiring cold preservation within (0 ≤ 6 deg. C)?* Preservation Method. Weil lee tee Packs Dry ice None Other: Daily check performed and passed on IR temperatures are recorded in Celsius TEMP:	sealed?	1		Damaged container Leaking container Other (describe)
within (0 ≤ 6 deg. C)?* *all temperatures are recorded in Celsius TEMP: Daily check performed and passed on IR Temperature Device Serial #: I () - I () Secondary Temperature Device Serial #: I () - I () Sample containers intact and scaled? Circle Applicable: Seals broken Damaged container Leaking container Other (describe) Sample containers intact and scaled? Circle Applicable: Seals broken Damaged container Leaking container Other (describe) Samples require volatile Analysis? Sample ID's and Containers Affected: Do any samples require Volatile Analysis? Do liquid VOA vials free of headspace? Yes	with shipment?			
Interperature gun? Imperature Device Serial #: I2 1-14 Secondary Temperature Device Serial #: If Applicable): Secondary Temperature Device Serial # (If Applicable): Sample containers intact and sealed? Circle Applicable: Seals broken Damaged container Leaking container Other (describe) Samples requiring chemical preservation at proper pH? Sample ID's and Containers Affected: If Preservation added, Lat# If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do any samples require Volatile Analysis? If Yes, are Encores or Soil Kits present for solids? YesNoNA(If unknown, select No) Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on bottles? ID's and containers affected: Date & time on COC match ID's on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe) COC form is properly signed in memory signed in relinquished Other (describe) Circle Applicable: Not relinquished Other (describe)	within $(0 \le 6 \text{ deg. C})$?*	\square	march	fall temperatures are recorded in Celsius
Samples requiring chemical preservation at proper pH? Sample ID's and Containers Affected: If Preservation added, Lot# Do any samples require Volatile Analysis? If Yes, are Encores or Soil Kits present for solids? Yes No NA_(If yes, take to VOA Freezer) Do liquid VOA vials free of headspace? Yes No NA_ NA_(If unknown, select No) Are liquid VOA vials free of headspace? Yes No_ NA_(If unknown, select No) Samples received within holding time? ID's and tests affected: Sample ID's on COC match ID's on bottles? ID's and containers affected: Date & time on COC match date & time on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe) CoC form is properly signed in relinquished/received sections? For the applicable: Not relinquished Other (describe)	temperature gun?			Secondary Temperature Device Serial # (If Applicable):
at proper pH? If Preservation added Lotth Do any samples require Volatile Analysis? If Yes, are Encores or Soil Kits present for solids? Yes_No_NA_(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes_No_NA_(If unknown, select No) NA_(If unknown, select No) Are liquid VOA vials free of headspace? Yes_No_NA_(If unknown, select No) NA_ Samples received within holding time? ID's and tests affected: Sample ID's on COC match ID's on bottles? ID's and containers affected: Date & time on COC match date & time on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Are sample containers identifiable as GEL provided? Circle Applicable: Not relinquished Other (describe) COC form is properly signed in relinquished/received sections? Gircle Applicable: Not relinquished Other (describe)	A REAL PROPERTY AND A REAL	\square		
Do any samples require Volatile Analysis? If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freczer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on bottles? Date & time on COC match date & time on bottles? Number of containers received match number indicated on COC? Are sample containers identifiable as GEL provided? COC form is properly signed in relinquished/received sections? VB VB <	Samples requiring chemical preservation at proper pH?	1		If Preservation added 1 off
Samples received within holding time? ID's and tests affected: Sample ID's on COC match ID's on bottles? ID's and containers affected: Date & time on COC match date & time on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe) Are sample containers identifiable as GEL provided? Circle Applicable: Not relinquished Other (describe) Mumber of Containers identifiable as GEL provided? Circle Applicable: Not relinquished Other (describe)				Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No)
bottles? Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe) Are sample containers identifiable as GEL provided? Circle Applicable: Not relinquished Other (describe) COC form is properly signed in relinquished/received sections? YR Circle Applicable: Not relinquished Other (describe)	Samples received within holding time?		-	
on bottles? Image: Continues of containers received match number indicated on COC? Number indicated on COC? Image: Container count on COC Other (describe) Are sample containers identifiable as GEL provided? Image: Continues of container count on COC Other (describe) COC form is properly signed in relinquished/received sections? Image: Continuation Form if needed);	Sample ID's on COC match ID's on bottles?			ID's and containers affected:
number indicated on COC? Are sample containers identifiable as <u>GEL provided?</u> COC form is properly signed in relinquished/received sections? SR Circle Applicable: Not relinquished Other (describe) ments (Use Continuation Form if needed):		63		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
GEL provided? COC form is properly signed in relinquished/received sections? ments (Use Continuation Form if needed);	number indicated on COC?			Circle Applicable: No container count on COC Other (describe)
relinquished/received sections?	GEL provided?			
58 - W - 200603 COC TIME : 11:30 SAMPLE TIME : 11:40	relinquished/received sections?	1	٩ı	Circle Applicable: Not relinquished Other (describe)
	58-W-206693 CO	сτ	'IR	E: 11: 30 SAMPLE TIME : 11:40

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State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Technical Case Narrative GSI Environmental Inc. SDG #: 512859

Perchlorates by LCMSMS

Product: Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M) <u>Analytical Method:</u> SW846 6850 Modified <u>Analytical Procedure:</u> GL-OA-E-067 REV# 15 <u>Analytical Batches:</u> 2011115 and 2011114

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204578053	Method Blank (MB)
1204578054	Laboratory Control Sample (LCS)
1204578055	512856001(AV-1-200604) Matrix Spike (MS)
1204578056	512856001(AV-1-200604) Matrix Spike Duplicate (MSD)
1204578057	Interference Check Sample (ICS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Metals

<u>Product:</u> Determination of Metals by ICP <u>Analytical Method:</u> SW846 3050B/6010D <u>Analytical Procedure:</u> GL-MA-E-013 REV# 31 <u>Analytical Batch:</u> 2008857

Preparation Method: SW846 3050B **Preparation Procedure:** GL-MA-E-009 REV# 29 **Preparation Batch:** 2008854

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703 The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204574159	Method Blank (MB)ICP
1204574160	Laboratory Control Sample (LCS)
1204574163	512856001(AV-1-200604L) Serial Dilution (SD)
1204574161	512856001(AV-1-200604S) Matrix Spike (MS)
1204574162	512856001(AV-1-200604SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

<u>Product:</u> Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer <u>Analytical Method:</u> SW846 7471A <u>Analytical Procedure:</u> GL-MA-E-010 REV# 38 <u>Analytical Batch:</u> 2011848

Preparation Method: SW846 7471A Prep **Preparation Procedure:** GL-MA-E-010 REV# 38 **Preparation Batch:** 2011847

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204579696	Method Blank (MB)CVAA
1204579697	Laboratory Control Sample (LCS)
1204579702	513320001(NonSDGL) Serial Dilution (SD)
1204579699	513320001(NonSDGS) Matrix Spike (MS)
1204579701	513320001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Radiochemistry

<u>Product:</u> Dry Weight <u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512859001	A-1-200604
512859002	A-2-200604

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R **Analytical Procedure:** GL-RAD-A-013 REV# 27 **Analytical Batch:** 2009006

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703 The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204574616	Method Blank (MB)
1204574617	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574618	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Sr90, Vegetation <u>Analytical Method:</u> EPA 905.0 Modified/DOE RP501 Rev. 1 Modified <u>Analytical Procedure:</u> GL-RAD-A-004 REV# 21 <u>Analytical Batch:</u> 2008956

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204574464	Method Blank (MB)
1204574465	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574466	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Vegetation Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2011631

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512859001	A-1-200604
512859002	A-2-200604
1204579191	Method Blank (MB)
1204579192	512856001(AV-1-200604) Sample Duplicate (DUP)
1204579193	512856001(AV-1-200604) Matrix Spike (MS)
1204579194	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples 1204579192 (AV-1-200604DUP) and 512859002 (A-2-200604) were recounted due to high MDCs. The recounts are reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512856

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512856 GEL Work Order: 512856

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: AV-1-200604 Project: GSIE00119 Sample ID: 512856001 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 09:30 05-JUN-20 Receive Date: Client Collector:

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	e Batch	Method
LC-MS/MS Perchlorat	e											
Perchlorate by LC-MS	/MS "As Rece	eived"										
Perchlorate	U	ND	0.437	1.75	ug/kg	8.73	1	CWW	06/19/20	1423	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Merc		s Received"										
Mercury	U	ND	6.81	20.3	ug/kg	102	1	MTM1	06/17/20	1040	2011848	2
Metals Analysis-ICP					00							
SW846 3050B/6010D	Metals Solid	"As Received"										
Antimony	J	1450	314	1900	ug/kg	95.1	1	JWJ	06/09/20	1902	2008857	3
Arsenic	Ŭ	ND	475	2850	ug/kg	95.1	1	0.110	00,09,20	1702	20000027	U
Barium	J	214	95.1	475	ug/kg	95.1						
Beryllium	U	ND	95.1	475	ug/kg	95.1	1					
Cadmium	U	ND	95.1	475	ug/kg	95.1	1					
Chromium	U	ND	143	951	ug/kg	95.1	1					
Cobalt	U	ND	143	475	ug/kg	95.1	1					
Copper		4500	285	1900	ug/kg	95.1	1					
Lead	U	ND	314	1900	ug/kg	95.1	1					
Molybdenum	U	ND	190	951	ug/kg	95.1	1					
Nickel	U	ND	143	475	ug/kg	95.1	1					
Selenium	U	ND	475	2850	ug/kg	95.1	1					
Silver	U	ND	95.1	475	ug/kg	95.1	1					
Thallium	U	ND	475	1900	ug/kg	95.1	1					
Vanadium	U	ND	95.1	475	ug/kg	95.1	1					
Zinc		5610	380	1900	ug/kg	95.1	1					
The following Prep Me	ethods were pe	erformed:										
Method	Description	n		Analyst	Date	,	Time	e Pre	ep Batch			
GEL Prep Method	Laboratory C	omposite		-				200	08703			
SW846 3050B	SW846 3050	B Prep	:	SM1	06/09/20	(0900	200)8854			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids	(CWW	06/18/20		1839	201	1114			
SW846 7471A Prep	EPA 7471A N	Mercury Prep Soil	L	AXS5	06/16/20		1334	201	1847			
The following Analyti	cal Methods v	vere performed:										
Method	Description	-			A	Analyst	t Coi	nments	5			
1	SW846 6850											
2	SW846 7471A											
3	SW846 3050E											

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Certificate of Analysis

			Report Date:	July 2, 2020
Company :	GSI Environmental Inc.			
Address :	155 Grand Ave			
	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	AV-1-200604	Project:	GSIE00119	
Sample ID:	512856001	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are d DF: Dilution Factor DL: Detection Limit MDA: Minimum Det MDC: Minimum Det	ectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitation	on Limit					

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Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: AV-2-200604 Project: GSIE00119 Sample ID: 512856002 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 13:00 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	e Batch	Method
LC-MS/MS Perchlora	te											
Perchlorate by LC-MS	S/MS "As Rece	eived"										
Perchlorate	U	ND	0.840	3.36	ug/kg	8.40	2	CWW	06/19/20	1450	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer		s Received"										
Mercury	U	ND	7.50	22.4	ug/kg	112	1	MTM1	06/17/20	1042	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D	Metals, Solid	"As Received"										
Antimony	U	ND	315	1910	ug/kg	95.4	1	JWJ	06/09/20	1922	2008857	3
Arsenic	U	ND	477	2860	ug/kg	95.4	1					
Barium	U	ND	95.4	477	ug/kg	95.4	1					
Beryllium	U	ND	95.4	477	ug/kg	95.4	1					
Cadmium	U	ND	95.4	477	ug/kg	95.4	1					
Chromium	U	ND	143	954	ug/kg	95.4	1					
Cobalt	U	ND	143	477	ug/kg	95.4	1					
Copper		3240	286	1910	ug/kg	95.4	1					
Lead	J	446	315	1910	ug/kg	95.4	1					
Molybdenum	U	ND	191	954	ug/kg	95.4	1					
Nickel	J	245	143	477	ug/kg	95.4	1					
Selenium	U	ND	477	2860	ug/kg	95.4	1					
Silver	U	ND	95.4	477	ug/kg	95.4	1					
Thallium	U	ND	477	1910	ug/kg	95.4						
Vanadium	U	ND	95.4	477	ug/kg	95.4						
Zinc		4970	382	1910	ug/kg	95.4	1					
The following Prep M	ethods were pe	erformed:										
Method	Description	n		Analyst	Date	r	Time	e Pr	ep Batch			
GEL Prep Method	Laboratory C	omposite						20	08703			
SW846 3050B	SW846 3050	B Prep		SM1	06/09/20	(0900	20	08854			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids		CWW	06/18/20		1839	20	11114			
SW846 7471A Prep	EPA 7471A N	Mercury Prep Soil		AXS5	06/16/20		1334	20	11847			
The following Analyt	ical Methods v	were performed:										
Method	Description	1			A	nalvst	Co	nments	3			
1	SW846 6850					,						
2	SW846 7471A											
3	SW846 3050E											

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Certificate of Analysis

			Report Date:	July 2, 2020
Company :	GSI Environmental Inc.			
Address :	155 Grand Ave			
	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	AV-2-200604	Project:	GSIE00119	
Sample ID:	512856002	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch Method
Notes:								
Column headers are de DF: Dilution Factor DL: Detection Limit MDA: Minimum Dete MDC: Minimum Dete	ctable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitati	on Limit				

Certificate of Analysis

Company : Address :	155 Grand	onmental Inc. Ave										
	Suite 704 Oakland, C	California 946	12					R	eport Date:	July 2,	2020	
Contact:	Travis Wie	eks							1	, j		
Project:	Near S SF	L										
Client Sam Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	5128 Vege e: 04-JU					Pro Cli	oject: ient ID:		IE00119 IE002			
Parameter	Qualific		Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec Gammaspec, Ge	c Analysis amma, Solid (Sta								222 1211a295	- 200 1000	2	
Cesium-137	U	0.00577	+/-0.0149	0.0288	+/-0.0151	0.100	pCi/g		RXF2	06/11/20 1009	2009006	1
Rad Gas Flow Pre GFPC, Sr90, Ve	oportional Counter of the operation of t											
Strontium-90	U	-0.271	+/-0.105	0.237	+/-0.105	0.240	pCi/g		MXS2	07/02/20 0712	2008956	2
Rad Liquid Scint	•											
	istillation, Veget			2.20	1.00		<u> </u>		FILIA	0.6/0.4/00.0117	2011/201	2
Tritium	U	0.335	+/-1.80	3.28	+/-1.80	5.00	pCi/g		EW3	06/24/20 0117	2011631	3
Solid Preparation Laboratory Con	1 nposite "As Rece	ived"										
The following Pr	ep Methods we	re performed										
Method	Description				Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep G	L-RAD-A-021			LYT1	06/08/20	093	37	2008811			
GEL Prep Method	Laboratory Com	posite							2008703			
The following An	alytical Method	s were perfor	rmed									
Method	Description											
1	DOE HASL 300	, 4.5.2.3/Ga-01-	R									
2	EPA 905.0 Modi	fied/DOE RP50	1 Rev. 1 Modi	fied								
3	EPA 906.0 Modi	fied										
4	GEL Prep Metho	d										
Surrogate/Trace	r Recovery	Test]	Batch	ID Recover	y% Accepta	ble Limi	its
Strontium Carr	ier	GFPC, Sr	90, Vegetatio	n "As Receiv	ed"			20089	62 56	.9 (25%-	125%)	

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Certificate of Analysis

Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.
Client Sample Sample ID:	ID: AV-1-200604 512856001			Project: Client ID:	GSIE00119 GSIE002	
Project:	Near S SFL					
Contact:	Travis Wicks					
	Suite 704 Oakland, California 94612				Report Date:	July 2, 2020
Address :	155 Grand Ave					
Company :	GSI Environmental Inc.					

Surrogate/Tracer Recovery	Test	Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	155 Grand A Suite 704												
	-	alifornia 946	12					R	eport Date:		July 2,	2020	
Contact:	Travis Wick	CS											
Project:	Near S SFL	,											
Client Sam Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	51285 Veget te: 04-JU	ation N-20 N-20					oject: ent ID:		E00119 E002				
Parameter	Qualifier	· Result (J ncertainty	MDC	TPU	RL	Units	PF	DF Analys	st Dat	te Time	Batch	Mtd.
Cesium-137 Rad Gas Flow Pr <i>GFPC, Sr90, Va</i> Strontium-90 Rad Liquid Scint	amma, Solid (Stan U oportional Count egetation "As Reco U illation Analysis istillation, Vegeta U	-0.00117 ting eived" -0.0220	+/-0.00799 +/-0.0705	0.0145 0.140 4.64	+/-0.00801 +/-0.0705 +/-2.68		pCi/g pCi/g pCi/g		MXS2	06/26/2	20 0648	2009006 2008956 2011631	5 2
-	nposite "As Receiv	ved"											
The following Pr	en Methods were	e nerformed											
Method	Description	periorinea			Analyst	Date	Tir	ne	Prep Batch				
Dry Soil Prep	Dry Soil Prep GL	-RAD-A-021			LYT1	06/08/20	093	37	2008811				
GEL Prep Method	Laboratory Comp	osite							2008703				
The following An	alvtical Methods	were nerfo	rmed										
Method	Description	perro	lineu										
1	DOE HASL 300, 4	4.5.2.3/Ga-01-	R										
2	EPA 905.0 Modifi			fied									
3	EPA 906.0 Modifi	ed											
4	GEL Prep Method	L											
Surrogate/Trace	er Recovery	Test]	Batch	ID Recove	ry%	Accepta	ble Lim	its
Strontium Carr	-	GFPC. Sr	90. Vegetation	n "As Received"				20089		.9		-125%)	
			, Betailo							-	(20 /0	/ 0 /	

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Certificate of Analysis

Company :	GSI Environmental	Inc.					
Address :	155 Grand Ave						
	Suite 704 Oakland, California	94612				Report Date:	July 2, 2020
Contact:	Travis Wicks	191012				Report Date.	July 2, 2020
Project:	Near S SFL						
Client Sample Sample ID:	ID: AV-2-200604 512856002	1			Project: Client ID:	GSIE00119 GSIE002	
Parameter	Qualifier Res	ult Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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QC Summary

Report Date: July 2, 2020

Page 1 of 8

Oakland, California Contact: Travis Wicks

GSI Environmental Inc.

155 Grand Ave Suite 704

Workorder: 512856

Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
LC-MS/MS Perchlorate Batch 2011115										
QC1204578057 ICS Perchlorate	1.95		2.02	ug/kg		104	(70%-130%)	CWW	06/19/2	0 14:05
QC1204578054 LCS Perchlorate	1.91	1	1.89	ug/kg		99	(70%-130%)		06/19/2	20 13:56
QC1204578053 MB Perchlorate		U	ND	ug/kg					06/19/2	20 13:47
QC1204578055 512856001 MS Perchlorate	1.88 U	ND	1.95	ug/kg		104	(75%-125%)		06/19/2	20 14:32
QC1204578056 512856001 MSD Perchlorate	1.73 U	ND	1.82	ug/kg	7	105	(0%-30%)		06/19/2	20 14:41
Metals Analysis-ICP Batch 2008857 —										
QC1204574160 LCS Antimony	45400		44700	ug/kg		98.4	(80%-120%)	JWJ	06/09/2	20 19:00
Arsenic	45400		42000	ug/kg		92.5	(80%-120%)			
Barium	45400		43200	ug/kg		95.3	(80%-120%)			
Beryllium	45400		46500	ug/kg		102	(80%-120%)			
Cadmium	45400		42100	ug/kg		92.8	(80%-120%)			
Chromium	45400		42700	ug/kg		94.1	(80%-120%)			

Workorder: 512856										
								A 1 4		2 of 8
Parmname Metals Analysis-ICP	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date T	lime
Batch 2008857										I
Cobalt	45400		44800	ug/kg		98.7	(80%-120%)	JWJ	06/09/20) 19:00
Copper	45400		42800	ug/kg		94.4	(80%-120%)			
Lead	45400		43100	ug/kg		95	(80%-120%)			
Molybdenum	45400		46200	ug/kg		102	(80%-120%)			
Nickel	45400		42500	ug/kg		93.7	(80%-120%)			
Selenium	45400		41900	ug/kg		92.4	(80%-120%)			
Silver	9070		8480	ug/kg		93.5	(80%-120%)			
Thallium	45400		44100	ug/kg		97.2	(80%-120%)			
Vanadium	45400		42700	ug/kg		94.2	(80%-120%)			
Zinc	45400		42500	ug/kg		93.6	(80%-120%)			
QC1204574159 MB Antimony		1	820	ug/kg					06/09/20) 18:56
Arsenic		U	ND	ug/kg						
Barium		U	ND	ug/kg						
Beryllium		U	ND	ug/kg						
Cadmium		U	ND	ug/kg						

				$\underline{\mathbf{v}}$		<u>ry</u>						
Workorder:	512856										Pag	ge 3 of 8
Parmname		NOM	M	Sample Qua	al QC	Units	RPD/D%	REC%	6 Range	Anlst		Time
Metals Analysis-ICBatch20	P 008857											
Chromium				J	198	ug/kg				JWJ	06/09/2	20 18:56
Cobalt				U	ND	ug/kg						
Copper				U	ND	ug/kg						
Lead				J	780	ug/kg						
Molybdenum				U	ND	ug/kg						
Nickel				U	ND	ug/kg						
Selenium				U	ND	ug/kg						
Silver				U	ND	ug/kg						
Thallium				U	ND	ug/kg						
Vanadium				U	ND	ug/kg						
Zinc				U	ND	ug/kg						
QC1204574161 Antimony	512856001 MS	s 46100	J	1450	44300	ug/kg		93	(75%-125%	')	06/09/.	20 19:06
Arsenic		46100	U	ND	44600	ug/kg		96.8	(75%-125%)		
Barium		46100	J	214	45400	ug/kg		98	(75%-125%)		
Beryllium		46100	U	ND	49100	ug/kg		107	(75%-125%)		

Workorder: 512856			Der	to 1 of 9						
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst		ge 4 of 8 Time
Metals Analysis-ICP Batch 2008857		Jumpie Zum	<u> </u>		KID(27)	<u> </u>	<u> </u>	<u>Annor</u>	Dur	<u></u>
Cadmium	46100 U	ND	43900	ug/kg		95.2	(75%-125%)) JWJ	06/09/2	20 19:06
Chromium	46100 U	ND	44500	ug/kg		96.4	(75%-125%))		
Cobalt	46100 U	ND	48700	ug/kg		106	(75%-125%))		
Copper	46100	4500	47700	ug/kg		93.6	(75%-125%))		
Lead	46100 U	ND	45100	ug/kg		97.3	(75%-125%))		
Molybdenum	46100 U	ND	49500	ug/kg		107	(75%-125%))		
Nickel	46100 U	ND	44600	ug/kg		96.3	(75%-125%))		
Selenium	46100 U	ND	43900	ug/kg		95.1	(75%-125%))		
Silver	9230 U	ND	8720	ug/kg		94.5	(75%-125%))		
Thallium	46100 U	ND	43100	ug/kg		93.5	(75%-125%))		
Vanadium	46100 U	ND	44900	ug/kg		97.3	(75%-125%))		
Zinc	46100	5610	48200	ug/kg		92.3	(75%-125%))		
QC1204574162 512856001 MSD Antimony	47500 J	1450	46200	ug/kg	4	94.1	(0%-20%))	06/09/ź	20 19:08
Arsenic	47500 U	ND	44300	ug/kg	0.779	93.2	(0%-20%))		
Barium	47500 J	214	45500	ug/kg	0.195	95.3	(0%-20%))		

Workorder: 512856								
		Comula	0	TT \$4 m		DEC9/	Downey Awlet	Page 5 of 8
Parmname Metals Analysis-ICP	NOM	Sample	Qual QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Batch 2008857								
Beryllium	47500 U	ND	49200	ug/kg	0.0435	103	(0%-20%) JWJ	06/09/20 19:08
Cadmium	47500 U	ND	44100	ug/kg	0.474	92.8	(0%-20%)	
01	47500 U	ND	44700	-10/kg	0.402	02.0	(00/ 200/)	
Chromium	47500 U	ND	44700	ug/kg	0.402	93.9	(0%-20%)	
Cobalt	47500 U	ND	48200	ug/kg	0.98	101	(0%-20%)	
			-		•		(**** =****,	
Copper	47500	4500	47900	ug/kg	0.432	91.3	(0%-20%)	
Lead	47500 U	ND	44900	ug/kg	0.472	94	(0%-20%)	
Molybdenum	47500 U	ND	49500	ug/kg	0.168	104	(0%-20%)	
NT 1_1	47500 U	ND	44400	ng/kg	0.415	02.1	(00/ 200/)	
Nickel	47500 U	IND	44400	ug/kg	0.415	93.1	(0%-20%)	
Selenium	47500 U	ND	41600	ug/kg	5.34	87.5	(0%-20%)	
							· ·	
Silver	9510 U	ND	8660	ug/kg	0.595	91.2	(0%-20%)	
Thallium	47500 U	ND	43200	ug/kg	0.0556	90.8	(0%-20%)	
Vanadium	47500 U	ND	45300	ug/kg	0.851	95.3	(0%-20%)	
7	47500	5(10	40200	/l	2.20	01.0	(00/ 200/)	
Zinc	47500	5610	49300	ug/kg	2.29	91.9	(0%-20%)	
QC1204574163 512856001 SDILT								
Antimony	J	15.2	U ND	ug/L	N/A		(0%-20%)	06/09/20 19:13
Arsenic	U	ND	U ND	ug/L	N/A		(0%-20%)	

Workorder: 512856				*					Pag	e 6 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range A	nlst	Date	Time
Metals Analysis-ICP Batch 2008857										
Barium	J	2.25 U	ND	ug/L	N/A	((0%-20%)	JWJ	06/09/2	20 19:13
Beryllium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Cadmium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Chromium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Cobalt	U	ND U	ND	ug/L	N/A	((0%-20%)			
Copper		47.3 J	9.21	ug/L	2.69	((0%-20%)			
Lead	U	ND U	ND	ug/L	N/A	((0%-20%)			
Molybdenum	U	ND U	ND	ug/L	N/A	((0%-20%)			
Nickel	U	ND U	ND	ug/L	N/A	((0%-20%)			
Selenium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Silver	U	ND U	ND	ug/L	N/A	((0%-20%)			
Thallium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Vanadium	U	ND U	ND	ug/L	N/A	((0%-20%)			
Zinc		59.0 J	14.1	ug/L	19.8	((0%-20%)			

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QC Summary

Workorder: 512856								Page 7 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-MercuryBatch2011848								
QC1204579697 LCS Mercury	238		191	ug/kg		80.2	(80%-120%) MTM1	06/17/20 10:32
QC1204579696 MB Mercury		U	ND	ug/kg				06/17/20 10:30
QC1204579699 513320001 MS Mercury	345	47.6	363	ug/kg		91.5	(80%-120%)	06/17/20 11:02
QC1204579701 513320001 MSI Mercury	D 305	47.6	323	ug/kg	11.8	90.2	(0%-20%)	06/17/20 11:04
QC1204579702 513320001 SDI Mercury	LT	0.311 U	ND	ug/L	N/A		(0%-10%)	06/17/20 11:05

Notes:

The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- JNX Non Calibrated Compound
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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QC Summary

Parmna	e NOM Sample Qual QC Units RPD/D% REC% Range Anlst Date Tim	ne								
Ν	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor									
N/A	A RPD or %Recovery limits do not apply.									
N1	See case narrative									
ND	Analyte concentration is not detected above the detection limit									
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Р	OrganicsThe concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.									
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R	Sample results are rejected									
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UJ	Compound cannot be extracted									
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.									
Y	QC Samples were not spiked with this compound									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									
^ The R five tim	cates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. lative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than $s_{0}(5X)$ the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the d_{12} the contract required detection limit (RL).									

RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

OC Summary

			Q	C S	ummary	Y	,	Damant D	-4 TI 2 2020	
Client :	GSI Environmental Inc.						_	Report Da	ate: July 2, 2020 Page 1 of 3	
	155 Grand Ave								rage 1 of 5	
	Suite 704									
Constants	Oakland, California									
Contact:	Travis Wicks									
Workorder:	512856									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe Batch	2009006									
QC1204574617	512856001 DUP									
Cesium-137		U	0.00577	U	0.00416	pCi/g	0		N/A RXF2	06/11/2013:12
		Uncert:	+/-0.0149		+/-0.0150					
		TPU:	+/-0.0151		+/-0.0151					
QC1204574618	LCS									
Americium-241		486			572	pCi/g		118	(75%-125%) RXF2	06/11/2013:26
		Uncert:			+/-12.4					
		TPU:			+/-54.5	C :/		100		
Cobalt-60		98.8			99.2	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.30					
Cesium-137		TPU: 165			+/-8.79 165	nCi/a		100	(75%-125%)	
Cesium-157		Uncert:			+/-2.54	pCi/g		100	(75%-125%)	
		TPU:			+/-2.34 +/-14.1					
QC1204574616	MB	110.			·/-1 -1 -1					
Cesium-137				U	0.000724	pCi/g			RXF2	06/11/2010:16
2001011 107		Uncert:		U	+/-0.00567	P016			10112	2011/2010/10
		TPU:			+/-0.00568					
Rad Gas Flow										
Batch	2008956									
QC1204574465	512856001 DUP									
Strontium-90		U	-0.271	U	-0.0524	pCi/g	0		N/A MXS2	06/26/2006:57
		Uncert:	+/-0.105	-	+/-0.0909	1 0	, i i i i i i i i i i i i i i i i i i i			
		TPU:	+/-0.105		+/-0.0909					
QC1204574466	LCS									
Strontium-90		1.45			1.27	pCi/g		87.6	(75%-125%) MXS2	06/26/2006:57
		Uncert:			+/-0.0762					
		TPU:			+/-0.299					
QC1204574464	MB									
Strontium-90				U	0.00694	pCi/g			MXS2	06/26/2006:57
		Uncert:			+/-0.0169					
		TPU:			+/-0.0170					
Rad Liquid Scint Batch	t illation 2011631									
QC1204579192	512856001 DUP									
Tritium		U	0.335	U	0.898	pCi/g	0		N/A EW3	06/24/2011:03
		Uncert:	+/-1.80		+/-1.87					
		TPU:	+/-1.80		+/-1.88					
QC1204579194	LCS									
Tritium		85.0			66.2	pCi/g		77.9	(75%-125%) EW3	06/23/2007:11
		Uncert:			+/-9.01					

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QC Summary

Workorder: 512856					Page 2 of 3											
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time							
Rad Liquid ScintillationBatch2011631																
	TPU:		+/-17.5													
QC1204579191 MB																
Tritium		U	-1.17	pCi/g				EW3	06/23/2004:45							
	Uncert:		+/-2.70													
	TPU:		+/-2.70													
QC1204579193 512856001 MS																
Tritium	90.9 U	0.335	73.2	pCi/g		80.5	(75%-125%	5) EW3	06/23/2006:48							
	Uncert:	+/-1.80	+/-8.21													
	TPU:	+/-1.80	+/-18.5													

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512856				-			Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

CHAIN-OF-CUSTODY RECORD Date: 6/4/22 Page of 1		Lab contact: Rrielle Luthman	SAMPLER(S): (PRINT)	Kapia therell + Och Vass			· · · · · · · · · · · · · · · · · · ·												6/4/20	Date: 65/20 Time: 4.10	Date: Time:
	DH4	[78]	SAW		<u> </u>	() (0747\0 (0,4	ed bered r-90 (905,0 r-37 (906) r-37 (906) r-31 (906) r-31 (906) r-31 (905,0 r-31 (905,0) r-31 (905,0) r-3	, Title 2 Seerve Bserve	run Y Pre	× × × ×	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				A A A A			Received by: (Signature)	Received hv. (Sinnative)	1 A A A	Received by: (Signature)
PROJECT NAME:	1	Convection active Susan Gallardo	GELUBAL ID:	NL: <u>Smgallardo@gsi-net.com: tzwicks@gsi-net.com</u>		R 🗌 48 HR VS 🛛 XISTANDARD	Z₽	SAMPLING MATRIX NO. OF		The origo trut	\ \						~	ellen R			N.
ENVIRONMENTAL FROM:	GSI Environmental Inc.	105 Grand Ave. Suite 704 Oakland, CA 94612		(510)	LABORATORY: GEL Laboratories	TURNAROUND TIME: SAME DAY 24 HR		LAB SAMPLE ID	AV-1-7=0404	- 20004								Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)	

Laboratories

Client: CCIC			-	SAMPLE RECEIPT & REVIEW FORM
631 <u>E</u>			1	DG/AR/COC/Work Order: S2851e
Received By: STACY BOOM	1E	•	<u> </u> [Date Received: JUNE 5, 2020
Carrier and Tracking Number			,	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	No	*1	3935 4669 0289 - 4 'c 3935 4669 0278 - 21 c
A)Shipped as a DOT Hazardous?			H	izard Class Shipped: UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?		/		DC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		/	Mi Cl	aximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr assified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		/		C notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		-	llf I PC	D or E is yes, select Hazards below. B's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria		Z	°Ż	
1 Shipping containers received intact and sealed? 2 Chain of custody documents included				Chere Applicable: Seals broken Damaged container Leaking container Other (describe)
with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
 3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?* 4 Daily check performed and passed on IR 		125		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
4 temperature gun?				Temperature Device Serial #: TELO 19 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	ł			Sample ID's and Containers Affected:
7 Do any samples require Volatile Analysis?			1	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
8 Samples received within holding time?				ID's and tests affected:
Sample ID's on COC match ID's on bottles?				ID's and containers affected:
Date & time on COC match date & time on bottles?		T		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?			[Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided?		Ŀ	-	
COC form is properly signed in relinquished/received sections? SR mments (Use Continuation Form if needed):		1	ľ	Circle Applicable: Not relinquished Other (describe)
558-W-206693 COC	τ	10	۸E	1:11:30 SAMPLE TIME : 11:40
PM (or PMA) rev	view	v: h	nitia	Is Date 0/8/20 Page of GL-CHL-SR-001 Rev 6

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Technical Case Narrative GSI Environmental Inc. SDG #: 512856

Perchlorates by LCMSMS

Product: Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M) <u>Analytical Method:</u> SW846 6850 Modified <u>Analytical Procedure:</u> GL-OA-E-067 REV# 15 <u>Analytical Batches:</u> 2011115 and 2011114

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512856001	AV-1-200604
512856002	AV-2-200604
1204578053	Method Blank (MB)
1204578054	Laboratory Control Sample (LCS)
1204578055	512856001(AV-1-200604) Matrix Spike (MS)
1204578056	512856001(AV-1-200604) Matrix Spike Duplicate (MSD)
1204578057	Interference Check Sample (ICS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

Due to the foamy nature of the sample matrix, it was necessary to analyze 512856002 (AV-2-200604) at a 1:2 dilution.

Metals

Product: Determination of Metals by ICP <u>Analytical Method:</u> SW846 3050B/6010D <u>Analytical Procedure:</u> GL-MA-E-013 REV# 31 <u>Analytical Batch:</u> 2008857

Preparation Method: SW846 3050B

Preparation Procedure: GL-MA-E-009 REV# 29 **Preparation Batch:** 2008854

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512856001	AV-1-200604
512856002	AV-2-200604
1204574159	Method Blank (MB)ICP
1204574160	Laboratory Control Sample (LCS)
1204574163	512856001(AV-1-200604L) Serial Dilution (SD)
1204574161	512856001(AV-1-200604S) Matrix Spike (MS)
1204574162	512856001(AV-1-200604SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

<u>Product:</u> Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer <u>Analytical Method:</u> SW846 7471A <u>Analytical Procedure:</u> GL-MA-E-010 REV# 38 <u>Analytical Batch:</u> 2011848

Preparation Method: SW846 7471A Prep **Preparation Procedure:** GL-MA-E-010 REV# 38 **Preparation Batch:** 2011847

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512856001	AV-1-200604
512856002	AV-2-200604
1204579696	Method Blank (MB)CVAA

1204579697	Laboratory Control Sample (LCS)
1204579702	513320001(NonSDGL) Serial Dilution (SD)
1204579699	513320001(NonSDGS) Matrix Spike (MS)
1204579701	513320001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Radiochemistry

Product: Dry Weight Preparation Method: Dry Soil Prep Preparation Procedure: GL-RAD-A-021 REV# 23 Preparation Batch: 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512856001	AV-1-200604
512856002	AV-2-200604

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R Analytical Procedure: GL-RAD-A-013 REV# 27 Analytical Batch: 2009006

<u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2008811 <u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512856001	AV-1-200604
512856002	AV-2-200604
1204574616	Method Blank (MB)
1204574617	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574618	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Sr90, Vegetation Analytical Method: EPA 905.0 Modified/DOE RP501 Rev. 1 Modified Analytical Procedure: GL-RAD-A-004 REV# 21 Analytical Batch: 2008956

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512856001	AV-1-200604
512856002	AV-2-200604
1204574464	Method Blank (MB)
1204574465	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574466	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Negative > 3 sigma TPU

Sample result was more negative than the three sigma TPU. The background control chart was examined and the detector was determined to be fully functional.

Sample	Analyte	Value
512856001 (AV-1-200604)	Strontium-90	Negative Result > 3 sigma value

Recounts

Sample 512856001 (AV-1-200604) was taken through additional clean-up steps and recounted due to a suspected false positive. The recount is reported.

Product: LSC, Tritium Distillation, Vegetation Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2011631

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512856001	AV-1-200604
512856002	AV-2-200604
1204579191	Method Blank (MB)
1204579192	512856001(AV-1-200604) Sample Duplicate (DUP)
1204579193	512856001(AV-1-200604) Matrix Spike (MS)
1204579194	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples 1204579192 (AV-1-200604DUP), 512856001 (AV-1-200604) and 512856002 (AV-2-200604) were recounted due to high MDCs. The recounts are reported.

<u>Certification Statement</u>

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512862

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512862 GEL Work Order: 512862

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: G-1-200604 Project: GSIE00119 Sample ID: 512862001 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 10:10 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	t Date	Time	Batch	Method
LC-MS/MS Perchlorat	e											
Perchlorate by LC-MS	/MS "As Reco	eived"										
Perchlorate	U	ND	4.05	16.2	ug/kg	8.10	10	CWW (06/22/20	2123	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer	cury, Solid "A	s Received"										
Mercury	U	ND	7.20	21.5	ug/kg	108	1	MTM1 (06/17/20	1050	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D	Metals, Solid	"As Received"										
Antimony	J	343	299	1810	ug/kg	90.6	1	JWJ (06/09/20	1933	2008857	3
Arsenic	U	ND	453	2720	ug/kg	90.6	1					
Barium		602	90.6	453	ug/kg	90.6	1					
Beryllium	U	ND	90.6	453	ug/kg	90.6	1					
Cadmium	U	ND	90.6	453	ug/kg	90.6	1					
Chromium	U	ND	136	906	ug/kg	90.6	1					
Cobalt	U	ND	136	453	ug/kg	90.6	1					
Copper	J	435	272	1810	ug/kg	90.6	1					
Lead	U	ND	299	1810	ug/kg	90.6	1					
Molybdenum	U	ND	181	906	ug/kg	90.6	1					
Nickel	U	ND	136	453	ug/kg	90.6	1					
Selenium	U	ND	453	2720	ug/kg	90.6	1					
Silver	U	ND	90.6	453	ug/kg	90.6	1					
Thallium	U	ND	453	1810	ug/kg	90.6	1					
Vanadium	U	ND	90.6	453	ug/kg	90.6	1					
Zinc		2400	362	1810	ug/kg	90.6	1					
The following Prep Me	ethods were p	erformed:										
Method	Descriptio	n	I	Analyst	Date	,	Time	-	Batch			
GEL Prep Method	Laboratory C	omposite						2008				
SW846 3050B	SW846 3050	B Prep	S	SM1	06/09/20		0900	2008	854			
SW846 6850 Modified	EPA 6850 Pe	erchlorate Extraction Solids	0	CWW	06/18/20		1839	2011	114			
SW846 7471A Prep	EPA 7471A	Mercury Prep Soil	A	AXS5	06/16/20		1334	2011	847			
The following Analyti	ical Methods v	were performed:										
Method	Description	1			A	Analyst	Cor	nments				
1	SW846 6850	Modified										
2	SW846 7471	A										
3	SW846 30501	B/6010D										

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			Report Date:	July 2, 2020
Company :	GSI Environmental Inc.			
Address :	155 Grand Ave			
	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	G-1-200604	Project:	GSIE00119	
Sample ID:	512862001	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are of DF: Dilution Factor DL: Detection Limit MDA: Minimum Det MDC: Minimum Det	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitation	on Limit					

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: G-2-200604 Project: GSIE00119 Sample ID: 512862002 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 13:05 Receive Date: 05-JUN-20 Collector: Client

LC-MS/MS Perchlorate Perchlorate by LC-MS/M												
Perchlorate by LC-MS/N												
	MS "As Rece	eived"										
Perchlorate	U	ND	4.29	17.2	ug/kg	8.58	10	CWW	06/22/20	2132	2011115	1
Mercury Analysis-CVA	A											
7471 Cold Vapor Mercu		s Received"										
Mercury	U	ND	7.50	22.4	ug/kg	112	1	MTM1	06/17/20	1052	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D M	fetals. Solid	"As Received"										
Antimony	J	516	317	1920	ug/kg	96.2	1	JWJ	06/09/20	1936	2008857	3
Arsenic	U	ND	481	2880	ug/kg	96.2						
Barium	J	149	96.2	481	ug/kg	96.2						
Beryllium	U	ND	96.2	481	ug/kg	96.2	1					
Cadmium	U	ND	96.2	481	ug/kg	96.2	1					
Chromium	U	ND	144	962	ug/kg	96.2						
Cobalt	U	ND	144	481	ug/kg	96.2	1					
Copper		3360	288	1920	ug/kg	96.2	1					
Lead	J	431	317	1920	ug/kg	96.2	1					
Molybdenum	U	ND	192	962	ug/kg	96.2	1					
Nickel	U	ND	144	481	ug/kg	96.2	1					
Selenium	U	ND	481	2880	ug/kg	96.2	1					
Silver	U	ND	96.2	481	ug/kg	96.2	1					
Thallium	U	ND	481	1920	ug/kg	96.2	1					
Vanadium	U	ND	96.2	481	ug/kg	96.2	1					
Zinc		4370	385	1920	ug/kg	96.2	1					
The following Prep Meth	hods were pe	erformed:										
Method	Description	1	1	Analyst	Date	r	Time	e Pre	ep Batch			
GEL Prep Method	Laboratory Co	omposite						200	08703			
SW846 3050B	SW846 3050I	3 Prep	5	SM1	06/09/20	(0900	200	08854			
SW846 6850 Modified	EPA 6850 Per	rchlorate Extraction Solids	(CWW	06/18/20		1839	201	1114			
SW846 7471A Prep	EPA 7471A N	Aercury Prep Soil	1	AXS5	06/16/20		1334	201	1847			
The following Analytica	al Methods w	vere performed:										
Method	Description	•			A	nalvst	Cor	nments				
1	SW846 6850 N											
2	SW846 7471A	L .										
3	SW846 3050B											

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

			Report Date:	July 2, 2020
Company :	GSI Environmental Inc.			
Address :	155 Grand Ave			
	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	G-2-200604	Project:	GSIE00119	
Sample ID:	512862002	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are d DF: Dilution Factor DL: Detection Limit MDA: Minimum Dete MDC: Minimum Dete	ectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitati	on Limit					

Contact: Travis Wicks Project: Near S SFL Contact: Travis Wicks Project: Near S SFL Client Sample ID: 51-200604 Sample ID: 512862001 Matrix: Vegetation Collect Date: 04-JUN-20 Receive Date: 05-JUN-20 Collect Oncome Gamma Spec Analysis Gamma Spec Analysis Gamma Spec Gamma, Solid (Standard List) "As Received" Kand Gas How Proportional Counting 00030 ++0.00396 0.0134 ++0.00805 0.100 pCl/g RXF2 06/11/20 1012 2009006 1 Rad Gas How Proportional Counting GFPC, Sr90, Vegetation "As Received" HXX2 06/22/20 0648 2008956 2 Rad Ligt Rotifilation, Analysis U 0.032 +/-2/21 5.00 pCl/g MXS2 06/22/20 0648 2008956 2 Rad Ligt Rotifilation, Vegetation "As Received" Tritium U 0.632 +/-2/21 5.00 pCl/g Iderboring Prep Me	Company : Address :	GSI Environ 155 Grand A Suite 704 Oakland, Cal	ve	12					R	leport Date:	July 2	2, 2020
Client Sample ID: G-1-200604 SIE001 Sample ID: 512862001 Client ID: GSIE002 Matrix: Vegetation Client ID: GSIE002 Collect Date: 04-JUN-20 Receive Date:: 05-JUN-20 CollectDor: Client Moisture: 87.8% Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd. Gammaspee, Gamma, Solid (Standard List) "As Received" Cesiam-137 U -0.00369 +/-0.00805 0.100 pGVg RXF2 06/11/20 1012 2009006 1 Rad Gas Flow Proportional Counting GPPC, Sty0, Vegetation "As Received" Strontium-90 U 0.00330 +/-0.0396 0.0714 +/-0.0396 0.240 pCVg MXS2 06/26/20 0648 2008956 2 Rad Liquid Scintillation Analysis LSC, Trithum U -0.632 +/-2.71 4.78 +/-2.71 5.00 pCVg EW3 06/22/20 212 2011631 3 Solid Preparator Laboratory Composite Time Method	Contact:	Travis Wicks										
Sample ID: 512862001 Client ID: GSIE002 Matrix: Vegetation Collect Date:: 04-1UN-20 Collect Date:: 05-JUN-20 Collector: Client Moisture: 87.8% W Premeter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd. Rad Gamma Spec. Gamma. Solid (Standard List) "As Received" Gammaspec. Gamma. Solid (Standard List) Gamaspec. Gamma. Solid (Standard List)	Project:	Near S SFL										
Card Gamma Spec Analysis Gammaspec, Gamma, Solid (Standard List) "As Received" Cesium-137 U -0.00369 +/-0.00786 0.0134 +/-0.00805 0.100 pCi/g RXF2 06/11/20 1012 2009006 1 Rad Gas Flow Proportional Counting GFPC, Sr90, Vegetation "As Received" U 0.00360 +/-0.0396 0.0714 +/-0.0396 0.240 pCi/g MXS2 06/26/20 0648 2008956 2 Rad Gas Flow Proportional Counting GFPC, Sr90, Vegetation "As Received" U 0.0030 +/-0.0396 0.0714 +/-0.0396 0.240 pCi/g MXS2 06/26/20 0648 2008956 2 Rad Liquid Scintillation Analysis LSC, Tritium Distillation, Vegetation "As Received" H/-2.71 5.00 pCi/g EW3 06/22/20 2121 2011631 3 Solid Preparation Laboratory Composite "As Received" Analyst Date Time Prep Batch Method Description Analyst Date 200811 200811 GEL Prep Method Laboratory Composite 2008703 200811 2008703 2008703	Sample ID: Matrix: Collect Date Receive Dat Collector:	512862 Vegetat e: 04-JUN te: 05-JUN Client	001 tion I-20									
Gamma, Solid (Standard List) "As Received" Cestum-137 U -0.00369 +/-0.00786 0.0134 +/-0.00805 0.100 pCi/g RXF2 06/11/20 1012 2009006 1 Rad Gas Flow Propertional Counting GPPC, Sr90, Vegetation "As Received" Strontium-90 U 0.00830 +/-0.0396 0.0714 +/-0.0396 0.240 pCi/g MXS2 06/26/20 0648 2008956 2 Rad Gas Flow Propertional Counting GPPC, Sr90, Vegetation "As Received" J 0.00830 +/-0.0396 0.240 pCi/g MXS2 06/26/20 0648 2008956 2 Rad Gas Flow Propertional Counting Light Scintillation, Negetation "As Received" J 0.0032 +/-2.71 4.78 +/-2.71 5.00 pCi/g EW3 06/22/20 2121 2011631 3 Strontium-90 U -0.0532 +/-2.71 4.78 +/-2.71 5.00 pCi/g EW3 06/22/20 2121 2011631 3 Strontium-90 Description Analyst Date Time Prep Batch Ima Prep Batch Ima	Parameter	Qualifier	Result I	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch Mt
MethodDescription1DOE HASL 300, 4.5.2.3/Ga-01-R2EPA 905.0 Modified/DOE RP501 Rev. 1 Modified3EPA 906.0 Modified/4GEL Prep MethodBatch IDRecovery%Acceptable Limits	Gammaspec, Ga Cesium-137 Rad Gas Flow Pro GFPC, Sr90, Ve Strontium-90 Rad Liquid Scintil LSC, Tritium Dis Tritium Solid Preparation Laboratory Com The following Pro Method Dry Soil Prep	amma, Solid (Stand U oportional Countin getation "As Recei U llation Analysis stillation, Vegetatio U uposite "As Receive ep Methods were p Description Dry Soil Prep GL-R	-0.00369 ng ved" 0.00830 on "As Rec -0.632 d" performed RAD-A-021	+/-0.00786 +/-0.0396 eived" +/-2.71	0.0714	+/-0.0396 +/-2.71 Analyst	0.240 5.00 Date	pCi/g pCi/g Tin		MXS2 EW3 Prep Batch 2008811	06/26/20 0648 06/22/20 2121	2008956 2
MethodDescription1DOE HASL 300, 4.5.2.3/Ga-01-R2EPA 905.0 Modified/DOE RP501 Rev. 1 Modified3EPA 906.0 Modified/4GEL Prep MethodBatch IDRecovery%Acceptable Limits	The following Ana	alvtical Methods v	vere perfo	rmed								
2 EPA 905.0 Modified/DOE RP501 Rev. 1 Modified 3 EPA 906.0 Modified 4 GEL Prep Method Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits		-	perio									
3 EPA 906.0 Modified 4 GEL Prep Method Surrogate/Tracery Test Batch ID Recovery%	1	DOE HASL 300, 4.	5.2.3/Ga-01	-R								
4 GEL Prep Method Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits	2	EPA 905.0 Modified	d/DOE RP5	01 Rev. 1 Modi	fied							
Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits	3	EPA 906.0 Modified	d									
	4	GEL Prep Method										
Strontium Carrier GFPC, Sr90, Vegetation "As Received" 2008956 98.9 (25%-125%)	Surrogate/Tracer	r Recovery	Гest					I	Batch	ID Recover	ry% Accept	able Limits
	Strontium Carri	er	GFPC, Sr	90, Vegetation	n "As Receiv	ed"					-	-125%)

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704 Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks				Report Date.	July 2, 2020
Project:	Near S SFL					
Client Sample Sample ID:	ID: G-1-200604 512862001			Project: Client ID:	GSIE00119 GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Surrogate/Tracer Recovery	Test	Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

Company : Address :	155 Grand A Suite 704	nmental Inc. Ave alifornia 946	12					D	leport Date:	Iul	y 2, 2020	
Contact:	Travis Wich		12					N	epon Date.	Jui	y 2, 2020	
Project:	Near S SFL											
5						D		CO	E00110			
Client Sam Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	: 51286 Veget te: 04-JU	2002 ation N-20 N-20					oject: ent ID:		IE00119 IE002			
Parameter	Qualifier	· Result (J ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date T	me Batc	h Mtd.
Rad Gamma Spe	c Analysis											
Gammaspec, G	amma, Solid (Stan	dard List) "/	As Received"									
Cesium-137	U	-0.00501	+/-0.00608	0.00968	+/-0.00650	0.100	pCi/g		RXF2	06/11/20 10	12 20090	06 1
Rad Gas Flow Pr GFPC, Sr90, Vo	oportional Count egetation "As Reco											
Strontium-90	U	-0.0134	+/-0.0213	0.0425	+/-0.0213	0.240	pCi/g		MXS2	06/26/20 06	48 20089	56 2
Rad Liquid Scint LSC, Tritium D	illation Analysis istillation, Vegeta	tion "As Rec	eived"									
Tritium	U	2.65	+/-2.11	3.38	+/-2.19	5.00	pCi/g		EW3	06/24/20 08	25 20116	31 3
Solid Preparation	1											
Laboratory Con	nposite "As Receiv	ved"										
The following Pr	ep Methods were	e performed										
Method	Description				Analyst	Date	Tir	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep GL	-RAD-A-021			LYT1	06/08/20	093	37	2008811			
GEL Prep Method	Laboratory Comp	osite							2008703			
The following An	alvtical Methods	were perfo	rmed									
Method	Description	F										
1	DOE HASL 300, 4	4.5.2.3/Ga-01-	R									
2	EPA 905.0 Modifi	ed/DOE RP5()1 Rev. 1 Modi	fied								
3	EPA 906.0 Modifi	ed										
4	GEL Prep Method	I										
Surrogate/Trace	er Recovery	Test]	Batch	ID Recover	y% Acce	ptable Li	mits
Strontium Carr	rier	GFPC, Sr	90, Vegetatio	n "As Received"				20089	56 10	01 (2	5%-125%)
		,								× *		

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: G-2-200604			Project:	GSIE00119	
Sample ID:	512862002			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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QC Summary

Report Date: July 2, 2020

Page 1 of 8

Oakland, California Contact: Travis Wicks

512862

Workorder:

GSI Environmental Inc.

155 Grand Ave Suite 704

Parmname NOM Sample Qual QC Units RPD/D% **REC%** Range Anlst Date Time LC-MS/MS Perchlorate 2011115 Batch QC1204578057 ICS 2.02 1.95 104 Perchlorate ug/kg (70%-130%) CWW 06/19/20 14:05 QC1204578054 LCS 1.91 J Perchlorate 1.89 99 06/19/20 13:56 ug/kg (70%-130%) QC1204578053 MB U Perchlorate ND 06/19/20 13:47 ug/kg QC1204578055 512856001 MS U ND Perchlorate 1.88 1.95 104 (75%-125%) 06/19/20 14:32 ug/kg OC1204578056 512856001 MSD Perchlorate 1.73 U ND 1.82 7 105 06/19/20 14:41 ug/kg (0%-30%)Metals Analysis-ICP 2008857 Batch QC1204574160 LCS Antimony 45400 44700 98.4 (80%-120%) JWJ 06/09/20 19:00 ug/kg Arsenic 45400 42000 92.5 ug/kg (80%-120%) 45400 43200 Barium ug/kg 95.3 (80%-120%) Beryllium 45400 46500 102 (80% - 120%)ug/kg Cadmium 45400 42100 ug/kg 92.8 (80%-120%) 45400 42700 Chromium ug/kg 94.1 (80% - 120%)

Workorder: 512862		<u>x</u> es.								
	NOM	Secola Oral	00	T T * 4 -:-		DECO	D	A 1-4	Page	
Parmname Metals Analysis-ICP	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date T	ime
Batch 2008857										
Cobalt	45400		44800	ug/kg		98.7	(80%-120%)	JWJ	06/09/20	19:00
Copper	45400		42800	ug/kg		94.4	(80%-120%)			
Lead	45400		43100	ug/kg		95	(80%-120%)			
Molybdenum	45400		46200	ug/kg		102	(80%-120%)			
Nickel	45400		42500	ug/kg		93.7	(80%-120%)			
Selenium	45400		41900	ug/kg		92.4	(80%-120%)			
Silver	9070		8480	ug/kg		93.5	(80%-120%)			
Thallium	45400		44100	ug/kg		97.2	(80%-120%)			
Vanadium	45400		42700	ug/kg		94.2	(80%-120%)			
Zinc	45400		42500	ug/kg		93.6	(80%-120%)			
QC1204574159 MB Antimony		J	820	ug/kg					06/09/20	18:56
Arsenic		U	ND	ug/kg						
Barium		U	ND	ug/kg						
Beryllium		U	ND	ug/kg						
Cadmium		U	ND	ug/kg						

Workorder:	512862			-	<u>></u>		*					Pag	ge 3 of 8
Parmname		NON	M	Sample	Qual	QC	Units	RPD/D%	REC%	6 Range	Anlst		Time
Metals Analysis-ICBatch20	CP 2008857												
Chromium					J	198	ug/kg	,			JWJ	06/09/2	20 18:56
Cobalt					U	ND	ug/kg)					
Copper					U	ND	ug/kg	,					
Lead					J	780	ug/kg						
Molybdenum					U	ND	ug/kg						
Nickel					U	ND	ug/kg						
Selenium					U	ND	ug/kg						
Silver					U	ND	ug/kg						
Thallium					U	ND	ug/kg						
Vanadium					U	ND	ug/kg						
Zinc					U	ND	ug/kg						
QC1204574161 Antimony	51 512856001 MS	IS 46100	J	1450		44300	ug/kg		93	(75%-125%))	06/09/.	20 19:06
Arsenic		46100	U	ND		44600	ug/kg		96.8	(75%-125%))		
Barium		46100	J	214		45400	ug/kg		98	(75%-125%))		
Beryllium		46100	U	ND		49100	ug/kg		107	(75%-125%))		

Workorder: 512862		$\underline{\mathbf{v}}$	ummu	<u></u>					Der	4 -6 9
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst		ge 4 of 8 Time
Metals Analysis-ICP Batch 2008857		Jampic Qua	<u></u>	<u> </u>		NEC / U	<u>Nange</u>	Amor	Dau	<u></u>
Cadmium	46100 U	ND	43900	ug/kg		95.2	(75%-125%)) JWJ	06/09/2	20 19:06
Chromium	46100 U	ND	44500	ug/kg		96.4	(75%-125%))		
Cobalt	46100 U	ND	48700	ug/kg		106	(75%-125%))		
Copper	46100	4500	47700	ug/kg		93.6	(75%-125%))		
Lead	46100 U	ND	45100	ug/kg		97.3	(75%-125%))		
Molybdenum	46100 U	ND	49500	ug/kg		107	(75%-125%))		
Nickel	46100 U	ND	44600	ug/kg		96.3	(75%-125%))		
Selenium	46100 U	ND	43900	ug/kg		95.1	(75%-125%))		I
Silver	9230 U	ND	8720	ug/kg		94.5	(75%-125%))		
Thallium	46100 U	ND	43100	ug/kg		93.5	(75%-125%))		
Vanadium	46100 U	ND	44900	ug/kg		97.3	(75%-125%))		
Zinc	46100	5610	48200	ug/kg		92.3	(75%-125%))		
QC1204574162 512856001 MSD Antimony	47500 J	1450	46200	ug/kg	4	94.1	(0%-20%))	06/09/.	20 19:08
Arsenic	47500 U	ND	44300	ug/kg	0.779	93.2	(0%-20%))		
Barium	47500 J	214	45500	ug/kg	0.195	95.3	(0%-20%))		

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Workordon 5129(2		Ľ		<u> </u>				
Workorder: 512862 Parmname	NOM	Sample	Qual QC	Units	RPD/D%	REC%	Range Anlst	Page 5 of 8 Date Time
Metals Analysis-ICP Batch 2008857		Bampie	Quai QC	Cints	M D / D /0	KEC /0	Kunge Amst	Date Time
Beryllium	47500 U	ND	49200	ug/kg	0.0435	103	(0%-20%) JW	J 06/09/20 19:08
Cadmium	47500 U	ND	44100	ug/kg	0.474	92.8	(0%-20%)	
Chromium	47500 U	ND	44700	ug/kg	0.402	93.9	(0%-20%)	
Cobalt	47500 U	ND	48200	ug/kg	0.98	101	(0%-20%)	
Copper	47500	4500	47900	ug/kg	0.432	91.3	(0%-20%)	
Lead	47500 U	ND	44900	ug/kg	0.472	94	(0%-20%)	
Molybdenum	47500 U	ND	49500	ug/kg	0.168	104	(0%-20%)	
Nickel	47500 U	ND	44400	ug/kg	0.415	93.1	(0%-20%)	
Selenium	47500 U	ND	41600	ug/kg	5.34	87.5	(0%-20%)	
Silver	9510 U	ND	8660	ug/kg	0.595	91.2	(0%-20%)	
Thallium	47500 U	ND	43200	ug/kg	0.0556	90.8	(0%-20%)	
Vanadium	47500 U	ND	45300	ug/kg	0.851	95.3	(0%-20%)	
Zinc	47500	5610	49300	ug/kg	2.29	91.9	(0%-20%)	
QC1204574163 512856001 SDILT Antimony	J	15.2	U ND	ug/L	N/A		(0%-20%)	06/09/20 19:13
Arsenic	U	ND	U ND	ug/L	N/A		(0%-20%)	

Workorder:	512862					<u></u>					Pag	ge 6 of 8
Parmname		NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-IC Batch 2	CP 2008857											
Barium		J	2.25	U	ND	ug/L	N/A		(0%-20%)) JWJ	06/09/2	20 19:13
Beryllium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Cadmium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Chromium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Cobalt		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Copper			47.3	J	9.21	ug/L	2.69		(0%-20%))		
Lead		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Molybdenum		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Nickel		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Selenium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Silver		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Thallium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Vanadium		U	ND	U	ND	ug/L	N/A		(0%-20%))		
Zinc			59.0	J	14.1	ug/L	19.8		(0%-20%))		

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QC Summary

Workorder: 512862											Page	e 7 of 8
Parmname		NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range A	nlst	Date	Time
Metals Analysis-MercuryBatch2011848												
QC1204579697 LCS Mercury		238			191	ug/kg		80.2	(80%-120%) N	MTM1	06/17/2	20 10:32
QC1204579696 MB Mercury				U	ND	ug/kg					06/17/2	20 10:30
QC1204579699 513320 Mercury	001 MS	345	47.6		363	ug/kg		91.5	(80%-120%)		06/17/2	20 11:02
QC1204579701 513320 Mercury	001 MSD	305	47.6		323	ug/kg	11.8	90.2	(0%-20%)		06/17/2	20 11:04
QC1204579702 513320 Mercury	001 SDILT		0.311	U	ND	ug/L	N/A		(0%-10%)		06/17/2	20 11:05

Notes:

Wardsondam

=100/0

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- JNX Non Calibrated Compound
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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QC Summary

Parmna	ne NOM Sample Qual QC Units RPD/D% REC% Range Anlst Date Time
Ν	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Р	OrganicsThe concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UJ	Compound cannot be extracted
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
Y	QC Samples were not spiked with this compound
۸	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded
^ The R five tim	cates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or % RPD not applicable. lative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than s (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of $+/-$ the

RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

OC Summary

			Q	C S	ummary	7	,	Damant D	-4 TI 2 2020	
Client :	GSI Environmental Inc.				•/	-		Report Da	ate: July 2, 2020	
	155 Grand Ave								Page 1 of 3	
	Suite 704									
	Oakland, California									
Contact:	Travis Wicks									
Workorder:	512862									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe Batch	2009006 ———									
OC1204574617	512856001 DUP									
Cesium-137		U	0.00577	U	0.00416	pCi/g	0		N/A RXF2	06/11/2013:12
		Uncert:	+/-0.0149		+/-0.0150	1 - 0				
		TPU:	+/-0.0151		+/-0.0151					
QC1204574618	LCS									
Americium-241	l	486			572	pCi/g		118	(75%-125%) RXF2	06/11/2013:26
		Uncert:			+/-12.4					
		TPU:			+/-54.5					
Cobalt-60		98.8			99.2	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.30					
		TPU:			+/-8.79					
Cesium-137		165			165	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.54					
001204574616	MD	TPU:			+/-14.1					
QC1204574616 Cesium-137	MB			U	0.000724	pCi/g			RXF2	06/11/2010:16
Cesium-137		Uncert:		U	+/-0.00567	pci/g			каг2	00/11/2010:10
		TPU:			+/-0.00568					
Rad Gas Flow		110.			., 0.00500					
	2008956									
	512856001 DUP									
Strontium-90	512050001 DUI	U	-0.271	U	-0.0524	pCi/g	0		N/A MXS2	06/26/2006:57
Suonuun-90		Uncert:	+/-0.105	U	+/-0.0909	PC1/g	0		1 1/ / 1 1/////	00/20/2000.37
		TPU:	+/-0.105		+/-0.0909					
QC1204574466	LCS									
Strontium-90		1.45			1.27	pCi/g		87.6	(75%-125%) MXS2	06/26/2006:57
		Uncert:			+/-0.0762	r 8			,	
		TPU:			+/-0.299					
QC1204574464	MB									
Strontium-90				U	0.00694	pCi/g			MXS2	06/26/2006:57
		Uncert:			+/-0.0169					
		TPU:			+/-0.0170					
Rad Liquid Scint Batch	tillation 2011631									
OC1204579192	512856001 DUP									
Tritium		U	0.335	U	0.898	pCi/g	0		N/A EW3	06/24/2011:03
		Uncert:	+/-1.80	U	+/-1.87	P016	0		1,11 1,15	56.22011.05
		TPU:	+/-1.80		+/-1.88					
QC1204579194	LCS									
Tritium		85.0			66.2	pCi/g		77.9	(75%-125%) EW3	06/23/2007:11
		Uncert:			+/-9.01					

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QC Summary

Workorder: 512862							Page 2	2 of 3	
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid ScintillationBatch2011631									
	TPU:		+/-17.5						
QC1204579191 MB									
Tritium		U	-1.17	pCi/g				EW3	06/23/2004:45
	Uncert:		+/-2.70						
	TPU:		+/-2.70						
QC1204579193 512856001 MS									
Tritium	90.9 U	0.335	73.2	pCi/g		80.5	(75%-125%	6) EW3	06/23/2006:48
	Uncert:	+/-1.80	+/-8.21						
	TPU:	+/-1.80	+/-18.5						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512862							Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

ENVIRONMENTAL												5	0	C128/02
FROM: CSI Environmental I-		PROJECT NAME:	AJU-BB							PROJI	PROJECT NO.: 5182)	
155 Grand Ave. Suite 704	1C. 704	PROJECT CONTACT:	Susan Gallardo	9						LAB C	ONTACT: Brie	LAB CONTACT: Brielle Luthman		
Oakland, CA 94612 (510) 463-8484	0	GLOBAL ID:	ī							SAMPI	SAMPLER(S): (PRINT)	1/2 Al	ET /	J Vec
(5	E-MAIL:	smgallardo@gsi-net.com; tzwicks@gsi-net.com	net.com; tzwick	s@gsi-net.	mo				REOI	REQUESTED	D ANAI YSFS	VSFS	2	2
LABORATORY: GEL Laboratories	ories						F		Please ch	eck box or		s needed.		ľ
TURNAROUND TIME:	24 HR [] 5 DAYS []	☐ 48 HR ⊠STANDARD						(0.418						
SPECIAL INSTRUCTIONS: - Sr-90 MDC of 0.5 pCi/g - H-3 MDC of 5 pCi/g	- Cs-137 ME - Include fle	- Cs-137 MDC of 1 pCi/g - Include flesh only; no peel		pon perved	iltered.	306) 06-18) sletal (906)	chlorate (;						
LAB SAMPLE ID		SAMPLING	MATRIX NO.				bit AC	юЧ						
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Relinquished by: (Signature)							-)	

Laboratories .: :

Ľ	lion to				SAMPLE RECEIPT & REVIEW FORM
F	Client: GSIE				
μ	Received By: STACY BOO	AIE	12 12	- 1	Date Received: JUNE 5, 2020
					FedEx Express FedEx Ground UPS Field Services Courier Other
	Carrier and Tracking Number				
-				_	3935 4669 0289 - 4'c 3935 4669 0278 - 21 ·
S	uspected Hazard Information	×2°	1	2 *	If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
	Shipped as a DOT Hazardous?			H	azard Class Shipped: UN#: UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) re	Did the client designate the samples are to be ceived as radioactive?				OC notation or radioactive stickers on containers equal client designation.
ra	Did the RSO classify the samples as fioactive?		-		aximum Net Counts Observed * (Observed Counts - Area Background Counts): CPM / mR/Hr lassified as: Rad 1 Rad 2 Rad 3
D) ha	Did the elient designate samples are zardous?				DC notation or hazard labels on containers equal client designation.
E)	Did the RSO identify possible hazards?			PC	D or E is yes, select Hazards below. 'B's Flammable Forcign Soil RCRA Asbestos Beryllium Other:
	Sample Receipt Criteria	Ycs	Ň	2°2	
1	Shipping containers received intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*	1	A++22	1	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
4	Daily check performed and passed on IR temperature gun?				Temperature Device Serial #: TPI-19 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	イ			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	イ	1013		Sample ID's and Containers Affected:
7	Do any samples require Volatile Analysis?			1	If Preservation added, Lot# If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
8	Samples received within holding time?				ID's and tests affected:
	Sample ID's on COC match ID's on bottles?				ID's and containers affected:
0	Date & time on COC match date & time on bottles?		808	7	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
<u>`</u>	Number of containers received match number indicated on COC?			ľ	Circle Applicable: No container count on COC Other (describe)
	Are sample containers identifiable as GEL provided?			1	
1	COC form is properly signed in relinquished/received sections?	Y		Y	Circle Applicable: Not relinquished Other (describe)
5	nents (Use Continuation Form if needed): 58 - W - 206603 CO	сτ		ME	E: 11: 30 SAMPLE TIME : 11:40
	PM (or PMA)	revie	w: I	nitia	
					GL-CHL-SR-001 Rev 6

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Technical Case Narrative GSI Environmental Inc. SDG #: 512862

Perchlorates by LCMSMS

Product: Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M) <u>Analytical Method:</u> SW846 6850 Modified <u>Analytical Procedure:</u> GL-OA-E-067 REV# 15 <u>Analytical Batches:</u> 2011115 and 2011114

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604
1204578053	Method Blank (MB)
1204578054	Laboratory Control Sample (LCS)
1204578055	512856001(AV-1-200604) Matrix Spike (MS)
1204578056	512856001(AV-1-200604) Matrix Spike Duplicate (MSD)
1204578057	Interference Check Sample (ICS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

It was necessary to analyze 512862001 (G-1-200604) and 512862002 (G-2-200604) at a dilution. This was due to the matrix effect on the recovery of the internal standard, Perchlorate-O(18). When the samples were analyzed neat or at a lower dilution, the recovery of the internal standard was less than 50%. This may have been the result of the acidic nature of the sample matrix. It was necessary to increase the dilutions to 1:10 for 512862001 and 512862002, and to 1:25 for 512864001, 512864002, 512866001, and 512866002.

<u>Metals</u>

<u>Product:</u> Determination of Metals by ICP <u>Analytical Method:</u> SW846 3050B/6010D <u>Analytical Procedure:</u> GL-MA-E-013 REV# 31

Analytical Batch: 2008857

Preparation Method: SW846 3050B **Preparation Procedure:** GL-MA-E-009 REV# 29 **Preparation Batch:** 2008854

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604
1204574159	Method Blank (MB)ICP
1204574160	Laboratory Control Sample (LCS)
1204574163	512856001(AV-1-200604L) Serial Dilution (SD)
1204574161	512856001(AV-1-200604S) Matrix Spike (MS)
1204574162	512856001(AV-1-200604SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

<u>Product:</u> Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer <u>Analytical Method:</u> SW846 7471A <u>Analytical Procedure:</u> GL-MA-E-010 REV# 38 <u>Analytical Batch:</u> 2011848

Preparation Method: SW846 7471A Prep **Preparation Procedure:** GL-MA-E-010 REV# 38 **Preparation Batch:** 2011847

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

G-1-200604
G-2-200604
Method Blank (MB)CVAA
Laboratory Control Sample (LCS)
513320001(NonSDGL) Serial Dilution (SD)
513320001(NonSDGS) Matrix Spike (MS)
513320001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Radiochemistry

<u>Product:</u> Dry Weight <u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) <u>Analytical Method:</u> DOE HASL 300, 4.5.2.3/Ga-01-R <u>Analytical Procedure:</u> GL-RAD-A-013 REV# 27 <u>Analytical Batch:</u> 2009006

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604
1204574616	Method Blank (MB)
1204574617	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574618	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

<u>Product:</u> GFPC, Sr90, Vegetation <u>Analytical Method:</u> EPA 905.0 Modified/DOE RP501 Rev. 1 Modified <u>Analytical Procedure:</u> GL-RAD-A-004 REV# 21 <u>Analytical Batch:</u> 2008956

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604
1204574464	Method Blank (MB)
1204574465	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574466	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Vegetation Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2011631

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512862001	G-1-200604
512862002	G-2-200604
1204579191	Method Blank (MB)
1204579192	512856001(AV-1-200604) Sample Duplicate (DUP)
1204579193	512856001(AV-1-200604) Matrix Spike (MS)
1204579194	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples 1204579192 (AV-1-200604DUP) and 512862002 (G-2-200604) were recounted due to high MDCs. The recounts are reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512864

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

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Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512864 GEL Work Order: 512864

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: L-1-200604 Project: GSIE00119 Sample ID: 512864001 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 10:20 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Da	ite	Time	Batch	Method
LC-MS/MS Perchlora	te											
Perchlorate by LC-MS	S/MS "As Reco	eived"										
Perchlorate	U	ND	10.6	42.6	ug/kg	8.51	25	CWW 06/22	2/20	2151	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer		s Received"										
Mercury	U	ND	7.67	22.9	ug/kg	115	1	MTM1 06/17	7/20	1054	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D	Metals, Solid	"As Received"										
Antimony	U	ND	304	1850	ug/kg	92.3	1	JWJ 06/09	9/20	1939	2008857	3
Arsenic	U	ND	461	2770	ug/kg	92.3	1					
Barium	J	437	92.3	461	ug/kg	92.3	1					
Beryllium	U	ND	92.3	461	ug/kg	92.3	1					
Cadmium	U	ND	92.3	461	ug/kg	92.3	1					
Chromium	U	ND	138	923	ug/kg	92.3	1					
Cobalt	U	ND	138	461	ug/kg	92.3	1					
Copper	J	367	277	1850	ug/kg	92.3	1					
Lead	U	ND	304	1850	ug/kg	92.3	1					
Molybdenum	U	ND	185	923	ug/kg	92.3	1					
Nickel	U	ND	138	461	ug/kg	92.3						
Selenium	U	ND	461	2770	ug/kg	92.3						
Silver	U	ND	92.3	461	ug/kg	92.3						
Thallium	U	ND	461	1850	ug/kg	92.3						
Vanadium	U	ND	92.3	461	ug/kg	92.3	1					
Zinc		3450	369	1850	ug/kg	92.3	1					
The following Prep M	ethods were p	erformed:										
Method	Descriptio	n	1	Analyst	Date	,	Time	e Prep Ba	ıtch			
GEL Prep Method	Laboratory C	omposite						2008703				
SW846 3050B	SW846 3050	B Prep	5	SM1	06/09/20		0900	2008854				
SW846 6850 Modified	EPA 6850 Pe	erchlorate Extraction Solids	(CWW	06/18/20		1839	2011114				
SW846 7471A Prep	EPA 7471A	Mercury Prep Soil	1	AXS5	06/16/20		1334	2011847				
The following Analyt	ical Methods v	were performed:										
Method	Description	1	Analyst Comments									
1	SW846 6850	Modified										
2	SW846 7471	A										
3	SW846 30501	B/6010D										

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Report Date:	July 2, 2020
GSIE00119	
GSIE002	
	GSIE00119

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are DF: Dilution Factor DL: Detection Limit MDA: Minimum De MDC: Minimum De	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitati	on Limit					

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Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: L-2-200604 Project: GSIE00119 Sample ID: 512864002 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 13:10 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
LC-MS/MS Perchlora	te											
Perchlorate by LC-MS	S/MS "As Rece	eived"										
Perchlorate	U	ND	10.0	40.2	ug/kg	8.03	25	CWW	06/22/20	2201	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer	cury, Solid "A	s Received"										
Mercury	U	ND	7.53	22.5	ug/kg	112	1	MTM1	06/17/20	1055	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D	Metals, Solid	"As Received"										
Antimony	U	ND	326	1980	ug/kg	98.8	1	JWJ	06/09/20	1943	2008857	3
Arsenic	U	ND	494	2960	ug/kg	98.8	1					
Barium	U	ND	98.8	494	ug/kg	98.8	1					
Beryllium	U	ND	98.8	494	ug/kg	98.8	1					
Cadmium	U	ND	98.8	494	ug/kg	98.8	1					
Chromium	U	ND	148	988	ug/kg	98.8	1					
Cobalt	U	ND	148	494	ug/kg	98.8	1					
Copper	J	340	296	1980	ug/kg	98.8	1					
Lead	U	ND	326	1980	ug/kg	98.8	1					
Molybdenum	U	ND	198	988	ug/kg	98.8	1					
Nickel	U	ND	148	494	ug/kg	98.8	1					
Selenium	U	ND	494	2960	ug/kg	98.8	1					
Silver	U	ND	98.8	494	ug/kg	98.8	1					
Thallium	U	ND	494	1980	ug/kg	98.8	1					
Vanadium	U	ND	98.8	494	ug/kg	98.8	1					
Zinc	J	1700	395	1980	ug/kg	98.8	1					
The following Prep M	lethods were pe	erformed:										
Method	Description	n	1	Analyst	Date	,	Time	e Pro	ep Batch			
GEL Prep Method	Laboratory C	omposite						200	08703			
SW846 3050B	SW846 3050	B Prep	S	SM1	06/09/20		0900	200)8854			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids	(CWW	06/18/20		1839	201	1114			
SW846 7471A Prep	EPA 7471A N	Mercury Prep Soil	I	AXS5	06/16/20		1334	201	1847			
The following Analyt	ical Methods v	vere performed:										
Method	Description	l	Analyst Comments									
1	SW846 6850	Modified										
2	SW846 7471A	A										
3	SW846 3050E	3/6010D										

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			Report Date:	July 2, 2020
Company : Address :	GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612			
Contact: Project:	Travis Wicks Near S SFL			
Client Sample ID: Sample ID:	L-2-200604 512864002	Project: Client ID:	GSIE00119 GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch M	Method
Notes:									
Column headers are of DF: Dilution Factor DL: Detection Limit MDA: Minimum Det MDC: Minimum Det	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitat	ion Limit					

Company : Address :	GSI Environ 155 Grand A Suite 704													
	Oakland, Ca	lifornia 946	512					R	eport Date:	July 2, 2020				
Contact:	Travis Wick	S												
Project:	Near S SFL											_		
Client Sam Sample ID: Matrix: Collect Dat Receive Da Collector:	s 512864 Vegeta te: 04-JUI tte: 05-JUI Client	4001 ation N-20 N-20					oject: ient ID:		E00119 E002					
Moisture:	92.1%													
Parameter	Qualifier	Result I	Uncertainty	MDC	TPU	RL	Units	PF	DF Analys	st Date Time	Batch	Mtd.		
Rad Gamma Spec Gammaspec, Ga Cesium-137	c Analysis amma, Solid (Stand U	dard List) "A -0.00233	As Received" +/-0.00426	0.00739	+/-0.00439	0.100	nCi/a		DVE2	06/11/20 1013	2000006	1		
Rad Gas Flow Pr	÷		+/-0.00420	0.00739	+/-0.00439	0.100	pCi/g		КАГ2	00/11/20 1013	2009000	1		
	egetation "As Rece													
Strontium-90	U	0.0124	+/-0.0239	0.0419	+/-0.0241	0.240	pCi/g		MXS2	06/26/20 0657	2008956	2		
Rad Liquid Scint	illation Analysis													
LSC, Tritium Di	istillation, Vegetat													
Tritium	U	0.0695	+/-2.45	4.57	+/-2.45	5.00	pCi/g		EW3	06/24/20 0918	2011631	3		
Solid Preparation														
	nposite "As Receiv													
The following Pr Method	ep Methods were Description	performed	L		Analyst	Date	Tin	n 0	Prep Batch					
	-													
Dry Soil Prep	Dry Soil Prep GL-				LYT1	06/08/20	093	57	2008811 2008703					
GEL Prep Method	Laboratory Compo	site							2008703					
The following An		were perfo	rmed											
Method	Description													
1	DOE HASL 300, 4	.5.2.3/Ga-01-	-R											
2	EPA 905.0 Modifie	ed/DOE RP50	01 Rev. 1 Mod	fied										
3	EPA 906.0 Modifie	ed												
4	GEL Prep Method													
Surrogate/Trace	r Recovery	Test					1	Batch	ID Recover	ry% Accepta	able Limi	its		
Strontium Carr	ier	GFPC, Sr	90, Vegetatio	n "As Received	d"			20089	56 92	.1 (25%	-125%)			
		,									,			

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: L-1-200604			Project:	GSIE00119	
Sample ID:	512864001			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

Company : Address :	GSI Enviro 155 Grand	nmental Inc. Ave											
	Suite 704 Oakland, C	alifornia 946	12					R	leport Date:		July 2,	2020	
Contact:	Travis Wic								eport Dute.		July 2,	2020	
Project:	Near S SFI	_											
Client Sam Sample ID Matrix: Collect Dat Receive Da Collector: Moisture:	51286 Veget te: 04-JU	54002 tation JN-20 JN-20 t					oject: ent ID:		IE00119 IE002				
Parameter	Qualifie	r Result (J ncertainty	MDC	TPU	RL	Units	PF	DF Analy	st Dat	e Time	Batch	Mtd.
Rad Gamma Spe	c Analysis												
-	amma, Solid (Star	ıdard List) "/	As Received"										
Cesium-137	U	0.00269	+/-0.00545	0.0114	+/-0.00560	0.100	pCi/g		RXF2	06/11/2	20 1015	2009006	5 1
Rad Gas Flow Pr GFPC, Sr90, Ve	oportional Coun egetation "As Rec												
Strontium-90	U	0.0411	+/-0.0278	0.0440	+/-0.0293	0.240	pCi/g		MXS2	06/26/2	20 0657	2008956	5 2
Rad Liquid Scint	•												
	istillation, Vegeta			2.25	(1.01		<u> </u>		FILIA	0.610.416	0 1010	2011/21	2
Tritium	U	0.576	+/-1.81	3.25	+/-1.81	5.00	pCi/g		EW3	06/24/2	20 1010	2011631	. 3
Solid Preparation	1 nposite "As Recei	ved"											
	•												
The following Pr		2 performed			A	Dete	Т.		Duen Detek				
Method	Description				Analyst	Date	Tir		Prep Batch				
Dry Soil Prep	Dry Soil Prep GL				LYT1	06/08/20	093	37	2008811				
GEL Prep Method	Laboratory Comp	osite							2008703				
The following An	alytical Methods	were perfo	rmed										
Method	Description												
1	DOE HASL 300,	4.5.2.3/Ga-01-	R										
2	EPA 905.0 Modif	ied/DOE RP5()1 Rev. 1 Modi	fied									
3	EPA 906.0 Modif	ied											
4	GEL Prep Method	1											
Surrogate/Trace	er Recovery	Test]	Batch	ID Recove	ry%	Accepta	ble Limi	its
Strontium Carr	rier	GFPC, Sr	90, Vegetatio	n "As Received"				20089	56 92	2.1	(25%-	-125%)	
		*										-	

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Certificate of Analysis

GSI Environmental Inc.					
155 Grand Ave					
					1 1 2 2020
,				Report Date:	July 2, 2020
Travis Wicks					
Near S SFL					
ID: L-2-200604			Project:	GSIE00119	
512864002			Client ID:	GSIE002	
Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.
	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ID: L-2-200604 512864002	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ID: L-2-200604 512864002	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFL ID: L-2-200604 512864002	155 Grand Ave Suite 704 Oakland, California 94612 Travis Wicks Near S SFLProject: Client ID:ID:L-2-200604 512864002Project: Client ID:	155 Grand Ave Suite 704 Oakland, California 94612Report Date:Travis Wicks Near S SFLReport Date:ID:L-2-200604 512864002Project: GSIE00119 Client ID:

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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QC Summary

Report Date: July 2, 2020

Page 1 of 8

155 Grand Ave Suite 704 Oakland, California Contact: Travis Wicks

GSI Environmental Inc.

Workorder: 512864

Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
LC-MS/MS Perchlorate Batch 2011115									
QC1204578057 ICS Perchlorate	1.95		2.02	ug/kg		104	(70%-130%)	CWW	06/19/20 14:05
QC1204578054 LCS Perchlorate	1.91	J	1.89	ug/kg		99	(70%-130%)		06/19/20 13:56
QC1204578053 MB Perchlorate		U	ND	ug/kg					06/19/20 13:47
QC1204578055 512856001 MS Perchlorate	1.88 U	ND	1.95	ug/kg		104	(75%-125%)		06/19/20 14:32
QC1204578056 512856001 MSD Perchlorate	1.73 U	ND	1.82	ug/kg	7	105	(0%-30%)		06/19/20 14:41
Metals Analysis-ICP Batch 2008857 ——									
QC1204574160 LCS Antimony	45400		44700	ug/kg		98.4	(80%-120%)	JWJ	06/09/20 19:00
Arsenic	45400		42000	ug/kg		92.5	(80%-120%)		
Barium	45400		43200	ug/kg		95.3	(80%-120%)		
Beryllium	45400		46500	ug/kg		102	(80%-120%)		
Cadmium	45400		42100	ug/kg		92.8	(80%-120%)		
Chromium	45400		42700	ug/kg		94.1	(80%-120%)		

Workorder: 512864		$\underline{\mathbf{v}}$		<u> </u>						
	NOM			T.T		DEC0/	D	A 14		e 2 of 8
Parmname Metals Analysis-ICP	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Batch 2008857										I
Cobalt	45400		44800	ug/kg		98.7	(80%-120%)	JWJ	06/09/20	0 19:00
Copper	45400		42800	ug/kg		94.4	(80%-120%)	1		I
Lead	45400		43100	ug/kg		95	(80%-120%)			ļ
	15 100		16000	1		102	(0.00/ 1.000/)			
Molybdenum	45400		46200	ug/kg		102	(80%-120%)			ļ
Nickel	45400		42500	ug/kg		93.7	(80%-120%)			
NICKEI	43400		42500	ug/ Ng		73.1	(0070-12070)			ļ
Selenium	45400		41900	ug/kg		92.4	(80%-120%)	ı		
							× .			ļ
Silver	9070		8480	ug/kg		93.5	(80%-120%)	1		
Thallium	45400		44100	ug/kg		97.2	(80%-120%)	I		
Vanadium	45400		42700	ug/kg		94.2	(80%-120%)	1		
Zinc	45400		42500	ug/kg		93.6	(80%-120%)	1		
QC1204574159 MB Antimony		J	820	ug/kg					06/09/20	0 18:56
Arsenic		U	ND	ug/kg						
Barium		U	ND	ug/kg						
Beryllium		U	ND	ug/kg						
Cadmium		U	ND	ug/kg						

				<u>v</u>		<u>ry</u>						l.
Workorder:	512864										Pag	ge 3 of 8
Parmname		NOM	M	Sample Qu	ual QC	Units	RPD/D%	REC%	6 Range	Anlst		Time
Metals Analysis-I Batch 2	CP 2008857											
Chromium				;	J 198	ug/kg	1			JWJ	06/09/2	20 18:56
Cobalt				Ţ	U ND	ug/kg	:					
Copper				τ	U ND	ug/kg						
Lead				:	J 780	ug/kg						
Molybdenum				τ	U ND	ug/kg						
Nickel				τ	U ND	ug/kg						
Selenium				τ	U ND	ug/kg						
Silver				τ	U ND	ug/kg						
Thallium				τ	U ND	ug/kg						
Vanadium				τ	U ND	ug/kg						
Zinc				τ	U ND	ug/kg						
QC120457416 Antimony	51 512856001 M	IS 46100	J	1450	44300	ug/kg	1	93	(75%-125%	')	06/09/.	20 19:06
Arsenic		46100	U	ND	44600	ug/kg		96.8	(75%-125%)		
Barium		46100	J	214	45400	ug/kg		98	(75%-125%)	.)		
Beryllium		46100	U	ND	49100	ug/kg		107	(75%-125%)	,)		

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Workorder: 512864		<u><u>v</u> v v</u>						
Parmname	NOM	Sample Qual	QC	Units RPD/D	% REC%	6 Range A	nlst	Page 4 of 8 Date Time
Metals Analysis-ICP Batch 2008857	11011	Sample Quar	<u> </u>			o Kange A	mst	Date Time
Cadmium	46100 U	ND	43900	ug/kg	95.2	(75%-125%)	JWJ	06/09/20 19:06
Chromium	46100 U	ND	44500	ug/kg	96.4	(75%-125%)		
Cobalt	46100 U	ND	48700	ug/kg	106	(75%-125%)		
Copper	46100	4500	47700	ug/kg	93.6	(75%-125%)		
Lead	46100 U	ND	45100	ug/kg	97.3	(75%-125%)		
Molybdenum	46100 U	ND	49500	ug/kg	107	(75%-125%)		
Nickel	46100 U	ND	44600	ug/kg	96.3	(75%-125%)		
Selenium	46100 U	ND	43900	ug/kg	95.1	(75%-125%)		
Silver	9230 U	ND	8720	ug/kg	94.5	(75%-125%)		
Thallium	46100 U	ND	43100	ug/kg	93.5	(75%-125%)		
Vanadium	46100 U	ND	44900	ug/kg	97.3	(75%-125%)		
Zinc	46100	5610	48200	ug/kg	92.3	(75%-125%)		
QC1204574162 512856001 MSD Antimony	47500 J	1450	46200	ug/kg	4 94.1	(0%-20%)		06/09/20 19:08
Arsenic	47500 U	ND	44300	ug/kg 0.77	9 93.2	(0%-20%)		
Barium	47500 J	214	45500	ug/kg 0.19	5 95.3	(0%-20%)		

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Workordon 5129(4		2		<u> </u>				
Workorder: 512864 Parmname	NOM	Sample	Qual QC	Units	RPD/D%	REC%	Range Anlst	Page 5 of 8 Date Time
Metals Analysis-ICP Batch 2008857	110111	Jampic	Quai QC	Cints	M D / D /0	KEC /0	Kange Anise	Date Time
Beryllium	47500 U	J ND	49200	ug/kg	0.0435	103	(0%-20%) JW	J 06/09/20 19:08
Cadmium	47500 U	J ND	44100	ug/kg	0.474	92.8	(0%-20%)	
Chromium	47500 U	J ND	44700	ug/kg	0.402	93.9	(0%-20%)	
Cobalt	47500 U	J ND	48200	ug/kg	0.98	101	(0%-20%)	
Copper	47500	4500	47900	ug/kg	0.432	91.3	(0%-20%)	
Lead	47500 U	J ND	44900	ug/kg	0.472	94	(0%-20%)	
Molybdenum	47500 U	J ND	49500	ug/kg	0.168	104	(0%-20%)	
Nickel	47500 U	J ND	44400	ug/kg	0.415	93.1	(0%-20%)	
Selenium	47500 U	J ND	41600	ug/kg	5.34	87.5	(0%-20%)	
Silver	9510 U	J ND	8660	ug/kg	0.595	91.2	(0%-20%)	
Thallium	47500 U	J ND	43200	ug/kg	0.0556	90.8	(0%-20%)	
Vanadium	47500 U	J ND	45300	ug/kg	0.851	95.3	(0%-20%)	
Zinc	47500	5610	49300	ug/kg	2.29	91.9	(0%-20%)	
QC1204574163 512856001 SDILT Antimony	J	15.2	U ND	ug/L	N/A		(0%-20%)	06/09/20 19:13
Arsenic	ι	J ND	U ND	ug/L	N/A		(0%-20%)	

Workorder: 512864				*			Page 6 of 8
Parmname	NOM	Sample Qual	QC	Units I	RPD/D% R	REC% Range Anlst	Date Time
Metals Analysis-ICP Batch 2008857							
Barium	J	2.25 U	ND	ug/L	N/A	(0%-20%) JW.	J 06/09/20 19:13
Beryllium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Cadmium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Chromium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Cobalt	U	ND U	ND	ug/L	N/A	(0%-20%)	
Copper		47.3 J	9.21	ug/L	2.69	(0%-20%)	
Lead	U	ND U	ND	ug/L	N/A	(0%-20%)	
Molybdenum	U	ND U	ND	ug/L	N/A	(0%-20%)	
Nickel	U	ND U	ND	ug/L	N/A	(0%-20%)	
Selenium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Silver	U	ND U	ND	ug/L	N/A	(0%-20%)	
Thallium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Vanadium	U	ND U	ND	ug/L	N/A	(0%-20%)	
Zinc		59.0 J	14.1	ug/L	19.8	(0%-20%)	

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QC Summary

Workorder: 512864								Page 7 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-MercuryBatch2011848								
QC1204579697 LCS Mercury	238		191	ug/kg		80.2	(80%-120%) MTM1	06/17/20 10:32
QC1204579696 MB Mercury		U	ND	ug/kg				06/17/20 10:30
QC1204579699 513320001 MS Mercury	s 345	47.6	363	ug/kg		91.5	(80%-120%)	06/17/20 11:02
QC1204579701 513320001 MS Mercury	SD 305	47.6	323	ug/kg	11.8	90.2	(0%-20%)	06/17/20 11:04
QC1204579702 513320001 SD Mercury	ЭШТ	0.311 U	ND	ug/L	N/A		(0%-10%)	06/17/20 11:05

Notes:

The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- JNX Non Calibrated Compound
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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QC Summary

Parmna	e NOM Sample Qual QC Units RPD/D% REC% Range Anlst Date Time
Ν	Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest nternal standard response factor
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Р	OrganicsThe concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, the difference is >70%.
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UJ	Compound cannot be extracted
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
Y	QC Samples were not spiked with this compound
٨	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded
^ The R five tim	rates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the data computed the DUB result.

RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

OC Summary

			Q	CS	ummary	7	,	Damant D	- 4 I 2 2020	
Client :	GSI Environmental Inc.					-	_	Report Da	ate: July 2, 2020 Page 1 of 3	
	155 Grand Ave								Page 1 01 5	
	Suite 704									
Contact:	Oakland, California Travis Wicks									
Workorder:	512864									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe	ec									
	2009006									
-	512856001 DUP									
Cesium-137		U	0.00577	U	0.00416	pCi/g	0		N/A RXF2	06/11/2013:12
		Uncert:	+/-0.0149		+/-0.0150					
		TPU:	+/-0.0151		+/-0.0151					
QC1204574618	LCS									
Americium-241		486			572	pCi/g		118	(75%-125%) RXF2	06/11/2013:26
		Uncert:			+/-12.4					
		TPU:			+/-54.5	~ (
Cobalt-60		98.8			99.2	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.30					
~ . 107		TPU:			+/-8.79	a : (100		
Cesium-137		165			165	pCi/g		100	(75%-125%)	
		Uncert:			+/-2.54					
0.01001574616		TPU:			+/-14.1					
QC1204574616	MB			TT	0.000704	0:/-			DVE	26/11/2010.16
Cesium-137		I		U	0.000724	pCi/g			RXF2	06/11/2010:16
		Uncert:			+/-0.00567					
		TPU:			+/-0.00568					
Rad Gas Flow Batch	2008956									
QC1204574465	512856001 DUP									
Strontium-90	512000001 2 02	U	-0.271	U	-0.0524	pCi/g	0		N/A MXS2	06/26/2006:57
Buonuan 20		Uncert:	+/-0.105	C	+/-0.0909	r~~0	~		1	00/20/2000.0.
		TPU:	+/-0.105		+/-0.0909					
QC1204574466	LCS	11 01	•• •• •							
Strontium-90	105	1.45			1.27	pCi/g		87.6	(75%-125%) MXS2	06/26/2006:57
Duomuan 20		Uncert:			+/-0.0762	r~~0		00	(10,0 120,0, 101122	00/20/200010
		TPU:			+/-0.299					
QC1204574464	MB									
Strontium-90				U	0.00694	pCi/g			MXS2	06/26/2006:57
		Uncert:			+/-0.0169	1 0				· · · ·
		TPU:			+/-0.0170					
Rad Liquid Scint	tillation									
Batch	2011631									
QC1204579192	512856001 DUP									
Tritium		U	0.335	U	0.898	pCi/g	0		N/A EW3	06/24/2011:03
		Uncert:	+/-1.80		+/-1.87					
		TPU:	+/-1.80		+/-1.88					
QC1204579194	LCS									
Tritium		85.0			66.2	pCi/g		77.9	(75%-125%) EW3	06/23/2007:11
		Uncert:			+/-9.01					

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QC Summary

Workorder: 512864						Page 2 of 3					
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time		
Rad Liquid Scintillation											
Batch 2011631											
	TPU:		+/-17.5								
QC1204579191 MB											
Tritium		U	-1.17	pCi/g				EW3	06/23/2004:45		
	Uncert:		+/-2.70								
	TPU:		+/-2.70								
QC1204579193 512856001 MS											
Tritium	90.9 U	0.335	73.2	pCi/g		80.5	(75%-125%) EW3	06/23/2006:48		
	Uncert:	+/-1.80	+/-8.21								
	TPU:	+/-1.80	+/-18.5								

Notes:

Wenleender

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

E1004

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512864				-			Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

ENVIR															CHA	NN-OF- Date:_ Pa	DF-CUST e: Page	125 125	RECOR	CHAIN-OF-CUSTODY RECORD Date: 6/4/20 Page 1 of 1
																9)	28	62	S-12804
FROM:	GSI Environmental Inc	Ü	PROJECT NAME:	AJU-BB									PROJ	PROJECT NO.: 5182	5182					
	155 Grand Ave. Suite 704	704	PROJECT CONTACT:	Susan Gallardo	allardo								LAB C	ONTACT:	LAB CONTACT: Brielle Luthman	uthma	c			
	Oakland, CA 94612 (510) 463-8484	2	GLOBAL ID:	1									SAMP	SAMPLER(S): (PRINT)	HINT)	11200	17) 72×	1.5S	toch (
TEL:	(510)	E-MAIL:	smgallardo@gsi-net.com; tzwicks@gsi-net.com	net.com; tz	wicks@gsi	-net.co	ε				8	<u>I</u> O III	REQUESTED		ANALYSES	3	7			
LABORATORY	TORY: GEL Laboratories	ories						ŀ	ŀ		Plea	se chec	k box or	fill in bl	Please check box or fill in blank as needed	eded.	F	ŀ	ŀ	
TURNAR]SAME DAY]72 HR	24 HR 5 DAYS	☐48 HR ⊠STANDARD					****	(g					-						
SPECIAL - Sr-9. - H-3	special instructions: - Sr-90 MDC of 0.5 pCi/g - H-3 MDC of 5 pCi/g	- Cs-137 N - Include fi	- Cs-137 MDC of 1 pCi/g - Include flesh only; no peel			лөд рөглөз	iltered	06) 761-20	e 22 Metals eteM 25 e	rchlorate (
LAB USE ONLY	SAMPLE ID	DATE	SAMPLING	MATRIX	NO. OF CONT.	Presei	i bləi i)												
	L-1-200604	6/4/20		tort		1		イズ	4	र र	 	<u> </u>	<u> </u>		<u> </u>	1	-	-		
	L-2-200604	{ 	م/د)	-)		 بر	-	XX	$\hat{\mathbf{x}}$	XX										
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Relingu	Relinquished by: (Signature)				8	Received by: (Signature)	by: (Si	gnatur	()	K	bour	2			Date:	Date: 6 151	12	Times) <u>c</u>	

Time Time:

15

Received by: (Signature)

Relinquished by: (Signature)

Date:

CHAIN-OF-CUSTODY RECORD Date: $L/4/2^{2}$ <u>______of____</u>

Laboratories

C	lient:				SAMPLE RECEIPT & REVIEW FORM						
\vdash	631E			s	DG/AR/COC/Work Order: 528104						
R	eccived By: STACY BOO	ME			Date Received: JUNE 5, 2020						
	Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other						
Su	spected Hazard Information	1 10	T,	·	3935 4669 0289-4'c 3935 4669 0278-21						
_	-proceeding and the proceeding a	Yes	Įź	· *	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.						
	Shipped as a DOT Hazardous?		-	Ha	zard Class Shipped: UN#: UN2910, Is the Radioactive Shipment Survey Compliant? YesNo						
B) rec	Did the client designate the samples are to be eived as radioactive?	ļ		ec.	C notation or radioactive stickers on containers equal client designation.						
rad	Did the RSO classify the samples as ioactive?		/	Ma Cla	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr assified as: Rad 1 Rad 2 Rad 3						
D) haz	Did the client designate samples are ardous?				C notation or hazard labels on containers equal elient designation.						
E)	Did the RSO identify possible hazards?		1	PC) or E is yes, select Hazards below. B's Flammable Foreign Soil RCRA Asbestos Beryllium Other:						
	Sample Receipt Criteria	Ýcs	ź	°Ż,	Comments/Qualifiers (Required for Non-Conforming Items)						
1	Shipping containers received intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)						
2	Chain of custody documents included with shipment?	\square			Circle Applicable: Client contacted and provided COC COC created upon receipt						
3	Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*		128294		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:						
4	Daily check performed and passed on IR temperature gun?				Temperature Device Serial #: <u>IQI-14</u> Secondary Temperature Device Serial # (If Applicable);						
5	Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)						
6	Samples requiring chemical preservation at proper pH?	7			Sample ID's and Containers Affected:						
7	Do any samples require Volatile Analysis?			1	If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:						
8	Samples received within holding time?	人			ID's and tests affected:						
9	Sample ID's on COC match ID's on bottles?				ID's and containers affected:						
1	Date & time on COC match date & time on bottles?			1	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)						
<u> </u>	Number of containers received match number indicated on COC?				Circle Applicable: No container count on COC Other (describe)						
2	Are sample containers identifiable as GEL provided?			1							
3	COC form is properly signed in relinquished/received sections?	Y		V	Circle Applicable: Not relinquished Other (describe)						
	nents (Use Continuation Form if needed): 58 - W - 206693 CO	C T	<i>נו</i>	ME	E: 11: 30 SAMPLE TIME : 11:40						
	PM (or PMA	,) revie	ew:	Initia	Is Date 0/8/20 Page of GL-CHL-SR-001 Rev 6						

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State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Technical Case Narrative GSI Environmental Inc. SDG #: 512864

Perchlorates by LCMSMS

Product: Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M) <u>Analytical Method:</u> SW846 6850 Modified <u>Analytical Procedure:</u> GL-OA-E-067 REV# 15 <u>Analytical Batches:</u> 2011115 and 2011114

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512864001	L-1-200604
512864002	L-2-200604
1204578053	Method Blank (MB)
1204578054	Laboratory Control Sample (LCS)
1204578055	512856001(AV-1-200604) Matrix Spike (MS)
1204578056	512856001(AV-1-200604) Matrix Spike Duplicate (MSD)
1204578057	Interference Check Sample (ICS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

It was necessary to analyze 512864001 (L-1-200604) and 512864002 (L-2-200604) at a dilution. This was due to the matrix effect on the recovery of the internal standard, Perchlorate-O(18). When the samples were analyzed neat or at a lower dilution, the recovery of the internal standard was less than 50%. This may have been the result of the acidic nature of the sample matrix. It was necessary to increase the dilutions to 1:10 for 512862001 and 512862002, and to 1:25 for 512864001, 512864002, 512866001, and 512866002.

<u>Metals</u>

<u>Product:</u> Determination of Metals by ICP <u>Analytical Method:</u> SW846 3050B/6010D <u>Analytical Procedure:</u> GL-MA-E-013 REV# 31

Analytical Batch: 2008857

Preparation Method: SW846 3050B **Preparation Procedure:** GL-MA-E-009 REV# 29 **Preparation Batch:** 2008854

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512864001	L-1-200604
512864002	L-2-200604
1204574159	Method Blank (MB)ICP
1204574160	Laboratory Control Sample (LCS)
1204574163	512856001(AV-1-200604L) Serial Dilution (SD)
1204574161	512856001(AV-1-200604S) Matrix Spike (MS)
1204574162	512856001(AV-1-200604SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

<u>Product:</u> Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer <u>Analytical Method:</u> SW846 7471A <u>Analytical Procedure:</u> GL-MA-E-010 REV# 38 <u>Analytical Batch:</u> 2011848

Preparation Method: SW846 7471A Prep **Preparation Procedure:** GL-MA-E-010 REV# 38 **Preparation Batch:** 2011847

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

512864001	L-1-200604
512864002	L-2-200604
1204579696	Method Blank (MB)CVAA
1204579697	Laboratory Control Sample (LCS)
1204579702	513320001(NonSDGL) Serial Dilution (SD)
1204579699	513320001(NonSDGS) Matrix Spike (MS)
1204579701	513320001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Radiochemistry

<u>Product:</u> Dry Weight <u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512864001	L-1-200604
512864002	L-2-200604

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) <u>Analytical Method:</u> DOE HASL 300, 4.5.2.3/Ga-01-R <u>Analytical Procedure:</u> GL-RAD-A-013 REV# 27 <u>Analytical Batch:</u> 2009006

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512864001	L-1-200604
512864002	L-2-200604
1204574616	Method Blank (MB)
1204574617	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574618	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

<u>Product:</u> GFPC, Sr90, Vegetation <u>Analytical Method:</u> EPA 905.0 Modified/DOE RP501 Rev. 1 Modified <u>Analytical Procedure:</u> GL-RAD-A-004 REV# 21 <u>Analytical Batch:</u> 2008956

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512864001	L-1-200604
512864002	L-2-200604
1204574464	Method Blank (MB)
1204574465	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574466	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Vegetation Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2011631

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512864001	L-1-200604
512864002	L-2-200604
1204579191	Method Blank (MB)
1204579192	512856001(AV-1-200604) Sample Duplicate (DUP)
1204579193	512856001(AV-1-200604) Matrix Spike (MS)
1204579194	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples 1204579192 (AV-1-200604DUP), 512864001 (L-1-200604) and 512864002 (L-2-200604) were recounted due to high MDCs. The recounts are reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.





PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843,556,8171 F 843,766,1178

gel.com

July 02, 2020

Travis Wicks GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612

Re: Near S SFL Work Order: 512866

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 05, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

B duth man,

Brielle Luthman Project Manager

Purchase Order: 5182 Enclosures

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 512866 GEL Work Order: 512866

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Brielle Luthman.

Reviewed by

B duth man

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: 0-1-200604 Project: GSIE00119 Sample ID: 512866001 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 10:30 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	e Batch	Method
LC-MS/MS Perchlorat	te											
Perchlorate by LC-MS	MS "As Rece	eived"										
Perchlorate	U	ND	10.2	41.0	ug/kg	8.20	25	CWW	06/22/20	2220	2011115	1
Mercury Analysis-CV	AA				00							
7471 Cold Vapor Mer		s Received"										
Mercury	U	ND	7.08	21.1	ug/kg	106	1	MTM1	06/17/20	1057	2011848	2
Metals Analysis-ICP					00							
SW846 3050B/6010D	Metals Solid	"As Received"										
Antimony	U	ND	303	1830	ug/kg	91.7	1	JWJ	06/09/20	1946	2008857	3
Arsenic	Ŭ	ND	459	2750	ug/kg	91.7		0110	00/09/20	17.10	2000007	5
Barium		883	91.7	459	ug/kg	91.7						
Beryllium	U	ND	91.7	459	ug/kg	91.7						
Cadmium	U	ND	91.7	459	ug/kg	91.7	1					
Chromium	U	ND	138	917	ug/kg	91.7	1					
Cobalt	U	ND	138	459	ug/kg	91.7	1					
Copper	J	454	275	1830	ug/kg	91.7	1					
Lead	U	ND	303	1830	ug/kg	91.7	1					
Molybdenum	U	ND	183	917	ug/kg	91.7	1					
Nickel	J	315	138	459	ug/kg	91.7	1					
Selenium	U	ND	459	2750	ug/kg	91.7	1					
Silver	U	ND	91.7	459	ug/kg	91.7	1					
Thallium	U	ND	459	1830	ug/kg	91.7	1					
Vanadium	U	ND	91.7	459	ug/kg	91.7	1					
Zinc		3230	367	1830	ug/kg	91.7	1					
The following Prep M	ethods were pe	erformed:										
Method	Description	n		Analyst	Date	r	Time	e Pr	ep Batch			
GEL Prep Method	Laboratory C	omposite						200)8703			
SW846 3050B	SW846 3050	B Prep	:	SM1	06/09/20	(0900	200)8854			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids		CWW	06/18/20		1839	20	11114			
SW846 7471A Prep	EPA 7471A N	Mercury Prep Soil		AXS5	06/16/20		1334	20	11847			
The following Analyt	ical Methods v	vere performed:										
Method	Description	-			A	nalyst	Cor	nments	5			
1	SW846 6850											
2	SW846 7471A	Α										
3	SW846 3050E											
-												

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Certificate of Analysis

			Report Date:	July 2, 2020
Company : Address :	GSI Environmental Inc. 155 Grand Ave			
Address .	Suite 704			
	Oakland, California 94612			
Contact:	Travis Wicks			
Project:	Near S SFL			
Client Sample ID:	0-1-200604	Project:	GSIE00119	
Sample ID:	512866001	Client ID:	GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Notes:									
Column headers are d DF: Dilution Factor DL: Detection Limit MDA: Minimum Dete MDC: Minimum Dete	ectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitati	on Limit					

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Certificate of Analysis

Report Date: July 2, 2020 Company : GSI Environmental Inc. Address : 155 Grand Ave Suite 704 Oakland, California 94612 Contact: Travis Wicks Project: Near S SFL Client Sample ID: 0-2-200604 Project: GSIE00119 Sample ID: 512866002 Client ID: GSIE002 Matrix: Vegetation Collect Date: 04-JUN-20 13:10 Receive Date: 05-JUN-20 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	e Batch	Method
LC-MS/MS Perchlorat	te											
Perchlorate by LC-MS	MS "As Rece	eived"										
Perchlorate	U	ND	10.7	42.7	ug/kg	8.55	25	CWW	06/22/20	2229	2011115	1
Mercury Analysis-CV	AA											
7471 Cold Vapor Mer		s Received"										
Mercury	U	ND	8.01	23.9	ug/kg	120	1	MTM1	06/17/20	1059	2011848	2
Metals Analysis-ICP												
SW846 3050B/6010D												
Antimony	U	ND	307	1860	ug/kg	93.1	1	JWJ	06/09/20	1949	2008857	3
Arsenic	U	ND	466	2790	ug/kg	93.1	1					
Barium	J	313	93.1	466	ug/kg	93.1	1					
Beryllium	U	ND	93.1	466	ug/kg	93.1	1					
Cadmium	U	ND	93.1	466	ug/kg	93.1	1					
Chromium	U	ND	140	931	ug/kg	93.1	1					
Cobalt	U	ND	140	466	ug/kg	93.1	1					
Copper	J	636	279	1860	ug/kg	93.1	1					
Lead	U	ND	307	1860	ug/kg	93.1	1					
Molybdenum	U	ND	186	931	ug/kg	93.1	1					
Nickel	J	143	140	466	ug/kg	93.1	1					
Selenium	U	ND	466	2790	ug/kg	93.1	1					
Silver	U	ND	93.1	466	ug/kg	93.1	1					
Thallium	U	ND	466	1860	ug/kg	93.1	1					
Vanadium	U	ND	93.1	466	ug/kg	93.1	1					
Zinc		4050	372	1860	ug/kg	93.1	1					
The following Prep M	ethods were p	erformed:										
Method	Description	n	A	Analyst	Date	,	Time	e Pr	ep Batch			
GEL Prep Method	Laboratory C	omposite						200	08703			
SW846 3050B	SW846 3050	B Prep	S	SM1	06/09/20		0900	200	08854			
SW846 6850 Modified	EPA 6850 Pe	rchlorate Extraction Solids	C	CWW	06/18/20		1839	20	11114			
SW846 7471A Prep	EPA 7471A 1	Mercury Prep Soil	A	AXS5	06/16/20		1334	20	11847			
The following Analyt	ical Methods v	were performed:										
Method	Description		Analyst Comments									
1	SW846 6850	Modified										
2	SW846 7471A	A										
3	SW846 3050I	3/6010D										

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Certificate of Analysis

			Report Date:	July 2, 2020
Company : Address :	GSI Environmental Inc. 155 Grand Ave Suite 704 Oakland, California 94612			
Contact: Project:	Travis Wicks Near S SFL			
Client Sample ID: Sample ID:	0-2-200604 512866002	Project: Client ID:	GSIE00119 GSIE002	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch Method
Notes:								
Column headers are DF: Dilution Factor DL: Detection Limit MDA: Minimum De MDC: Minimum De	tectable Activit	у	Lc/LC: Critical Level PF: Prep Factor RL: Reporting Limit SQL: Sample Quantitati	on Limit				

Certificate of Analysis

Company : Address :	GSI Environ 155 Grand A Suite 704											
	Oakland, Cal	ifornia 946	12					Re	eport Date:	July 2	, 2020	
Contact:	Travis Wicks	6										
Project:	Near S SFL											_
Client Samp Sample ID: Matrix: Collect Date Receive Dat Collector: Moisture:	512866 Vegeta e: 04-JUN	6001 tion 1-20					oject: ent ID:		E00119 E002			
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gamma Spec Gammaspec, Ga Cesium-137 Rad Gas Flow Pro	mma, Solid (Stand U	lard List) "A 0.00352		0.0113	+/-0.00579	0.100	pCi/g			06/11/20 1015		
	getation "As Recei											
Strontium-90	U	0.0377	+/-0.0302	0.0488	+/-0.0314	0.240	pCi/g		MXS2	06/27/20 1250	2008956	2
Rad Liquid Scintil												
	stillation, Vegetati											
Tritium	U	0.519	+/-2.88	4.98	+/-2.88	5.00	pCi/g		EW3	06/23/20 0240	2011631	3
Solid Preparation Laboratory Com	posite "As Receive	ed"										
The following Pre	p Methods were	performed										
Method	Description				Analyst	Date	Tin	ne	Prep Batch			
Dry Soil Prep	Dry Soil Prep GL-I	RAD-A-021			LYT1	06/08/20	093	37	2008811			
GEL Prep Method	Laboratory Compo	site							2008703			
The following Ana	lytical Methods	were perfo	rmed									
Method	Description											
1	DOE HASL 300, 4	5.2.3/Ga-01-	R									
2	EPA 905.0 Modifie	d/DOE RP50	1 Rev. 1 Modi	fied								
3	EPA 906.0 Modifie	d										
4	GEL Prep Method											
Surrogate/Tracer	Recovery	Test					J	Batch l	D Recover	y% Accepta	able Limi	its
Strontium Carri	er	GFPC, Sr	90, Vegetation	n "As Receive	ed"			200895	56 10	01 (25%)	-125%)	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	e ID: 0-1-200604			Project:	GSIE00119	
Sample ID:	512866001			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	GSI Enviror 155 Grand A Suite 704 Oakland, Ca	Ave	12					D	eport Date:		July 2,	2020	
Contact:	Travis Wick		12					N	eport Date.		July 2,	2020	
Project:	Near S SFL	3											
5		0001				D	•	CO	E00110				
Client Sam Sample ID: Matrix: Collect Dat Receive Da Collector: Moisture:	: 51286 Vegeta te: 04-JU	6002 ation N-20 N-20					oject: ient ID:		IE00119 IE002				
Parameter	Qualifier	Result (J ncertainty	MDC	TPU	RL	Units	PF	DF Analys	st Da	te Time	Batch	Mtd.
Rad Gamma Spe	c Analysis												
Gammaspec, G	amma, Solid (Stan	dard List) "/	As Received"										
Cesium-137	U	-0.00775	+/-0.0169	0.0308	+/-0.0173	0.100	pCi/g		RXF2	06/11/	20 1016	2009006	5 1
Rad Gas Flow Pr GFPC, Sr90, Vo	oportional Count egetation "As Rece												
Strontium-90	U	-0.0182	+/-0.0217	0.0467	+/-0.0217	0.240	pCi/g		MXS2	06/26/	20 0657	2008956	5 2
Rad Liquid Scint	-												
	istillation, Vegetat			1.50	10.55		<u></u>			0.6/0.0/			
Tritium	U	-0.169	+/-2.65	4.63	+/-2.65	5.00	pCi/g		EW3	06/23/2	20 0343	2011631	3
Solid Preparation	1 nposite "As Receiv	ad"											
-	-												
	ep Methods were	performed											
Method	Description				Analyst	Date	Tir	ne	Prep Batch				
Dry Soil Prep	Dry Soil Prep GL-	RAD-A-021			LYT1	06/08/20	093	37	2008811				
GEL Prep Method	Laboratory Compo	osite							2008703				
The following An	alytical Methods	were perfo	rmed										
Method	Description												
1	DOE HASL 300, 4	.5.2.3/Ga-01-	R										
2	EPA 905.0 Modifi	ed/DOE RP5()1 Rev. 1 Modi	fied									
3	EPA 906.0 Modifi	ed											
4	GEL Prep Method												
Surrogate/Trace	er Recovery	Test]	Batch	ID Recove	ry%	Accepta	ble Lim	its
Strontium Carr	rier	GFPC. Sr	90, Vegetatio	n "As Received"				20089	56 1	03	(25%-	-125%)	
		,	,								× - · · ·	/	

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Certificate of Analysis

Company :	GSI Environmental Inc.					
Address :	155 Grand Ave					
	Suite 704					
	Oakland, California 94612				Report Date:	July 2, 2020
Contact:	Travis Wicks					
Project:	Near S SFL					
Client Sample	ID: 0-2-200604			Project:	GSIE00119	
Sample ID:	512866002			Client ID:	GSIE002	
Parameter	Qualifier Result Uncertainty	MDC	TPU	RL Units	PF DF Analyst	Date Time Batch Mtd.

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor DL: Detection Limit Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Mtd.: Method PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

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QC Summary

Report Date: July 2, 2020

Range

(70%-130%)

Anlst

(70%-130%) CWW 06/19/20 14:05

REC%

104

99

RPD/D%

Page 1 of 8

Date Time

06/19/20 13:56

06/19/20 13:47

06/19/20 14:32

Oakland, California **Contact: Travis Wicks**

Workorder:

Motals Analysis-ICP

GSI Environmental Inc.

155 Grand Ave Suite 704

512866 Parmname NOM Sample Qual QC Units **LC-MS/MS Perchlorate** 2011115 Batch ICS QC1204578057 2.02 Perchlorate 1.95 ug/kg QC1204578054 LCS 1.91 J 1.89 Perchlorate ug/kg QC1204578053 MB U Perchlorate ND ug/kg

QC1204578055 512856001 MS Perchlorate 1.88 U ND 1.95 (75%-125%) ug/kg 104

QC1204578056 512856001 MSD Perchlorate 1.73 U ND 1.82 7 105 (0%-30%) 06/19/20 14:41 ug/kg

Batch 2008857						
QC1204574160 LCS Antimony	45400	44700	ug/kg	98.4	(80%-120%)	JWJ 06/09/20 19:00
Arsenic	45400	42000	ug/kg	92.5	(80%-120%)	
Barium	45400	43200	ug/kg	95.3	(80%-120%)	
Beryllium	45400	46500	ug/kg	102	(80%-120%)	
Cadmium	45400	42100	ug/kg	92.8	(80%-120%)	
Chromium	45400	42700	ug/kg	94.1	(80%-120%)	

Workorder: 512866		<u><u>v</u>eb.</u>	ummu	<u>.</u>					
				Linita			Danga	Anlat	Page 2 of 8
Parmname Metals Analysis-ICP Batch 2008857	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Cobalt	45400		44800	ug/kg		98.7	(80%-120%)) JWJ	06/09/20 19:00
Copper	45400		42800	ug/kg		94.4	(80%-120%))	
Lead	45400		43100	ug/kg		95	(80%-120%))	
Molybdenum	45400		46200	ug/kg		102	(80%-120%))	
Nickel	45400		42500	ug/kg		93.7	(80%-120%))	
Selenium	45400		41900	ug/kg		92.4	(80%-120%))	
Silver	9070		8480	ug/kg		93.5	(80%-120%))	
Thallium	45400		44100	ug/kg		97.2	(80%-120%))	
Vanadium	45400		42700	ug/kg		94.2	(80%-120%))	
Zinc	45400		42500	ug/kg		93.6	(80%-120%))	
QC1204574159 MB Antimony		J	820	ug/kg					06/09/20 18:56
Arsenic		U	ND	ug/kg					
Barium		U	ND	ug/kg					
Beryllium		U	ND	ug/kg					
Cadmium		U	ND	ug/kg					

Workorder:	512866			-	<u> </u>		*					Pag	ge 3 of 8
Parmname		NOM	M	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-I Batch 2	ICP 2008857												
Chromium					J	198	ug/kg				JWJ	06/09/2	20 18:56
Cobalt					U	ND	ug/kg						
Copper					U	ND	ug/kg						
Lead					J	780	ug/kg						
Molybdenum					U	ND	ug/kg						
Nickel					U	ND	ug/kg						
Selenium					U	ND	ug/kg						
Silver					U	ND	ug/kg						
Thallium					U	ND	ug/kg						
Vanadium					U	ND	ug/kg						
Zinc					U	ND	ug/kg						
QC120457416 Antimony	61 512856001 M	MS 46100	J	1450		44300	ug/kg		93	(75%-125%))	06/09/.	/20 19:06
Arsenic		46100	U	ND		44600	ug/kg		96.8	(75%-125%))		
Barium		46100	J	214		45400	ug/kg		98	(75%-125%))		
Beryllium		46100	U	ND		49100	ug/kg		107	(75%-125%	5)		

Workorder: 512866	<u>v</u> o summurj								Page 4 of 8				
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst		Time			
Metals Analysis-ICP Batch 2008857		Jampic You.	<u> </u>	Omus		MEC /v	Munge	Amor	Dur	<u></u>			
Cadmium	46100 U	ND	43900	ug/kg		95.2	(75%-125%)) JWJ	06/09/2	20 19:06			
Chromium	46100 U	ND	44500	ug/kg		96.4	(75%-125%))					
Cobalt	46100 U	ND	48700	ug/kg		106	(75%-125%))					
Copper	46100	4500	47700	ug/kg		93.6	(75%-125%))					
Lead	46100 U	ND	45100	ug/kg		97.3	(75%-125%))					
Molybdenum	46100 U	ND	49500	ug/kg		107	(75%-125%))					
Nickel	46100 U	ND	44600	ug/kg		96.3	(75%-125%))					
Selenium	46100 U	ND	43900	ug/kg		95.1	(75%-125%))					
Silver	9230 U	ND	8720	ug/kg		94.5	(75%-125%))					
Thallium	46100 U	ND	43100	ug/kg		93.5	(75%-125%))					
Vanadium	46100 U	ND	44900	ug/kg		97.3	(75%-125%))					
Zinc	46100	5610	48200	ug/kg		92.3	(75%-125%))					
QC1204574162 512856001 MSD Antimony	47500 J	1450	46200	ug/kg	4	94.1	(0%-20%))	06/09/′.	20 19:08			
Arsenic	47500 U	ND	44300	ug/kg	0.779	93.2	(0%-20%))					
Barium	47500 J	214	45500	ug/kg	0.195	95.3	(0%-20%))					

Workorder: 512866		Ľ.						
			<u> </u>					Page 5 of 8
Parmname	NOM	Sample	Qual QC	Units	RPD/D%	REC%	Range Anlst	Date Time
Metals Analysis-ICP Batch 2008857								
Beryllium	47500 U	ND	49200	ug/kg	0.0435	103	(0%-20%) JWJ	06/09/20 19:08
Cadmium	47500 U	ND	44100	ug/kg	0.474	92.8	(0%-20%)	
Chromium	47500 U	ND	44700	ug/kg	0.402	93.9	(0%-20%)	
Cobalt	47500 U	ND	48200	ug/kg	0.98	101	(0%-20%)	
Copper	47500	4500	47900	ug/kg	0.432	91.3	(0%-20%)	
Lead	47500 U	ND	44900	ug/kg	0.472	94	(0%-20%)	
Molybdenum	47500 U	ND	49500	ug/kg	0.168	104	(0%-20%)	
Nickel	47500 U	ND	44400	ug/kg	0.415	93.1	(0%-20%)	
Selenium	47500 U	ND	41600	ug/kg	5.34	87.5	(0%-20%)	
Silver	9510 U	ND	8660	ug/kg	0.595	91.2	(0%-20%)	
Thallium	47500 U	ND	43200	ug/kg	0.0556	90.8	(0%-20%)	
Vanadium	47500 U	ND	45300	ug/kg	0.851	95.3	(0%-20%)	
Zinc	47500	5610	49300	ug/kg	2.29	91.9	(0%-20%)	
QC1204574163 512856001 SDILT Antimony	J	15.2	U ND	ug/L	N/A		(0%-20%)	06/09/20 19:13
Arsenic	U	ND	U ND	ug/L	N/A		(0%-20%)	

Workorder: 512866				<u>~</u>					Pag	e 6 of 8
Parmname	NOM	Sample Qual	QC	Units	RPD/D%	REC% I	Range	Anlst	Date	Time
Metals Analysis-ICP Batch 2008857										
Barium	J	2.25 U	ND	ug/L	N/A	(0)%-20%)	JWJ	06/09/2	20 19:13
Beryllium	U	ND U	ND	ug/L	N/A	(0	0%-20%))		
Cadmium	U	ND U	ND	ug/L	N/A	(0)%-20%))		
Chromium	U	ND U	ND	ug/L	N/A	(0	0%-20%))		
Cobalt	U	ND U	ND	ug/L	N/A	(0	0%-20%))		
Copper		47.3 J	9.21	ug/L	2.69	(0)%-20%)	1		
Lead	U	ND U	ND	ug/L	N/A	(0)%-20%)	1		
Molybdenum	U	ND U	ND	ug/L	N/A	(0)%-20%)	1		
Nickel	U	ND U	ND	ug/L	N/A	(0)%-20%))		
Selenium	U	ND U	ND	ug/L	N/A	(0)%-20%))		
Silver	U	ND U	ND	ug/L	N/A	(0	0%-20%))		
Thallium	U	ND U	ND	ug/L	N/A	(0	0%-20%)	1		
Vanadium	U	ND U	ND	ug/L	N/A	(0)%-20%)	1		
Zinc		59.0 J	14.1	ug/L	19.8	(0)%-20%))		

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QC Summary

Workorder: 512866											Page	e 7 of 8
Parmname		NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range A	Anlst	Date	Time
Metals Analysis-MercuryBatch2011848												
QC1204579697 LC Mercury	S	238			191	ug/kg		80.2	(80%-120%) 1	MTM1	06/17/2	20 10:32
QC1204579696 ME Mercury	3			U	ND	ug/kg					06/17/2	20 10:30
QC1204579699 51332 Mercury	20001 MS	345	47.6		363	ug/kg		91.5	(80%-120%)		06/17/2	20 11:02
QC1204579701 51332 Mercury	20001 MSD	305	47.6		323	ug/kg	11.8	90.2	(0%-20%)		06/17/2	20 11:04
QC1204579702 51332 Mercury	20001 SDILT		0.311	U	ND	ug/L	N/A		(0%-10%)		06/17/2	20 11:05

Notes:

Wardsondam

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The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B The target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- JNX Non Calibrated Compound
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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QC Summary

Parmnaı	me	NOM	Sample Q	ual QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
N N/A	Presumptive evidence based internal standard response fa RPD or %Recovery limits do	ctor	orary search to n	nake a tentative id	entificatio	n of the analy	te (TIC). Ç	Juantitation	is based of	n neares	t
N1	See case narrative	not apply.									
ND	Analyte concentration is not	detected above the	detection limit								
NJ	Consult Case Narrative, Data	a Summary package	e, or Project Mar	nager concerning	this qualifi	er					
Р	OrganicsThe concentration	is between the prim	ary and confirmation	ation columns/det	ectors is >	40% different	. For HPLO	C, the differ	ence is >7	0%.	
Q	One or more quality control	criteria have not be	en met. Refer to	the applicable na	rrative or I	DER.					
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UJ	Compound cannot be extracted										
Х	Consult Case Narrative, Data	a Summary package	e, or Project Mar	nager concerning	this qualifi	er					
Y	Other specific qualifiers were	e required to proper	ly define the res	sults. Consult case	narrative.						
Y	QC Samples were not spiked	d with this compour	ıd								
^	RPD of sample and duplicate	e evaluated using +	-RL. Concentra	ations are <5X the	RL. Qual	lifier Not App	licable for I	Radiochem	istry.		
h	Preparation or preservation h	nolding time was ex	ceeded								
^ The Re five time	dicates that spike recovery limit Relative Percent Difference (RI nes (5X) the contract required of society as evolve to DUP result	PD) obtained from t detection limit (RL)	he sample dupli	cate (DUP) is eva	aluated aga	ainst the accept	otance criter	ria when the	e sample is	greater	

RL is used to evaluate the DUP result. * Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL LABORATORIES LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

OC Summary

			Q	CS	ummary	7	,	Damant D	- 4 I 2 2020	
Client :	GSI Environmental Inc.					-	_	Report Da	ate: July 2, 2020 Page 1 of 3	
	155 Grand Ave								Page 1 01 5	
	Suite 704									
Contact:	Oakland, California Travis Wicks									
Workorder:	512866									
Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spe Batch	2009006									
-	512856001 DUP									
Cesium-137		U	0.00577	U	0.00416	pCi/g	0		N/A RXF2	06/11/2013:12
		Uncert:	+/-0.0149		+/-0.0150					
		TPU:	+/-0.0151		+/-0.0151					
QC1204574618	LCS				570	a :/		110		25/11/2010.07
Americium-241		486			572	pCi/g		118	(75%-125%) RXF2	06/11/2013:26
		Uncert:			+/-12.4					
Cobalt-60		TPU: 98.8			+/-54.5 99.2	nCi/a		100	(75%-125%)	
Cobalt-00		98.8 Uncert:			+/-2.30	pCi/g		100	(/3%-123%)	
		TPU:			+/-2.30					
Cesium-137		165			165	pCi/g		100	(75%-125%)	
Costum 127		Uncert:			+/-2.54	PC. 5		100	(15/0 125/0)	
		TPU:			+/-14.1					
QC1204574616	MB				.,					
Cesium-137				U	0.000724	pCi/g			RXF2	06/11/2010:16
Costant 11		Uncert:		-	+/-0.00567	r 0				00,11,201011
		TPU:			+/-0.00568					
Rad Gas Flow										
	2008956									
QC1204574465	512856001 DUP									
Strontium-90	512050001 Det	U	-0.271	U	-0.0524	pCi/g	0		N/A MXS2	06/26/2006:57
Sublitum 20		Uncert:	+/-0.105	C	+/-0.0909	10.0	~		1	00/20/2000.0.
		TPU:	+/-0.105		+/-0.0909					
QC1204574466	LCS	11 01	.,							
Strontium-90		1.45			1.27	pCi/g		87.6	(75%-125%) MXS2	06/26/2006:57
		Uncert:			+/-0.0762	гυ		÷	(,	00,20,200,000
		TPU:			+/-0.299					
QC1204574464	MB									
Strontium-90				U	0.00694	pCi/g			MXS2	06/26/2006:57
		Uncert:			+/-0.0169	-				
		TPU:			+/-0.0170					
Rad Liquid Scint Batch	tillation									
0C1204579192	512856001 DUP									
Tritium	512050001 201	U	0.335	U	0.898	pCi/g	0		N/A EW3	06/24/2011:03
IIIIuiii		Uncert:	+/-1.80	U	+/-1.87	PC1/5	U		1N/FX 12113	00/24/2011.03
		TPU:	+/-1.80		+/-1.87					
QC1204579194	LCS	110.	T/-1.00		₩-1.00					
Tritium	LCS	85.0			66.2	pCi/g		77.9	(75%-125%) EW3	06/23/2007:11
Tituuiii		Uncert:			+/-9.01	per/s		11.7	$(15/0^{-1}25/0)$ Eves	00/23/2007.11
		Oncert.			1/-9.01					

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QC Summary

Workorder: 512866							Page 2	2 of 3	
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid ScintillationBatch2011631									
	TPU:		+/-17.5						
QC1204579191 MB									
Tritium		U	-1.17	pCi/g				EW3	06/23/2004:45
	Uncert:		+/-2.70						
	TPU:		+/-2.70						
QC1204579193 512856001 MS									
Tritium	90.9 U	0.335	73.2	pCi/g		80.5	(75%-125%	6) EW3	06/23/2006:48
	Uncert:	+/-1.80	+/-8.21						
	TPU:	+/-1.80	+/-18.5						

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

** Analyte is a Tracer compound

- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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QC Summary

Workorder:	512866				-			Page 3 of 3	
Parmname		NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

															CHAIN	CHAIN-OF-CUSTODY RECORD Date: 6/4/20 Page 0f //	1007 RI	
·WOGS			IPRO IECT NAME-													5	2	12800
		Inc.		AJU-BB									ОНЧ	PROJECT NO.: 5182	5182			
	155 Grand Ave. Suite 704	204	PROJECT CONTACT:	Susan Gallardo	allardo								LAB	CONTACT:	LAB CONTACT: Brielle Luthman	hman		
	Oakland, CA 9461 (510) 463-8484	5	GLOBAL ID:	ł									SAM	SAMPLER(S): (PRINT)	S; (PRINT) + towel	1+12	Tosh	1.55
TEL:	(510)	E-MAIL:	smgallardo@gsi-net.com; tzwicks@gsi-net.com	i-net.com; tz	wicks@gsi	-net.cc	εl					REQU	REQUESTED	DAN	ANALYSES			
LABOR	LABORATORY: GEL Laboratories	tories							F	F		ease che	sck box o	r fill in bl	Please check box or fill in blank as needed			ŀ
TURNA	TURNAROUND TIME:	24 HR [5 DAYS]	☐ 48 HR ⊠STANDARD						(9									
specia - Sr-(- H-3	special instructions: - Sr-90 MDC of 0.5 pCi/g - H-3 MDC of 5 pCi/g	- Cs-137 ME - Include fle:	- Cs-137 MDC of 1 pCi/g	KITH UHLD		лед еглед	iltered	906) 761-2: 206) 06-12	-25 Metals (6 906) 2-H	chlorate (5					****		
USE USE ONLY	SAMPLE ID	S DATE	SAMPLING	MATRIX	NO. OF CONT.	Preser						*****						
	10-1-200644	04124	6201	たった		1	Ê	х X	X X	X	Ļ	-	-					-
	10-7-20004	i-t	NG)				1	$\frac{X}{X}$	X X	×	1		-	-				
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Reling	Relinquished by: (Signature))			R	Received by: (Signature)	by: (S	gnature	()	14	8 18				Date: 6 W	12/24	Time: 0	0
Reling	Relinquished by: (Signature)				R	Received by: (Signature)	by: (S	gnature	()						Date:		Time:	
															-			1

Laboratories

Client: CCIC			SAMPLE RECEIPT & REVIEW FORM
<u>6315</u>			SDG/AR/COC/Work Order: 5128106
Received By: STACY BOO	ME	a	Date Received: JUNE 5, 2020
Carrier and Tracking Number			Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
uspected Hazard Information	1.	T.	3935 4669 0289-4'c 3935 4669 0278-21
	, ∠cs	ź	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
)Shipped as a DOT Hazardous?	<u> </u>	-	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
) Did the client designate the samples are to be ceived as radioactive?		-	\mathbf{c} OC notation or radioactive stickers on containers equal client designation.
) Did the RSO classify the samples as dioactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
) Did the client designate samples are zardous?		*	COC notation or hazard labels on containers equal elient designation.
Did the RSO identify possible hazards?		-	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Vcs	ź.	2 Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	~		Circle Applicable: Seals bröken Damaged container Leaking container Other (describe)
Chain of custody documents included with shipment?	\square		Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*	\mathcal{A}	ure-the	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
Daily check performed and passed on IR temperature gun?	_		Temperature Device Serial #: I Q 1 - 1 Q Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and scaled?	Δ		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	1		Sample ID's and Containers Affected:
Do any samples require Volatile Analysis?			If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?			ID's and tests affected:
Sample ID's on COC match ID's on bottles?	イ		ID's and containers affected:
Date & time on COC match date & time on bottles?			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided?			
COC form is properly signed in relinquished/received sections?	Y		Circle Applicable: Not relinquished Other (describe)
uments (Use Continuation Form if needed): 558 - ₩ - 206693 CO	C T	C 1	AE: 11: 30 SAMPLE TIME : 11:40
PM (or PMA)	revio		itials Date 0/8/20 Page of

-12

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-32
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 02 July 2020

Technical Case Narrative GSI Environmental Inc. SDG #: 512866

Perchlorates by LCMSMS

Product: Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M) <u>Analytical Method:</u> SW846 6850 Modified <u>Analytical Procedure:</u> GL-OA-E-067 REV# 15 <u>Analytical Batches:</u> 2011115 and 2011114

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512866001	0-1-200604
512866002	0-2-200604
1204578053	Method Blank (MB)
1204578054	Laboratory Control Sample (LCS)
1204578055	512856001(AV-1-200604) Matrix Spike (MS)
1204578056	512856001(AV-1-200604) Matrix Spike Duplicate (MSD)
1204578057	Interference Check Sample (ICS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

It was necessary to analyze 512866001 (0-1-200604) and 512866002 (0-2-200604) at a dilution. This was due to the matrix effect on the recovery of the internal standard, Perchlorate-O(18). When the samples were analyzed neat or at a lower dilution, the recovery of the internal standard was less than 50%. This may have been the result of the acidic nature of the sample matrix. It was necessary to increase the dilutions to 1:10 for 512862001 and 512862002, and to 1:25 for 512864001, 512864002, 512866001, and 512866002.

<u>Metals</u>

<u>Product:</u> Determination of Metals by ICP <u>Analytical Method:</u> SW846 3050B/6010D <u>Analytical Procedure:</u> GL-MA-E-013 REV# 31

Analytical Batch: 2008857

Preparation Method: SW846 3050B **Preparation Procedure:** GL-MA-E-009 REV# 29 **Preparation Batch:** 2008854

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512866001	0-1-200604
512866002	0-2-200604
1204574159	Method Blank (MB)ICP
1204574160	Laboratory Control Sample (LCS)
1204574163	512856001(AV-1-200604L) Serial Dilution (SD)
1204574161	512856001(AV-1-200604S) Matrix Spike (MS)
1204574162	512856001(AV-1-200604SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

<u>Product:</u> Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer <u>Analytical Method:</u> SW846 7471A <u>Analytical Procedure:</u> GL-MA-E-010 REV# 38 <u>Analytical Batch:</u> 2011848

Preparation Method: SW846 7471A Prep **Preparation Procedure:** GL-MA-E-010 REV# 38 **Preparation Batch:** 2011847

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

512866001	0-1-200604
512866002	0-2-200604
1204579696	Method Blank (MB)CVAA
1204579697	Laboratory Control Sample (LCS)
1204579702	513320001(NonSDGL) Serial Dilution (SD)
1204579699	513320001(NonSDGS) Matrix Spike (MS)
1204579701	513320001(NonSDGSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Radiochemistry

<u>Product:</u> Dry Weight <u>Preparation Method:</u> Dry Soil Prep <u>Preparation Procedure:</u> GL-RAD-A-021 REV# 23 <u>Preparation Batch:</u> 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
512866001	0-1-200604
512866002	0-2-200604

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Gammaspec, Gamma, Solid (Standard List) <u>Analytical Method:</u> DOE HASL 300, 4.5.2.3/Ga-01-R <u>Analytical Procedure:</u> GL-RAD-A-013 REV# 27 <u>Analytical Batch:</u> 2009006

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
512866001	0-1-200604
512866002	0-2-200604
1204574616	Method Blank (MB)
1204574617	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574618	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

<u>Product:</u> GFPC, Sr90, Vegetation <u>Analytical Method:</u> EPA 905.0 Modified/DOE RP501 Rev. 1 Modified <u>Analytical Procedure:</u> GL-RAD-A-004 REV# 21 <u>Analytical Batch:</u> 2008956

Preparation Method: Dry Soil Prep **Preparation Procedure:** GL-RAD-A-021 REV# 23 **Preparation Batch:** 2008811

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512866001	0-1-200604
512866002	0-2-200604
1204574464	Method Blank (MB)
1204574465	512856001(AV-1-200604) Sample Duplicate (DUP)
1204574466	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: LSC, Tritium Distillation, Vegetation Analytical Method: EPA 906.0 Modified **Analytical Procedure:** GL-RAD-A-002 REV# 23 **Analytical Batch:** 2011631

<u>Composite Preparation Method:</u> GEL Prep Method <u>Composite Preparation Procedure:</u> GL-RAD-A-026 REV# 17 <u>Composite Preparation Batch:</u> 2008703

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
512866001	0-1-200604
512866002	0-2-200604
1204579191	Method Blank (MB)
1204579192	512856001(AV-1-200604) Sample Duplicate (DUP)
1204579193	512856001(AV-1-200604) Matrix Spike (MS)
1204579194	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Sample 1204579192 (AV-1-200604DUP) was recounted due to high MDC. The recount is reported.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.